
UNIT 1 HISTORIOGRAPHY OF THE PRE-COLONIAL ECONOMY – ANCIENT

Structure

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1.1 INTRODUCTION

The last forty years have witnessed numerous publications on the economic history of early India, on themes ranging from landownership, revenue system and rural settlements to urbanisation, crafts, money and trade. This heightened interest in the study of early Indian economy has been the result of the shift in focus from political or dynastic history towards an understanding of material culture and economic life. Though there were earlier efforts in this direction the decisive shift came only with the influential writings of D.D. Kosambi and R.S. Sharma in the 1950s and 1960s. In their writings they began to explain change with reference to environment, technology and economic life. Ancient or early India came to be visualized not as a static epoch, but in terms of stages in relation to the dominant social and economic patterns prevailing during the various periods. Early India is broadly divided into two phases i.e., the early historical and the early medieval. While the first extends up to and includes the Gupta period, the second covers the succeeding six to seven centuries. Within these two phases a number of other stages have also been worked out. To elaborate, while the Age of the Buddha is seen to have been characterized by peasant production and urbanisation, the Mauryan period is perceived to have been marked by state control of the economy.

Between the middle of the twentieth century and now, there have been changes in the ways of seeing and explaining the economic history of early India. Perspectives tend to vary depending on the kind of questions historians ask, the range of sources they use and the methods they adopt. Conventionally the Mauryan economy, deriving from the *Arthashastra*, has been characterized in terms of centralized state control over all sectors of the economy. However, recent research, by moving away from traditional treatment of the sources and looking at the regional material cultures brought to light by archaeology, has modified our understanding. Archaeology has revealed the coexistence and interaction of cultures at different levels of technological and social development. Prosperity during the said period was spread largely over Gangetic northern India and its fringes. It is being increasingly recognized that empires by their very nature accommodated varied social formations and differentiated spaces, accounting for the uneven depth of administration across regions. Similarly, the post-

Mauryan centuries instead of being identified only with urban growth, networks of trade and money economy are also beginning to be understood in terms of different stages of state formation and agrarian expansion in regions outside the Ganga valley.

1.2 IDEAS AND ECONOMY

Before discussing other aspects related to the theme it is necessary to briefly dwell on economic ideas inherent in our sources. It is necessary to mention that here we are concerned with the ideas of economy, as distinguished from economic thought, available in texts. We may proceed by citing some examples. In the middle of the first millennium B.C. we come across numerous crops and cereals such as barley, wheat, rice, sesamum, mustard, lentils, sugarcane, banana and mangoes in Sanskrit and Pali literature. Similarly, the spread of plough cultivation, paddy transplantation and knowledge of varieties of rice, with *sali* being a generic term, is attested. While *kedara* means a prepared plot, terms like *ropana* and *ropeti* are related to transplantation. These activities together with the demarcation of village space into *khetta* (cultivable land), *ushara* (waste land) and *gocara* (grazing units) unmistakably suggest the increasing importance and preoccupation with land and agriculture in the said period. The fields, it is said, appeared like the robe of a monk, clearly indicating their uneven, differentiated, patch-work pattern. The description of cattle in the *Suttanipata*, an early Pali text, as *annada* (giver of food), *vannada* (giver of beauty) and *sukhada* (giver of happiness) again demonstrates the importance of cattle in a situation dominated by peasant units of production. Like the visible frequency of terms related to the root word *go* (cattle) in the Rig Vedic period, when pastoralism was important, the changed economic conditions in the Age of the Buddha are reflected in the above mentioned references to crops, types of land and agricultural operations.

In the *Arthashastra* the section dealing with the settlement of villages (*janapada-nivesha*) brings out the importance of rural settlements and agriculture as the basis of the revenue of the state. The text preferred the habitation of shudras in newly founded agrarian settlements or the rehabilitated decaying ones, largely because they were capable of hard work and amenable to exploitation. In newly settled areas peasants were allowed tax remissions and state help in terms of the supply of seeds, money and cattle. These were intended to bring virgin land under cultivation and extend the orbit of revenue collection for the state. Similarly, farmers were not allowed to keep their plots unused. Royal control of non-agricultural production, including mining and metallurgy, and trade is envisaged in the text with a view to maximizing revenue. The relationship between mines and metals, the treasury and the consolidation and expansion of state power is clearly brought out in the *Arthashastra*. The *Milinda-panho* and *Manusmriti*, dating to the post-Mauryan centuries, suggest that the field belonged to him who cleared it of the forest cover and made it fit for cultivation. Such allusions reflect on the question of land-ownership and provide insights into the phased history of agrarian expansion. Post-Mauryan texts provide information about a large number of occupations and workers, with implications for craft production, specialisation and trade. The said period was marked by varieties of guilds, including those of craftsmen and merchants, and long-distance inter-regional and maritime trade. Inscriptions at Mathura, Sanchi and such other places mentioning the names and occupations of the donors bear testimony to their economic competence and the prosperity of the regions they represent. Coins in gold, silver, copper and even lead and potin issued by several dynasties and *gana-samghas* during this period bear testimony to the extent and depth of

monetisation of society. It ties up well with the contemporary history of towns and trade. The importance of categories such as peasants, artisans and merchants, and their requirements, is highlighted in the sources from the Age of the Buddha onwards.

With the coming of the Guptas and beyond land grant inscriptions become the major source of information for the writing of economic history. The remissions to the donee or donees suggest the possible sources of revenue. On the basis of the preponderance of agriculture-related terms in such records, among other reasons, it is argued that the Gupta and post-Gupta periods witnessed the decline of trade, decay of towns and paucity of metallic money. This is a much debated theme to which we shall return later. That all land grants were not made in virgin territories nor were they in all cases meant to extend the area under cultivation is obvious from the evidence in the records. In the context of the demarcation of the donated space reference to natural boundaries like anthills, rivers and forests, instead of neighbouring plots or settlements, would suggest sparse settlements or an early stage in the history of the area. Similarly, varying references to the addresses of the grants are also replete with possibilities for rural society. Inscriptions also provide information on types of settlements and their constituents, indicating differentiation and immense variety rather than all of them being alike. References to plants and crops like *jamun*, mango, cotton, paddy, oil seeds, etc. have implications for the history of agriculture and environment. Contemporary works like *Harshacarita* furnish evidence of the agrarian prosperity of Shrikantha and contrast it with the forest and forest life in the Vindhya, in the wider context of narrating the story of Harsha. The incidental yet vivid description of the two regions and the contrasting economic pursuits are a delight for the historian.

1.3 PRE-1950s HISTORIOGRAPHICAL TRENDS

Ancient Indian economic history up to the middle of the twentieth century was largely dependent on incidental references in literary texts. U.N. Ghoshal's *Agrarian System of Northern India* and A.N. Bose's *Social and Rural Economy of Northern India (c. 600 B.C. - A.D. 200)*, for example, are essentially based on textual material, despite the use of inscriptional data. Most works of this variety brought together factual details from different sources, cutting across time and space. It made it difficult to work out processes of change with regard to any institution. The analysis and explanation of economic life and institutions within incorporative concepts were unknown. Perspectives on early India have undergone significant changes from the middle of the 1950s and since then economic history, with bearings on society and polity, has occupied centre stage. From being a matter of marginal concern, economic history came to occupy an important position. Early India instead of being seen as a period dominated by numerous dynasties and their wars came to be perceived in terms of socio-economic stages. Explanations of change, including prosperity and decline, centering around political authority made way for another kind of analysis. Whether the Harappans had a plough or not or the Vedic people had access to iron or not or why it was that the rise of Magadha, emergence of urban centers and 'heterodox' sects happened to coincide in the middle of the first millennium B.C. were the types of questions that began to be asked and addressed. In brief, there was a significant shift in perspective. In the process some cherished notions were disturbed, and that was inevitable. With the illumination of the wide ranging economic activities in the post-Maurya centuries and the comparative decline or stagnation in the Gupta period the idea of the 'Golden Age' of the Guptas received a set-back and the Guptas lost some of their lustre. The shift from dynastic to economic history

made common people visible and, instead of kings and dynasties, it invested them with agency.

1.4 THE NEW HISTORIOGRAPHY

The new historiography which became the dominant historiography through the 1960s and 70s emphasized technological and economic changes and their significance. Briefly stated, it characterized the early historical and early medieval periods in opposition to each other. The early historical period is seen as marked by wide-ranging exchange networks, horizontal spread of urban centres, monetisation of the economy and comparatively less unequal distribution of land, if not produce. Although society was stratified, it was more open and less exploitative than the later times. The vaishyas as the principal tax payers and shudras as the basic source of labour bore the brunt of production activities. The formation of the early medieval period, which is characterized as 'feudal', is perceived in terms of the decline of long-distance and maritime trade, urban decay, dearth of metallic money, fragmentation of authority (related to the phenomenon of land grants), the relative shifts in the fortunes of the vaishyas and shudras, localisation of crafts, loss of mobility of artisans, traders and peasants and the emergence of closed, self-sufficient economic units. The rise of a dominant class of rent collecting landlords and a servile peasantry, suffering numerous constraints, it is said, finally manifested itself in violent agrarian conflicts and rural revolts. It is necessary to note that the details of this summarised picture have not remained static over the years nor do all the exponents of the 'Indian feudalism' school hold similar views. Explanations of the transition to the early medieval phase have shifted from the decline of long-distance and maritime trade to decline of towns and even a social crisis. Historians differ in their treatment of the post-Gupta centuries. While some characterise the eleventh-twelfth centuries as a categorically distinct phase compared to the seventh-tenth centuries, which were marked by economic decline, others locate growth in the rural economy within the early feudal context, with long-term consequences for markets, merchants, trade and towns.

The idea of general decline as envisaged within the dominant historiography for early medieval India, notwithstanding the acknowledgement of agrarian expansion in certain regions during the same period, has been questioned in recent years. Though it is admitted that early medieval India experienced many interrelated processes of change it is treated in continuity with the early historical phase. The focus is on the historical transformation of regions outside Gangetic northern India and the changes coming from within local societies, leading to the making of agrarian regions. Agrarian expansion and peasantisation of tribes, local state formation and the extension of state society as well as caste formation and the hierarchical placement of different groups in society are seen as major developments characterising early medieval India. Instead of generalising across regions and periods this alternative historiography shows regional variations and changes over time. Rural settlements, for example, are shown to be of many types: village (*grama*), hamlet (*palli*), herders' settlement (*ghosha*), etc. Every village not necessarily had all the requirements such as a tank, temple and cremation ground. This situation compelled inter-village interaction. Similarly, the social composition of the villages varied. It is shown that rural settlements changed with time. They could and in fact did change from one category to another. A *grama* could at some point become a centre of exchange, a *hatta*, and move on to become a commercial node, known as *mandapika* in the north and *pentha* in the south. Such centres many a time attracted political attention

as sources of resource generation. As in the case of rural settlements and rural society, it is said, there were typological distinctions between trade centres and traders; and yet these hierarchies did not hinder interactions. *Vanikas* (petty traders), *banjaras* (peddlers), *sarthavahas* (caravan traders), *shresthis* (rich merchants) and *rajashresthis* (royal merchants) represent the range of traders in early India. The historical complexity and variety across regions, instead of being subsumed under generalisations, receive their due in this more recent historiography, which also questions stereotypes associated with ‘the village community’ (as closed, self-sufficient and homogeneous entities) and the decline of trade and urban centres in early medieval India. Like all informed debates the debate on characterising early medieval India has opened up new possibilities.

1.5 RECENT RESEARCHES

Recent researches on the economic history of ancient India seem to have contributed substantially to our better understanding of the past. This has been made possible not necessarily because of the availability of new data but largely owing to new perspectives and, flowing from it, new sets of questions which have been brought to bear upon the evidence. There have been some efforts towards the use of statistical methods in analysing stone tools and pottery, bearing on resource use and settlement history, and early medieval south Indian inscriptions for discerning patterns in economic and administrative histories. Having said that, it needs to be mentioned that given the nature of the source materials in most cases it is not easy to quantify. The assessments of the economic historian of early India of production, prices, agrarian expansion, the ratio of donated land to land under cultivation, etc., continue to remain at the best tentative. At the most one can speak about certain trends.

Usually there is a tendency to equate a political formation such as the Mauryan state or Satavahana Deccan with a social formation or to generalise from the perspective of a region like Gangetic northern India for the entire country. What is ignored in such instances is the unevenness in levels of material cultures across regions, and even sub-regions. Historians are beginning to recognise these disparities and charting the pattern of economic and cultural transformations in the varied regions. Although Indian history communities at different levels of technological and economic development have co-existed. The Neolithic cattle-keepers of the Deccan, the Mesolithic or middle stone age hunter-gatherers of Langhnaj (in Gujarat) and the Harappan agriculturists and craftsmen coexisted in a seemingly symbiotic relationship. The recognition of these differences helps us to understand the phased manner of economic growth in the sub-continent. Indian archaeology provides evidence for such uneven patterns of growth from the protohistoric period onwards. Even in Mauryan times, as mentioned above, much of the progress was largely confined to Gangetic northern India and adjoining regions. Parts of Peninsular India experienced comparable growth during and after the Mauryas. To elaborate, in post-Mauryan Deccan while coastal Andhra owed its prosperity to agriculture, the economy of the central Deccan (Telengana) was sustained by artisanal production, including the smelting and forging of iron tools, and trade. In Gupta and post-Gupta centuries the process of continuous agrarian expansion ensured the co-existence of economically interrelated developing and developed areas in many regions of the country. Forests and settlements, despite representing different kinds of spaces, existed in a relationship of interaction and change and not necessarily opposition in early India.

Archaeology has enriched our understanding of early India insofar as it has given rise to new sets of questions bearing on the expansion of agriculture, urbanisation,

crafts, money and trade. The numerous archaeological cultures (Black-and-Red Ware, Ochre Coloured Pottery, Copper Hoards, Painted Grey Ware, etc.) placed between the later half of the second millennium B.C. and the middle of the first millennium B.C. in indicating mutual contacts and adaptations have helped us in moving away from invasion and colonisation as explanatory categories for change. Further, the perspective provided by these chalcolithic and early iron age cultures assume importance in the context of the shift from the primacy of Vedic literature to a greater reliance on archaeological evidence to understand the long-term history of the spread of settlements, peasant units of production and the evolution of regions. The spread of iron technology at different stages into the varied cultural regions is usually seen to mark the transition to full-fledged peasant economy. This seems to have happened at different points of the first millennium B.C. across regions. The role of iron in shaping early historical north India has been questioned and there has been an interesting debate around the iron-productivity-surplus-complex society thesis. However, the origins of agriculture and the emergence of farming communities predate the coming of iron. The Neolithic-chalcolithic communities outside the orbit of Harappan civilisation produced the first farmers in different other parts of the Indian subcontinent, who domesticated such important crops as barley, wheat, rice and millets and animals like cattle, sheep and goat. Craft specialisation and exchange networks too did not begin with the historic period, their history can be traced to proto-historic cultures. The presence of high-value grave goods, including iron objects, at some megalithic sites in Vidarbha suggests social differentiation even in these early iron age cultures. The significance of the proto-historic data in any long-term perspective of resource-use, crafts production, exchange and social organisation cannot be missed. In fact, recent researches on the transition to the early historical phase in Gangetic north India, the Deccan and south India are underlining the importance of such evidence.

Researches on early medieval India are tending to become inscription based and region centred. Apart from the numerical richness of the epigraphical material, the desire to move away from only theoretical and prescriptive positions on state, society and economy, leading to a better and comparative understanding of processes and structures across the variegated regions explains these developments. However, there is an unevenness in the volume and quality of regional studies. While studies on early medieval Bengal, Rajasthan, Gujarat, Kerala and Tamilnadu indicate the patterns quite well, the same cannot be said for the other regions.

1.6 SUMMARY

Finally, it needs to be mentioned that today economic history is seen as a part of a wider canvas of history and it is not treated in isolation. The practice of inter-disciplinarity and the concern for opening up and addressing new dimensions of early Indian history have led to enhanced interest in issues like social differentiation, stratification, social mobility and state formation. Studies in these areas clearly indicate that economy is not the only agency of social change. Thus, it is realised that differentiation could emanate from multiple sources: access or absence of access to economic resources or political power. Upward social mobility was conditional upon acquiring economic or political power or both, which in turn were prerequisites for the observance and emulation of upper caste norms and rituals. The subject of state formation provides a good example of how one dimension of society cannot be studied to the exclusion of other dimensions. For the emergence of states an agrarian base, settlements and social differentiation of some kind are usually necessary. However, once states emerged they could, and in fact did, influence changes in each

of the aforesaid areas. Examples such as these, and they can easily be multiplied, illustrate the continuous interplay of numerous forces in the making of history, while simultaneously drawing our attention to the overlap between economic history and other facets of history.

1.7 EXERCISES

- 1) Discuss the contemporary ideas on ancient Indian economic history.
- 2) Did the prevailing ideas on economic history of ancient India suggest pattern of growth or stagnation?
- 3) Analyse the new emerging trends in historiography during the early 1960s.
- 4) In what ways the post 1950s economic historical writings represent a departure from early 20th century historical writings?
- 5) Account for the recent trends in the economic history writings of ancient India.

1.8 SUGGESTED READINGS

Chattopadhyaya, B.D. (2003), 'Trends of Research on Ancient Indian Economic History', in B.D. Chattopadhyaya, *Studying Early India: Archaeology, Texts and Historical Issues*, Permanent Black, New Delhi, pp. 217-31.

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UNIT 2 HISTORIOGRAPHY OF THE PRE-COLONIAL PERIOD – MEDIEVAL

Structure

- 2.1 Introduction
- 2.2 Colonial Perception
- 2.3 A Critique of Colonial Approach
- 2.4 Major Trends
 - 2.4.1 The Nationalists
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 - 2.4.3 A Critique of Marxist Approach
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- 2.5 New Trends
- 2.6 Summary
- 2.7 Exercises
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2.1 INTRODUCTION

The pursuit of economic history is a relatively new entrant among professional historians in India. Till the 1950s, it was scarcely regarded as an independent discipline by professional historians, the field being more or less a monopoly of economists by disposition. Among professional historians, the economy at best had a marginal presence, the greatest weightage being reserved for explaining political or dynastic changes. In such traditional works, the economic sphere was limited to the description of commercial and agricultural products of India in order to highlight what was at best understood to be the material culture of the people. The economy – the material foundations of society, and the ability or otherwise of a society to produce, consume and distribute its resources and assets among various groups of people positioned in asymmetrical relations with each other – did not constitute an autonomous objective of historical analysis.

2.2 COLONIAL PERCEPTION

There was however an exception, and that came from the colonial attempts to understand the nature of the pre-colonial Indian economy in order to highlight the achievements of British rule in India. The earliest serious explorations in this direction were made by W.H. Moreland, who in his books *India at the Death of Akbar: An Economic Study* (1920), *From Akbar to Aurangzeb: A Study in Indian Economic History* (1923), and *Agrarian System Of Moslem India* (1929), attempted to give a connected account of 'economic movements which affected India' under the Delhi Sultans and the Mughals. For Moreland the objective of economic history was to 'show how the people spent their incomes, and the sources from which those incomes were derived'. While he provided enormous details about the bases of economic production and distribution in the Indian economy, and for the 'increase in the efficiency of marketing agencies' under the influence of European commerce in the

17th century, he, as a colonial historian, emphasised the ‘intensification of economic parasitism’ which was simultaneously destroying ‘her productive energies’. This was because of the stranglehold exercised by a ruling class ‘accustomed to extremes of luxury and display’, who were ‘impelled by the strongest motive to grasp for themselves the largest possible share of each producer’s income’, which ‘brought about a marked and cumulative reaction on productive industry’.

2.3 A CRITIQUE OF COLONIAL APPROACH

While Indian historians largely discountenanced such a pessimistic view of the medieval Indian economy, the first serious attempt to counter such a negative prognosis was made from the 1960s by Irfan Habib. Of his many writings on the economy of medieval India, his *Agrarian System of Mughal India* (1963, reprinted 1999), and ‘Potentialities of Capitalistic Development in the Economy of Mughal India’ (1969) may be considered two of the most path-breaking ones. Habib’s researches demonstrated that Moreland’s views about the backwardness of the medieval Indian economy were not tenable. He showed the existence of private and alienable forms of private property in land, which coexisted with the rights of the state to a share in the produce, and with the rights of occupancy tenants beneath. Furthermore, as the medieval Indian economy expanded, it developed an integrated money economy, serviced by trader-bankers using remarkably sophisticated systems of double-entry book-keeping. This was matched by a remarkable expansion in city life, supported by a huge population of specialist artisans organised into workshops who produced for the court and for export both through European companies and directly to south-east and west Asia. Apart from the export of luxury items, India’s foreign trade consisted of both handicrafts and food grains: for example, large quantities of rice were exported from Bengal and from the Malabar coast.

Since the 1960s, writings on the medieval Indian economy have substantially confirmed these features. In fact, there is an overwhelming consensus that the medieval Indian economy witnessed substantial growth. The macro-view of the Indian economy at the turn of the 17th century may be summarized as follows:

- 1) a high degree of commercialisation, so that most producers produced in part for a market, and some, probably along the coast, produced primarily for the market;
- 2) a trimetallic monetary system backed up by elaborate (nationwide) networks of sophisticated financial institutions (for example, the *hundi*);
- 3) a number of primate cities, an interwoven network of supply lines to the cities, and a substantially large percentage, almost 15%, living in such places;
- 4) a system of land tenure based on private ownership and reasonably brisk market in land and in rights over land;
- 5) a high labour to land ratio, and the concentration of cultivation in lands of high intrinsic fertility which in turn made possible high yields per acre;
- 6) a political system in which the elite depended on a series of cash-valorized prebendalised holdings, the incomes from which either consumed in urban areas or hypothecated in advance to a class of specialised rural bankers/moneylenders who farmed these prebends by advancing money to the elite; and
- 7) specialised communities of merchants, each engaged in a distinctive branch of trading or double-ended money ventures with local economies as well as with the European trading Companies.

2.4 MAJOR TRENDS

Nevertheless, despite large areas of agreement on the features of the medieval Indian economy, historians have differed on the more problematical issues like: what caused this growth?, what was the general direction and nature of this?, and whether this process was actually severely undermined in the 18th century, or was it more of a reorientation under rapidly changing macro-circumstances rather than decline? Such considerations have resulted in historical reconstructions of the medieval Indian economy and centre around three core issues: periodisation; trends and characteristics of the medieval Indian economy; and the impact of Europe on India, first in the realm of trade and then in the increasing marginalisation of the Indian economy under the sweep of European (specifically, British) imperialism from the mid-18th century.

These concerns have led to the historiographical division of the medieval Indian economic history in the past fifty years in four distinct clusters. One cluster, based exclusively on official Persian records has revolved around the political-economy, especially the fiscality of the medieval state, from the 13th to the 17th centuries, where it is strongly argued that the medieval Indian economy was a distinct departure. The second cluster, which relies on the European-language archives (particularly the Portuguese, Dutch and the English) has focussed on the patterns of India's overseas trade and the nature of European commercial enterprise in India between the 15th and the 18th centuries, arguing again for a distinctiveness in the interface between Europe and India in the early-modern period. The third cluster has been explorations in regional economic history based on the vernacular-language archival materials, particularly in western India, where the focus has been overwhelmingly on the relationship between the state and the regional economies. The fourth cluster concerns itself with the break up of the Mughal imperial economy and the transition to a colonial economy in the 18th century. Its dominant concerns have been nature and incidence of the tax burden imposed by the new regime and the increasing retardation of the Indian economy under the new dispensation.

Broadly speaking, the principal approaches, which historians have adopted in their respective quests to understand the medieval economy, can be clubbed under three 'schools'. The first analytical paradigm, which has been of the longest duration, can be broadly called the nationalist; the second influential approach has been by historians who have adopted a Marxist framework, and the third is the 'revisionist' approach, which is of a more recent origin and also the one which has received the greatest criticism by the nationalist/Marxist historians.

2.4.1 The Nationalists

The nationalist interpretation, which emerged in the 19th century as a critique of colonial/imperialist constructions of a stagnant, unchanging 'East', is mainly concerned with establishing the pan-Indian unified nature of the medieval Indian economy, flourishing under the three-cornered stimuli of political stability provided by the medieval Indian, particularly the Mughal, state; the rich natural resources of the country, and the productivity of the Indian producers. These, it is argued gave India a unique position and made it the fulcrum of economic transactions in the medieval and early-modern periods. The nationalist 'school' places great emphasis upon the unified (i.e., composite) and dynamic nature of the medieval Indian economy, and sees its demise in the debilitating impact of colonial rule. In other words, had colonial

exploitation not intervened when it did, India would have transited into an economic powerhouse.

2.4.2 Marxist Historiography

Marxist historiography, which has reached considerable finesse and depth in the last fifty-odd years, does not speak with one voice in its interpretation of the medieval economy. There are some whose views border very closely to the nationalist position. For these historians, the levels achieved by the manufacturing sectors in 16th and 17th centuries India were enough to ensure that the economy was poised on the verge of an industrial revolution, till it was destroyed by an industrialising Britain. Such simplistic and unitary views of the medieval Indian economy are not shared by other historians of the same analytical dispensation. It is instead argued that the economic history of medieval India is an important chapter in the larger story of the exploitation of the Indian producers by a doubly-despotic system: that of a political-landed aristocracy combination and a usurious merchant capital, both of which sapped the vitality of the Indian producers by appropriating greater and greater portions of the surplus produced by them and then dissipating this enormous wealth in largely unproductive purposes. Thus, while the consumption fund of the medieval ruling classes increased enormously, this was achieved at the expense of the productive potential of the economy – a typical case of killing the goose that laid the golden egg. Therefore all the indices, which others have seen as symptoms of economic vitality, these historians view as transitory, bereft of all possibilities of achieving an economic breakthrough. The arrival of colonialism in the 18th century meant that it began preying on an economy already paralysed by its own internal stasis, and added to the misery of the producers both absolutely and in relative terms by introducing certain novelties, such as the new land-tax systems and the drain of wealth through the one-sided transfer of tribute.

In other words, while the nationalist vision of the medieval Indian economy is growth in the midst of a stable equilibrium, one influential variant of the Marxian framework sees it more as a fractured process where the fruits of economic growth were unevenly distributed among a parasitical ruling class in the form of revenue assignments, and the rest was siphoned away by a form of merchant-capital which existed only as an appendage of the revenue appropriating system. In this version of historical analysis, the prime mover of the economy was not the forces of the productive systems but the way in which surplus was collected by the state and distributed within the ruling class, and commercial growth, which occurred in the medieval economy was, typically of a forced nature. This argument, proposed in the 1960s is still adhered to with very little modifications by an influential group of historians.

Despite the major differences in the way nationalist and Marxist historiographies have interpreted the dynamics of the medieval economy, there are certain areas where they share certain commonly grounded assumptions. The first such ground is their almost complete agreement on the centralised nature of the medieval Indian state and of its being the hub of economic transactions. The second area of convergence is that the medieval economy was an expanding economy: cash usage had increased, as had the volume and complexities of commercial transactions. The third commonly shared position of the two schools is that the decline of the Mughal empire in the early 18th century was a deep disjuncture characterised, among other things, by chaos and anarchy leading inexorably to a deep-seated economic regression

This preoccupation with the centrality of the state can be seen in the 'forced commercialisation' thesis. An argument, which was specifically developed in order to understand economic retardation in the colonial context, has been pushed backwards to explain growth in the medieval Indian economy largely as a fallout of the fiscal requirements of the medieval Indian state. Since, it is argued, that the medieval state managed to extract more than 40 percent of the agricultural produce as revenue, paid overwhelmingly in cash, this constituted 'an incredibly high proportion' of a consumption fund in a predominantly subsistence economy. The accumulated wealth was circulated by the ruling class by conspicuous consumption, which thereby stimulated exchange, monetisation, markets, and a cash-nexus. However, the nature of this commercial growth was of an enforced kind since the extraction of revenue occurred through the use of non-economic coercion, mainly by the use of political compulsions. Two consequences followed. First, merchant capital would never develop an independent basis for it was entirely, almost parasitically, dependent on the vagaries of ruling class consumption. Secondly, the high burden of taxation served simultaneously to cripple the possibilities of growth in the cultivation of superior kinds of crops, and created extensive impoverishment in the countryside. One significant fallout of this highly exploitative system was that the possibilities of structural growth, that is, a qualitative transformation in the economic system to higher (capitalistic) level was prevented. Merchant capital, which had such an enormous presence in the economy would atrophy with the decline of the Mughal empire. Paradoxically, it is here that some of the findings begin to come perilously close to the arguments proposed by Moreland in the 1920s, some of which were summarised in the beginning of this essay.

In 1982 the publication of *Cambridge Economic History of India (CEHI)*, volume 1 especially was a benchmark. It summarised and synthesised an anterior generation of researchers along the nationalist/Marxist frameworks, and was thus a convenient point to begin looking afresh and to think ahead. In fact, many of the specific themes that constitute the teaching of Indian economic history still continue to be based quite extensively on that volume. I refer here to issues like the relationship between the state and the economy, the question of agricultural and non-agricultural production, the structure and dynamics of internal trading, the growth and spread of a money-using economy, and the changing networks and profiles of international trade and the impact on the medieval Indian economy.

2.4.3 A Critique of Marxist Approach

While historians recognise the importance of *CEHI* volume, some of its assumptions and findings have been critiqued in the following manner.

First, the chronological markers which guided this volume are no longer acceptable. The early medieval economy, that is India from the 8th to the 12th centuries is dismissed precisely into three pages, and the medieval is rather conventionally started in 1206. It also ends in 1750, but has practically nothing to offer as a discussion on the developments in the Indian economy during the period of Mughal decline. This critique has arisen because historians have now seriously rethought the bounding edges of what is constructed as medieval both backwards and forward, and the problem of continuities between the early medieval to the medieval, and between the later medieval to the early-colonial are now so deeply entrenched in historiography, and the unstated problematic in the chronological schema adopted by *CEHI I* is being increasingly seen as inadequate.

Secondly, the *CEHI 1* privileges the state and the expense of every other institution of social grouping that existed in medieval India. Every aspect of the Indian economy in these crucial centuries is seen as an extension of the luxury consumption and fiscal organisation among the elite, depending in the last instance on the ability of the state of systematically extracting between 40 and 45 per cent of gross agricultural produce. Critics have pointed out that quite apart from the fact that the evidence of such high degrees of extraction are questioned in the same volume by the evidence available from South India, this monocausal explanation is at surprising variance from the evidence being thrown up from regional records from Maharashtra, Rajasthan and Bengal. Also, the so-called extractive efficiency of the state gets substantially diluted if one looks at the significant fiscal leakages which occurred between what was collected and what was actually transmitted as tribute to the imperial centre. Local fees paid to landed-magnates, to holders of privileged tenures in the form of large grants of revenue-free lands which over time became patrimonial holdings, and the huge explosion of marketing-centres in rural India surely cannot be explained any more by this one variable.

Third, the large picture that one gets from the *CEHI 1* about the overall context of the medieval Indian economy in the six centuries which this volume encompasses is one of stasis. A certain degree of stratification and conflict in society is recognised, but this is posited within a surprising degree of changelessness in the larger context. In the long centuries between the 13th and the 18th, the *CEHI 1* identifies two phases or cycles of state formation, one in the 13th and 14th centuries, the second in the 16th and 17th centuries. Both the cycles were determined by the ability of the state to refine its tax-assignment systems, which, in both instances, fell regressively on society and subverted superior cultivation, while it simultaneously increased the distance between the rich and poor in the countryside. Stasis is implicit in this explanation because it ascribes one single motor to explain the same sort of change over six centuries: in other words, the more India changed the more it remained the same. Critics therefore point out that overall, one leaves the *CEHI 1* with this inescapable impression of a country trapped in an increasingly atrophying agricultural economy in which all other activities were irredeemably peripheral.

2.4.4 Revisionists

Such criticisms of the regressive characterisation of the medieval economy in *CEHI 1* have been made by historians who have been dubbed as 'revisionists'. A major milestone in revisionist history-writing of the publication, in 1983 of Chris Bayly's *Rulers, Townsmen and Bazaars* which spearheaded a fresh look at the problematic of state-society intersections in late pre-colonial India. More recently, individual historians who have increasingly begun questioning the state-dominated explanation of medieval India's economy have based their arguments on Persian-language sources, records contained in the regional (vernacular) archives, and the evidence contained in European-language sources (particularly, the Dutch and the English colonial records) in order to construct a rich and variegated social and economic history of India.

The revisionist viewpoint disagrees with and critiques the more dominant historiographical schools on three specific counts. The first is its disagreement with the effectiveness of the centralised state in medieval India. The second area of disagreement is over the dynamics of the commercial processes in medieval India. The third point of difference is that of the so-called subservience/ parasitism of merchant capital. At the level of the polity, instead of seeing the medieval state as an

effectively centralised one, attention is drawn by some historians, basing themselves on Persian sources, to the medieval state being a more negotiated arrangement with dominant landed groups in the countryside and vulnerable to internal pressures from its nobles. Some examples of these vulnerabilities are the inability of the medieval state, even under the Mughals, to affect parity between assessment of revenue (the *jama*) and what was actually collected (the *hasil*), or its failure to prevent transmission losses of up to 25 per cent of its revenue from the countryside. Attention is also drawn to the more structural inability of the medieval Indian empires to engineer a set of enduring systems to bridge chasms between a powerful land-based rural elite (the *zamindars*) scattered even in the heartland of the empire as well as all over the country. *Mawasat* and *zor-talab* (perennially refractory areas) thus existed cheek by jowl with *sir-i-hasil* (revenue paying) lands causing immense problems for the fiscal health of the state and severely undermined its military efficiency.

The arguments questioning the predominantly overarching role of the state are buttressed by a more differentiated view of the economy. Instead of commercial growth being an enforced offshoot of ruling class ostentation, the new view is that the economy enjoyed a relative autonomy manifest in the growth of small country towns and fixed marketing centres. Specially dynamic components of the economy are identified in the proliferation of marketing networks in the countryside, and the expansion of non-agricultural production spearheaded by artisans and funded by merchant groups busy provisioning a burgeoning export economy of the subcontinent. Particularly important in this conception are the roles being ascribed to the landed gentry, who instead of being a class of rural exploiters are now being seen as playing a more proactive role in the economy by financing agricultural reclamation, providing vital agricultural inputs to stimulate production and encouraging exchange by establishing markets in their domains. A further suggestion is that the agrarian revolts at the end of the 17th century and their successes were not so much the desperate reactions of an impoverished peasantry but indicated the prosperity of these rural gentries

The argument about the parasitic nature of commercial life in medieval India has also been effectively undermined by historians exploring the nature of the maritime trade of India, particularly in the 17th and 18th centuries. There are specifically some important areas where a considerable refinement has taken place. One has been the almost complete rejection of the notion, proposed in the 1950s, that the Indian merchant was a mere pedlar and that India's trade was overwhelmingly in luxury goods. The consensus, instead, is of a trade comprising a diverse range of commodities, including luxuries, being conducted by a whole range of merchants starting from merchant-princes at the top to petty itinerant *vyaparis* at the village level. These constituted the cornerstone of the 'Asian trade revolution' occurring in the 16th and 17th centuries, a process which has been recently redefined as being composed of two parts: 'the phenomenal expansion in the volume and value of Euro-Asian trade', and 'a major diversification in the composition and the origin of the Asian cargo entering this trade'. Another area of refinement has been a new understanding of the relationship between the Indian merchant and the medieval Indian polity. The Indian Ocean was part of an elaborate commercial network with the Atlantic and the Pacific, and it was the increasing Europeanisation of early modern trade that set the tone and the future of India's commercial life in this period. In its long engagement with this commerce, the Indian side provided goods and the services, but under conditions of demand which were mediated by the global networks of European commerce. The profits were significant from the Indian point of view, and much wealth, mainly in the form of silver-bullion, flowed into India through this

channel. From the perspective of understanding the economic history of India, these developments were extremely significant. Indian commercial life and merchant capital was deployed in the service of wider networks of connections whose impulses were determined as much as from Africa, South-east Asia and Europe as they were from Agra and Delhi.

Far from being mute spectators to the caprices of the medieval ruling class, the merchants are now seen as conscious makers of their own destinies. Merchant-princes exercised considerable influence in the polity, and some indeed became grandees of the empire. Others who did not enjoy, or desire, such a proximate relationship with the state nevertheless undertook a 'portfolio' of investments, which included state-finance through contracting for revenue farms (*ijara*) and in moving the imperial tribute from the provinces to the central government. This latter role was vital in maintaining the fiscal health of the medieval state, a fact which the state could ignore or interfere with only at its own risk and peril. Furthermore, the minting of coins and the movement of bullion was the exclusive preserve of a specialized body of merchants, the *sarrafs*. The state seldom tried to or could interfere in this area.

Significant also has been the newly emerging emphasis in historical reconstructions of the medieval economy on the role of merchants and traders in the 'intermediate' (as distinct from the imperial centre and the village) layers of the Indian economy. This has emerged in order to contextualize the growing importance of internal and trans-regional trade in basic raw materials, foodstuffs, and capital goods carried in vast quantities through the interior by small merchants and itinerant (*banjara*) caravans. *Banjara* networks facilitated an exchange economy of surprising densities stretching over great distances. For instance, much of the cotton woven by the large textile industry on the south-east coast came from Maharashtra and Berar; the whole interior of the southern peninsula was dependent for salt on supplies brought from the sea; and the poorer people of the rice-growing riverine systems of the southeast ate not the expensive crops which they produced, but millets and dry grains carried from the interior. Such complex networks could arise only because of the internal dynamism of the countryside. One such dynamic was the existence of various non-peasant groups who lived in the villages to perform various rituals, commercial and administrative functions. In addition, large town-based merchants also had their agents who either resided there, or came periodically to purchase directly from the peasant at the time of the harvest. In addition, the villages also had substantial numbers of people who were either craft producers, traders or engaged in providing various ancillary services to the village folk.

2.5 NEW TRENDS

Analyses of the medieval Indian economy have also been significantly reoriented in the recent past by using inputs from social anthropology and by broadening the concept of economic exchanges as involving a whole set of micro-transactions of a social and cultural nature. A major input in this respect has been 'ethno-history', an approach adopted by many historians from north America while studying pre-colonial India. The end purpose of ethno-history has been to deconstruct south Asian traditions and to reconstruct the past more in keeping with the values and understandings of the historical agents who lived it. One important shift ethno-history has brought about has been its attempt to see Indian history not as a prisoner of immutable categories (like caste, village community, or the *jajmani* system), but in terms of key institutions through which regional social and economic constellations can be

more meaningfully pursued. 'Little kingdom', 'watan', 'lineage group', 'temple', 'sect', 'gift', and 'honour' are seen as some of key institutions governing power, status, socio-economic transactions, entitlements, commercial exchange and wealth in India's rich and varied countryside. The significance of these institutions is that, if the relationships covered by these are explored, it becomes clear that we are dealing with a society whose articulations were much more complex and potentially dynamic than the concepts of immutable tradition or monolithic class structures. Another area where ethno-history has had a major presence is that it has drawn attention to the close relationship between community forms and structures and the imperatives of the material contexts in which they were situated. In other words, attention is now being increasingly focussed on the more non-formal communitarian-institutions as regulators of economic life for large groups of people.

This important input has led to many historians, particularly those studying the histories of south India and western India, emphasising the formation and role of community institutions in the economy and their eventual dissolution or transformation in the midst of macro-level economic changes. They show how these community-oriented institutions allowed members access to scarce resources, allowed them to maximise opportunities under sometimes trying conditions and helped in the allocation and redistribution of scarce resources among members of a community. Studies in other areas, in north India, Bengal, Hyderabad have also shown how during the late 17th and 18th centuries these regions saw the rise of 'great households' straddling the worlds of commerce and politics; literate-gentries like the 'vakils/dubashes' who were critical in the growing interface between European and the Indian commercial lives; *mirasi* peasants actively pursuing new opportunities in commercial agriculture in the south and the western parts of India; and commercial zamindars whose growing fortunes were based on the accumulation of wealth drawn from privileged rights previously held under ruler's and/or community prerogative.

How are these perspectives beginning to reorient the processes of understanding the nature of the pre-colonial Indian economy?

There is in the first instance a growing rethinking on the nature of the relations of production in the economy. The existence of privileged social groups in the countryside as well as rich peasants situated cheek by jowl with the poor, landless and the menials means that the circuits of investable capital and its intervention in the labour process could proceed autonomously, that is, independent of the macro-level transference of tribute from the regions to the imperial centre. Production responded to shifting market and price conjunctures, and this has been shown to have occurred in commodities as diverse as cotton in western India and rice in Bengal. A substantial section of the rural workforce was composed of artisans or engaged in pastoralism and/or in the exploitation of forests and jungles. A high density of cattle in pre-colonial India testifies to the existence of pastoralism and its centrality in the rhythms of agricultural production. Such specialized workforce meant the relative autonomy of an exchange sector in the village itself. It also meant that cultivation tended to be concentrated on high-quality lands, capable of being soil-replenishing in its techniques and strongly supported by high levels of animal fertilisation. As a result, per acre yields were perhaps substantially higher than those generally achieved in the later 19th-century.

From this the move into the question of markets and marketisation is a natural one. Far from being the accidental outcome of the circuits of high-end consumption of tribute, one needs to look at markets in medieval and early modern India in a bottoms-

up approach. Markets grew, as is commonly known, as did towns and cities with the vast contingents of soldiers, courtiers, priests, merchants and artisans. Large Indian cities (like Agra and Delhi) exuded substantially high levels of economic energies *sui generis*, thus radiating commercial impulses for up to 100 kilometres into the surrounding countryside; but smaller towns, perhaps performing a greater commercially aggregative role than the 'primate' cities of the Empire, could easily be indistinguishable from its surrounding countryside. On the whole, one of the principle thrust areas of the new approaches to Indian economic history is to locate marketisation and circulation in a multitude of productive and commercial functions below the level of the large city and their concentration in centres scattered over a wide variety of intermediate townships (*qasbas*) and in the larger villages (*dehat or gaon*). These together comprised a web of interconnected production centres dotting the face of the country across interwoven trade routes, which gave rise to a rurban (*muffusil*) economy that incorporated in it the village and the intermediate *qasba* economies into a composite whole.

Then there is the question of monetisation and cash-nexus in the medieval Indian economy. There is a surprising unanimity of opinion that the economy of south Asia witnessed the exponential increase in the volume and velocity of money transactions in these centuries. The question is: how does one explain such an increase? The standard answer so far has been that the monetisation was a result of greater systematisation of tax-gathering apparatus of the medieval state and its increasing propensity to collect revenue in cash. Attention is also drawn to the proliferation of mints and their centralisation as an example of this phenomenon. On the whole, such developments indicate the growing ability of the medieval state system to organise the circulation of large amounts of money; they do not explain the genesis of monetisation in the economy. Even a cursory look at the monetary history of the Delhi Sultanate shows how the development of the medieval state need not necessarily have corresponded with a greater availability of money. The period between the 10th and 12th centuries were marked by a severe monetary contraction both in India and in the Persian Gulf. In India, this was a period marked by intense plundering raids which digorged the hoarded treasures of northern India into the Islamic world. Plundering raids in the thirteenth century continued to operate as a significant factor behind the expansion of money use in the Sultanate's economy as did agrarian taxation and the growth of town centres. The thirteenth century expansion was again setback towards the end of the fourteenth century when there is strong evidence of extensive debasement of coinage, and in the fifteenth century when north India seems to have been facing a severe crisis of precious metals, mainly silver. The period between the 16th and eighteenth centuries was marked by a remarkable stability in the availability of metallic currency. The crucial fact remains that India did not have natural sources of precious metals, particularly silver and the export-expansion which India witnessed in the 17^{so}.th and 18th centuries in the direction of India's foreign trade first towards the Iberian peninsula and then towards northern Europe was the principle pump through which increasing quantities of that precious metal flowed into the bloodstream of the Indian economy. Centralisation and intrusive fiscal policy of the later medieval state was dependent on this prior economic expansion, and not the other way round.

Finally, economic historians have posited the idea of a conjuncture in late sixteenth and seventeenth centuries in order to explain the huge expansion as well as the possibilities of crisis in the Indian economy. The conjuncture between intrusive centralism of the Mughal state and the steady growth of the long-distance maritime trade running from the Mediterranean to East Africa to China and Japan was the

binding agent in the 17th century nexus between the dynamic Indian economy and the north European trading companies. Such binding agents, paradoxically, both expanded and weakened the sinews of the medieval Indian economy for two reasons: a) most indigenous traders in each exporting region assumed a position subordinate to the servants of the East India Companies; and b) in place of the older structure of a free trade flowing through overlapping markets centres through a series of port-entrepôts of India to the Mediterranean, the East India companies substituted a centrally administered channel for the exchange of goods and treasures. In effect, the most expanding and profitable portions of India's export trade were blocked-off from the independent Indian merchant. In effect, the commercial strength of the medieval Indian economy may have also been the source of its greatest weakness.

2.6 SUMMARY

The colonial historians defended the colonial policies and colonial rule in general by underlining the backwardness of India's pre-colonial economy. The first serious attack on colonial historiography was provided in the early 1960s by Marxist historians, particularly by Irfan Habib. His writings shattered the existing myth of a 'stagnant' pre-colonial Indian economy. Instead he highlighted the presence of a vibrant economic life in the pre-colonial period based on high levels of commercialisation of agriculture and money economy. The Marxist approach to study the medieval economy is largely 'state centric'. The 'revisionists' challenged their approach. They emphasized that 'regions' too played an equally dominant role. Recent studies on medieval economic history have broadened the base further and tried to integrate ethno-history with it.

2.7 EXERCISES

- 1) Discuss major approaches to study the medieval Indian economy.
- 2) Discuss Marxist approach to study the medieval Indian economy.
- 3) Provide a critique of the Marxist historiography.
- 4) Examine the new emerging trends to study the medieval Indian economy.
- 5) Give a brief account of the revisionist approach to studying the pre-colonial economy.

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UNIT 3 HISTORIOGRAPHY OF THE COLONIAL ECONOMY

Structure

- 3.1 Introduction
- 3.2 Main Trends
- 3.3 Issues and Themes in Historiography
- 3.4 New Trends
- 3.5 Summary
- 3.6 Exercises
- 3.7 Suggested Readings

3.1 INTRODUCTION

The economy of India has been the subject of economic analysis from the time the English East India Company began trading with India. There is ample evidence that the economists in England, including Adam Smith in *The Wealth of Nations*, explored the implications of the import of Indian products by Britain. Critics in the British parliament denounced Company rule in Bengal in the late 18th century and the origins of the drain of wealth from India can be traced to this period. The negative impact of colonial rule was very sharply criticized by Indian nationalists in the 19th and 20th century from Dadabhai Naoroji to Mahatma Gandhi. Marxists like R.P. Dutt and Ramakrishna Mukherjee have also been concerned about the transformation of India into a colonial economy and the argument has been developed more substantially in the work of later scholars.

Recently liberal and neo-liberal economists have tried to modify the critique of colonial rule in India developed by the left and nationalist historians of India. The left-nationalist position has been articulated in texts like Bipan Chandra's *India's Struggle for Independence* and Sumit Sarkar's *Modern India. The Cambridge Economic History of India, Vol II, c1757-1970* edited by Dharma Kumar and Meghnad Desai and *Economic History of India, 1857-1947* by Tirthankar Roy can be considered important contributions to the liberal understanding of the Indian economy in the colonial period. The left nationalist perception of the colonial economy has been subjected to critiques in recent works but the more substantive issues raised by this group of historians have not been fully addressed by the new economic historians.

3.2 MAIN TRENDS

The Colonial Viewpoint

The men who ruled India and the colonial scholars who assessed that rule were at great pains to emphasize that the advent of British rule had brought peace and good government to the subcontinent. Pax Britannica and the enormous public investment in the country brought about the development of a modern transport and communications network that laid the foundations of a modern economy. The railway network and irrigation system introduced by the British was the bedrock on which a

modern economy was built in India. The British conferred the benefit of western science and education and prepared the Indians for eventual self-government. Scholars like Vera Anstey and Theodore Morison were willing to admit that there was an element of tribute in Britain's economic relations with India but that on the whole British rule was beneficial for the Indians. In any case their main purpose was to provide a defence against the charges brought out by the nationalists and nationalist economists against colonial exploitation.

The Nationalist View

Nationalist economists like Dadabhai Naoroji, Mahadev Govind Ranade, and J.V. Joshi were strong proponents of a theory of drain of wealth from India to Britain. Naoroji developed the argument about the drain of wealth from India in *Poverty and Un-British Rule in India*. They argued that British rule led to the impoverishment of India and that the Indian economy was subordinated to meet the needs of the British economy. A policy of free trade led to de-industrialisation and the growth of landless agricultural labour and the decline of employment in the secondary sector of the economy. A policy of high land revenue to meet the heavy expenditures on defence and civil administration led to the exploitation of the peasantry and the decline in per capita income during the period of British rule. The nationalist and economic historian, R. C. Dutt, had a debate with the Viceroy, Lord Curzon, on the nature of colonial rule in India along these lines. The substantive critique was developed in Dutt's *The Economic History of India* published in the early years of the twentieth century. Bipan Chandra explored the economic ideas of the Indian nationalists in *The Rise and Growth of Economic Nationalism in India* published in 1966. B.N. Ganguly used modern economic theory to assess the contributions of the nationalists to economic thought in *Indian Economic Thought: Nineteenth Century Perspectives*. [Delhi, 1977]

The growth of commercial agriculture, often under physical or economic coercion, led to the growing dependence of the peasantry on merchants and moneylenders. This process of commercialisation of agriculture led to differentiation of the peasantry, growth of sharecropping and tenancy as well as landlessness. It also resulted in exploitation by both merchants and moneylenders and increase in the number of famines and rise in mortality. Most nationalists and nationalist economists attributed the devastating famines of the 19th century to the ill effects of colonial exploitation. The British rulers pursued a policy of free trade in order to promote the interests of British industry, most notably the Lancashire cotton textile industry, which flooded the markets in India.

The nationalists generally dealt with the neglect of public investment in irrigation and agriculture and the lack of support for scientific and technical education in the country. They argued that Britain was trying to transform India into an adjunct of the British economy as a valuable source of raw materials and a consumer of British manufactured goods. They did criticize the control over India's money supply, interest and exchange rates but that was much later in the twentieth century and particularly in the inter-war period. The primary focus of the nationalists was on the need for tariff protection and the measure of protection that was actually provided by the colonial Tariff Boards during the inter-war period to specific industries like cotton, steel, paper and sugar. In the final analysis the retardation of the Indian economy was attributable to the policies pursued by the British in India, not any failures on the part of the Indians.

The Marxist understanding of the colonial economy was that it was linked to broad changes in the British economy. The phases of capitalist development in Britain determined the features of imperialism in the colonial world. The phase of merchant capitalist development led to the exploitation and plunder of the resources of the non-European world. The exploitation of Bengal, after the battle of Plassey in 1757, was responsible for the 'drain of wealth' to Britain in the second half of the 18th century. The resources from India contributed substantially to the accumulation of capital that was essential for the British industrial revolution in its early stages. These ideas with minor variations can be found in the works of R.P. Dutt, Ramakrishna Mukherjee, Irfan Habib and Utsa Patnaik.

Marx himself had argued that colonialism would have a destructive phase in the beginning and it would be followed by a regenerative phase in which the colonial economy was transformed over time. The nationalists and the majority of Indian Marxists argued that the impact of colonial rule in India was basically negative. Colonialism led to the immense exploitation of the Indian people and the immiseration of the population. Some Marxists, like Hamza Alavi and Jairus Banaji, briefly argued for a new or an additional stage in the schema of historical evolution offered by Marx, namely the colonial mode of production. [Utsa Patnaik (ed), Delhi, 1990] Indian Marxists, most notably Irfan Habib, did not accept the suggestion that in India there was an Asiatic mode of production instead of feudalism, but the idea of a colonial mode of production died within a decade of its appearance. Bipan Chandra argued that excessive colonial exploitation of India in the early phase of capitalist development in Britain led to the retardation of the Indian economy. Therefore the utility of India for Britain in the next stage of its historical development diminished.

The Marxists share many ideas with the nationalists – the drain of wealth, deindustrialisation, forced commercialisation of agriculture and the exploitation of the common people by colonial rule. Where they differ is in developing a systematic critique of the Indian capitalist and landowning classes on the question of economic growth, land reforms and anti-moneylender and anti-landlord legislation in the colonial period. Also the Marxists invariably link their critique of colonialism to capitalism and imperialism. Many nationalist economists too refer to these terms but they do so in a less rigorous and comprehensive manner than the Marxist economists. The Marxists also consider alternatives to the path of economic development adopted by the mainstream Indian nationalist leadership. They have a different assessment of the possibilities of economic and political development within colonialism from that of the nationalist economic historian.

The work of Latin American economists and historians like Andre Gunder Frank [1967] and Celso Furtado [1970] has been quite significant in shaping the understanding of colonialism. The most significant and popular argument was that underdevelopment was not a natural condition and that there had been over time the development of underdevelopment. It was argued that European capitalist imperialism from the 17th century onwards had been exploiting the resources of the non-European world. The economies of the countries that came under the grip of these capitalist forces were systematically exploited and distorted over several centuries. Therefore to describe the third world economies after the Second World War as underdeveloped was a blatant distortion of history. The work of Samir Amin [1974]

and Immanuel Wallerstein [1976, 1979] also shaped discussions of colonialism in Asia, Africa and Latin America right through the 1970s and 1980s in the Third world

The 'dependency school' was not very popular in India partly because it was unacceptable to Indian Marxist scholars. Even in the west Marxists like Bill Warren had criticized the dependency school argument in *Imperialism: Pioneer of Capitalism* published in 1980. The Indian Marxists felt that this school was working with an understanding of capitalism based on exchange relations rather than production relations within an economy. They also found the attitude towards economic growth too rigid and deterministic. The 'world-system' and 'world economy' approach of Wallerstein, with its division of the world economy into core, periphery and semi-periphery, was also perceived as too schematic and rigid. The immense complexity of the society and economy of South Asia also made arguments at this level of analysis unacceptable to the majority of Indian left-wing scholars. The body of empirical work already done by Indian Marxists also made them disinclined to pursue the lines of enquiry offered by the dependency and world-system theorists.

Liberal and Neo-Liberal Interpretation

In the 1980s the 'counter-revolution' in economic history gained momentum in the Anglo-American world. The rise of monetarist theories and the growing rejection of Keynesian economics led to a revaluation of major issues in the economic history of Britain and other countries. The revaluation of imperialism also began in this period and scholars like Cain and Hopkins [1993], Patrick O'Brien, [1988] Davis and Huttenback [1986] began to question some of the staunchly held views of the Marxist and left-liberal intelligentsia about the nature of colonialism. British colonialism did not in this view appear as exploitative as it did from the left-nationalist viewpoint. It has been argued that the economic exploitation of the colonies was not beneficial to the British people as a whole; that the availability of markets for British industrial goods in the colonial world and capital investment in overseas markets may have discouraged domestic investment and delayed the development of the 'new' industries in Britain. In fact in the *Past & Present* of 1988 O'Brien went so far as to argue that Britain would have been better off if it had abandoned its Empire in 1846 as the free traders like Cobden and Bright were arguing at that time.

The recent emergence of liberal or neo-liberal ideology is not only a hardheaded look at the economics of empire. There has been much concern about the application of economic theory and neo-liberal theory in order to look at the economic issues explored by an earlier generation of left-nationalist scholars. Tirthankar Roy's examination of the issue of de-industrialisation in colonial India takes up self-consciously a non-Marxist viewpoint based on the ideas of Adam Smith. Gregory Clark [1987] examines the question of labour productivity in Indian mills as a factor affecting their ability to compete against British imports despite very low wages. The links between economic processes and social stratification and change is also explored in recent literature.

The earlier economic historians explored the broad trends in economic development of the country. Over time there has been a proliferation of empirical work on a whole range of themes and subjects that only received cursory treatment in broad surveys of the colonial economy earlier. Secondly, the use of economic theory has

increased in the study of economic issues. New concepts have emerged and the same data has also been examined from a fresh point of view. Thirdly, the level of rigour in the use of statistical data has improved over time. In the 1970s there was the emergence of rigorous quantitative economic history in the study of the economies of the west.

These quantitative historians, known as the cliometricians, made use of econometrics and statistics to interpret economic data in a manner that had not been possible earlier. The use of counterfactuals to interpret changes in economic processes also grew in the 1980s. The second edition of *The Economic History of Britain Since 1700* in three volumes published in the mid 1990s actually integrates quantitative techniques and counterfactual arguments to make assessments of British economic performance, of the costs and benefits of British imperialism and the value of British overseas investments. These techniques were not important when the first edition of this work, *The Economic History of Britain Since 1700*, edited by Floud and McCloskey, was published in two volumes in 1981.

Economic Theory, Anthropology and Ecology

In Indian economic history we find theoretical sophistication in the work of Amit Bhaduri [1999] and Krishna Bharadwaj [1974] in their discussions of agricultural development. The use of quantitative techniques can be found in the work of Omkar Goswami and Shrivastava at the level of the regional economy and the work of Blyn, Heston and Sivasubramanian at the level of the Indian economy as a whole. There has also been the use of anthropological evidence to interpret economic and social change. In his study of the emergence of bonded labour in the Gaya and Shahabad districts of Bihar Gyan Prakash has used the oral Lok literature of the bhuiyan landless labourers to reconstruct the past and understand the kamia-malik relations in the region. Dipesh Chakravarty has used ideas of Marx and Heidegger to interpret the Vishvakarma puja by industrial workers.

The study of ecology and environment was considered important for scholars of ancient India. Scholars of ancient India considered the implications of geography for Indian history very important even fifty years ago. In the study of modern India the role of ecology and environment, though not totally absent, was not given more than a passing reference until about two decades ago. Agronomists and industrial economists were always concerned about specific aspects of the environment even fifty years ago, but a wide-ranging concern has emerged only in the last two decades. Ecological aspects of poppy and indigo production can also be found in the study of the commercialisation of agriculture in Bengal by Binoy Bhushan Chaudhuri in the late 1960s but the primary concern was not with ecology and environment.

A major early text, *Agrarian Conditions in Northern India* by Elizabeth Whitcombe published in 1972, was concerned with ecology. It studied the ill effects of the spread of irrigation in the United Provinces. However the main contribution came from Ramachandra Guha and Madhav Gadgil in *This Fissured Land*. [1992] In recent years Richard Grove, [1998] M. Rangarajan, [1996] Sumit Guha [1999] and K. Sivaramakrishnan have worked on these themes. Ludden's *Agrarian History of South Asia* is also an attempt at integrating economic, agronomic and ecological themes.

3.3 ISSUES AND THEMES IN HISTORIOGRAPHY

The Eighteenth Century and Colonialism

One of the major concerns in South Asian historiography has been the potentiality of capitalist development in the region. Irfan Habib discussed this in the late 1960s. He did not think that there was the possibility of capitalist development in India despite several favourable features of the economy of 18th century India. Several scholars have challenged the viewpoint that regarded the west as the model for economic development. The transition from feudalism to capitalism is no longer discussed in terms of the two paths that Marx had described and Dobb had discussed in his *Studies in the Development of Capitalism*. [London, 1963] Terence Byres has argued that there are several historical paths from feudalism to capitalism. Even more radical a perspective has emerged over the last decade. The historical explanations for the rise of capitalism in Europe have been questioned and the gap between the west and the rest of the world has been challenged. This has been cogently argued in *The Great Divergence* published in the year 2000 by Pomeranz. Although this deals with the similarities in the levels of development in south China and England until the second half of the 18th century the critique of Eurocentric history has finally emerged.

After the publication of the works of Bayly, Marshal [1998], Alam and Subrahmanyam it is no longer possible to regard the 18th century as a period of decline and decay. They have argued that the period was not marked by stagnation and destruction although recurring warfare did have negative effects. The advent of colonialism was not a sudden or disruptive event but a gradual process. Further, European trade had expansionary effects on the economy of India and was not as exploitative as the nationalists and Marxists like N.K. Sinha [1965] and Ramakrishna Mukherjee [1974] had argued. Capitalism did not develop in India but the living standard of the artisans and the rural population was hardly as dismal as early colonial accounts had suggested. Parthasarthy has argued that the conditions of weavers in South India were as good as that of weavers in Britain at the end of the 18th century. [Past & Present, 1998] The 18th century was a period of agricultural expansion and scholars like Muzaffar Alam [1986] and Stewart Gordon [1994] have argued that there was expansion of acreage in several regions despite the decline of the Mughal empire and frequent warfare.

In a recent survey Bayly has argued that Europe did have a lead over the non-European world. *The Birth of the Modern World* argues that the industrious revolution, changes in the nature of warfare and the role of the state in Europe in the 17th and 18th centuries may have as much to do with the edge that European states enjoyed in the non-European world as the so-called industrial revolution. Bayly has argued that 18th century India was far more dynamic than was believed earlier but it was not in a position to compete with the East India Company in India. In his earlier works, *Rulers, Townsmen and Bazaars* and *Imperial Meridian* Bayly has not looked at the question of exploitation and drain of wealth from India. In his 2004 publication he does cite O'Brien to argue that the transfer of resources to Britain could have constituted about 5% to 15% of the capital formation in Britain towards the end of the 18th century. The revisionist work of Bayly and the Marxist critique may have come as close to each other on this issue as is possible given the difference in the perspectives of the two traditions, liberal and Marxist.

The nationalist economists had argued that British rule had impoverished the country. All the nationalist estimates of per capita income under colonial rule brought out the decline in per capita income in the country after a century of rule. The colonial apologists pointed out that this had to do with the backwardness of the country before the advent of colonial rule and the tremendous increase in population that pulled down the per capita output and consumption of foodgrains in the country as well as the per capita income. Various estimates have been made about India's overall performance. One scholar thought it fit to divide the assessments on the basis of their conclusions into optimists and pessimists. The optimists found evidence of economic progress in terms of infrastructure for a modern economy, the emergence of a class of rich peasants in various parts of the country, the rise of modern industry and institutions. D.K. Fieldhouse and Niall Ferguson are the liberal scholars who take a more optimistic view of the overall progress under colonialism or Anglo globalisation as Ferguson [2003] chooses to call it in his book *Empire*.

There is no doubt that colonial rule did not lead to remarkable economic progress. The Marxist argument was that the British industrial capitalists did not want India to compete against the industries of Britain and therefore followed a policy of free trade. Dadabhai Naoroji, D.R. Gadgil, [1969] R.P. Dutt, A.K. Bagchi [1972] and Rajat Ray [1979] emphasize the importance of the policies of the colonial state, regardless of the other factors responsible for retardation of the economy. The nationalists and Marxists agree that a measure of tariff protection and state support for industry would have led to substantial industrial growth before the First World War. The British had a stake in thwarting India's industrial development but the utility of India as a market for British manufactured goods depended on the purchasing power of the Indian population.

Barrat Brown [1974] and David Washbrook [1981] explored the implications and reasons for the stagnation of Indian agriculture. Brown argued in the late 1970s that the slow development of the Indian economy and specially agriculture diminished the opportunities in India for the British export industries. Washbrook argued that whenever the impulse for modernisation and development of the colonial state came up against the need to maintain political stability the state invariably chose the latter instead of the former. The reasons for the limited public investment in irrigation in the pre-World War I period had to do with the official requirement of an adequate rate of return on investment in irrigation projects after a certain period. The nationalists argued that the British neglected irrigation in favour of the railways because the latter industry directly served the interests of the British economy. Whatever the reasons for it the performance of Indian agriculture was dismal and the optimists and the pessimists have very marginal differences in their estimates of the overall growth rate and per capita growth rates of output, productivity and yields of agriculture in the period 1900-1947.

It was argued by the Marxists that the impact of the Great War and the Great Depression weakened Britain's grip over India and allowed the Indian industries to develop. In recent years the argument of scholars has been that in the closing years of British rule in India foreign capitalists and expatriate businessmen in India were willing to invest in industry but were constrained by the absence of sufficient demand for the products of industry. Tomlinson argued this more than two decades ago with regard to the plan to set up a second steel plant in India to rival the Tata plant at

Jamshedpur during the mid 1930s. In the late colonial period while several factors favoured import-substitution industrialisation economic nationalists and left wing scholars have continued to emphasize the rearguard action of the declining staple industries like Lancashire cotton to try and retain its market in India. Basudev Chatterjee and Aditya Mukherjee emphasize the struggle of Indian businessmen and nationalist politicians to try and protect Indian interests against the interests of foreign capitalists. Limited growth of industry takes place despite the negative role of vested interests and the colonial state.

Deindustrialisation

In the early left nationalist assessments of the decline of the traditional artisanal industries in India it was argued that manufactured imports led to a significant decline in the number of people engaged in the secondary sector and the growth of landless agricultural labour. S.J. Patel. [1952] had used the Census of India Reports to argue that landlessness in India had increased dramatically Daniel Thorner used the same Census Reports from 1881 to 1931 in *Land and Labour in India* [Bombay 1962] to argue that the decline in secondary employment during this period was not more than one or two percent. The misreading of Census categories was behind the high estimates of decline in the secondary sector. The focus of scholarly attention thereafter shifted to the decline in employment in the pre-Census period.

In 1968 Morris David Morris argued that the discussion of deindustrialisation was uninformed by economic theory. Even with substantial increases in cotton imports into India during the 19th century an increase in population, per capita income and per capita cloth consumption could have led to an expansion in the size of the domestic market for cloth. Therefore the argument for deindustrialisation based on rising manufactured imports into the country would not hold. The *Indian Economic and Social History Review* [1968] carried sharply critical responses by Tapan Raychaudhuri and Bipan Chandra. They pointed out the immense amount of empirical information that was available in official reports and unofficial accounts of the decline in the income, employment and output of weavers. The use of cheaper imported yarn to produce cloth would not help Indian weavers compete against the products of Lancashire unless the weavers substantially improved their productivity or accepted a lower income according to an estimate by Meghnad Desai for the mid 19th century.

Bagchi [1976] used the Buchanan-Hamilton survey of 1809-11 and the Census of 1901 to conclude that the number of people in the secondary sector declined from 18.6% to 8.5%. Sumit Guha [1989] argued that Bagchi over-estimated the extent of the decline based on his assessment of the conversion ratios of raw cotton to cloth and the quality of cloth produced in the region. During the 1980s numerous studies brought out the regional variations in deindustrialisation. Krishnamurty [1985], Specker [1989], Harnetty [1991] and Yanagisawa contributed to it. Specker's study of handlooms in the Madras presidency showed that the number of handlooms did not decline but the number of people engaged in weaving declined and there was a movement towards coarse cloth production. The decline in spinning and weaving in this account were dependent on the conditions of agriculture and the relative prices of raw cotton, cloth and food crops. Imports were not the sole cause in the decline of the weavers but the economic fluctuations in the agricultural sector and famines contributed to the decline of artisanal production and employment.

In several recent articles and books it has been argued that the pessimistic assessments

of the handloom sector in India in the 19th and specially the 20th century may not be justified. In *Artisans and Industrialisation* Tirthankar Roy [1993] argued that the handloom sector managed to hold its own against both the foreign and Indian mill sector during the inter-war period. In fact the market share of handlooms in cloth consumption in terms of value probably increased during the 1930s. Roy has done detailed work on the traditional industries of India to argue that many of them managed to cope with foreign competition fairly well. There was a growing use of superior technology like the fly shuttle and imported yarns and dyes. The artisans benefited by congregating in towns and improved their bargaining position vis-à-vis financiers and merchants. The number of weavers declined but the output remained substantial based on rising productivity. Industries like brassware and leatherwork managed to adjust to the changing environment and prospered in the urban centers.

Although recent literature, like Roy's *Traditional Industry in the Economy of Colonial India*, [Cambridge, 1999] has provided a detailed account of the history of Indian crafts and their dynamism the substantial decline of Indian artisanal production in the 19th century is undeniable. The period 1850-1880 witnessed the most significant decline in output and employment in the handloom sector as Twomey [1983] has pointed out. Revisionist work has not been able to undermine the validity of the nationalist argument that during the 19th century there was a tremendous decline in Indian artisanal production and employment.

Drain of Wealth

The idea of tribute from India to Britain emerged in the late 18th century and Sir John Shore and Rammohan Roy also made some rough estimates of the sums that went out of the country. The theory of the drain is however associated with Dadabhai Naoroji who estimated that by the late 19th century 1500 million pounds had been taken away in the form of drain. He argued in his book, *Poverty and Un-British Rule in India*, [London, 1901] that the country was impoverished because of this drain and the capital that Britain invested in the country was a small part of the money that Britain had taken out earlier. The British made huge profits on the export of commodities and these also constituted a form of drain. In his analysis there was also an internal drain as resources were sucked up by a few urban centers. The 'home charges', the expenditure that the Government of India incurred in Britain as contractual expenses overseas, were directly related to the fact of colonial rule.

Of special importance was the argument about the unrequited export surplus. The nationalists believed that the maintenance of a substantial export surplus was a necessary mechanism for the drain of wealth from India. These 'unrequited exports' were a measure of the drain of wealth from India. Many nationalists believed that the entire export surplus represented a drain from India because there was nothing that India got in exchange for this surplus. The drain was in its widest definition a term that implied all the ways in which the fact of colonial rule imposed a financial burden on India. The entire exploitative mechanism established by colonial rule- ranging from high defence expenditure, costly civil administration, high land revenue demand, neglect of development and irrigation, guaranteed railway loans- were all indirectly related to the drain from India.

The colonial apologists were critical of both the wider and narrower definition of the drain theory. They argued that strictly speaking only some of the Home Charges, the expenditure incurred by the Secretary of State in London on behalf of the Government of India, constituted 'tribute' or the drain from India to Britain. The

expenditure incurred under Home Charges was a small fraction of the total value of India's foreign trade and could not be regarded as a major burden. The annual remittances of interest on railway loans and public debt in pound sterling could not be regarded as a drain. The loans were taken for productive purposes and the rates at which the capital was provided was lower than what India might have got even if it had been an independent country. India benefited by having access to the cheapest capital market in the world and payment of interest on debt did not constitute exploitation or drain.

Vera Anstey in *Economic Development of India*, [London, 1921] and Theodore Morison in *Economic Transition in India*, [London, 1911] also argued that there was no question of unrequited exports since India received payment for all its exports. The nationalists did not take into account the huge import of gold and silver into the country that made India a sink for precious metals. The export surplus was used to pay for the imports of treasure and payment for banking and financial services that appeared in the balance of payments accounts. The tribute was a small price to pay for the peace and good government that the British gave to India. The investments in the railways, plantations, mines and public debt of India aided the modernisation of the country. The colonial view found no economic justification for the nationalist theory of the drain.

Liberal and neo-liberal economists and historians have supported these arguments of the colonial apologists. K.N. Chaudhury [1968] in an article in 1968 had argued that the Home Charges constituted only about 1.5% of the value of India's exports at the beginning of the twentieth century. Since only the home charges constituted a drain in the strict sense of the term the tribute was not a very significant burden. In the *Cambridge Economic History of India*, Vol II, [Delhi 1983] Chaudhury argued that the poverty and lack of economic development of the country could not be understood primarily in terms of a theory of drain of wealth from India. Goldsmith in *The Financial Development of India, 1860-1977*, argued that the drain was not very significant and broadly agreed with the views of Anstey. Although B.R. Tomlinson cites the work of nationalist and Marxist scholars on the drain from India it does not strike him as a very significant burden in his *New Cambridge History of India* volume entitled *The Economy of Modern India, 1860-1970*.

For the Marxists the drain of wealth is an important factor in the critique of colonialism. Irfan Habib, [1985] Utsa Patnaik and Sunanda Sen have developed their arguments against the liberal and colonial viewpoint. Although discussion of the drain is found in the works of earlier scholars like Gurtoo [1961] and Bannerjee [1982] the works of the three scholars mentioned above have acquired greater influence. Irfan Habib emphasized the importance of the drain from India for the capital formation in Britain during the early stages of the industrial revolution. He also critiqued the *CEHI* Vol II for its inability to perceive colonialism in its survey of the economy. Utsa Patnaik [2000] pointed out that between one-sixth and three-tenths of the total taxation revenues of British India were transferred abroad for the entire duration of colonial rule starting in 1765. She argues that a surplus budget was used by the colonial state to pay for expenditures incurred abroad. Commercialisation of agriculture was encouraged to pay for these expenditures overseas by means of export surpluses. This led to famines in the nineteenth century and the decline of per capita food availability in the twentieth century. [Utsa Patnaik, 1990]

misunderstood the mechanism of the drain they were right in assuming that the remittances under the Home charges constituted a drain of wealth from India. Sen has argued in *Colonies and the Empire: India 1890-1914*, published in 1992, that the nationalists were wrong in assuming that India's exports were not being paid for. Also the payment of interest on productive loans cannot be regarded as a drain. However the decision of the Select Committee of the British Parliament had led to a change in accounting practices of the Indian government in 1867. According to this new practice the revenue surpluses of India were to be used to retire the unproductive debts of India that were deliberately classified under productive works. As a result of these accounting practices what was in fact being paid out of Indian revenues was not interest on productive debt at all. Therefore the nationalist hunch that the entire amount of the remittances under home charges constituted the drain was justified. The drain amounted to about 19.8 million pounds per year on average during the period 1898-1908. This was about 2.3% of India's national income at that time. The drain of wealth from India is an issue that the left-nationalists are unwilling to abandon and it would appear with good reason.

Commercialisation of Agriculture

There was commercialisation of agriculture even in the pre-colonial period, but it grew enormously during the colonial period. The nationalists argued that commercialisation of agriculture was encouraged to make India a supplier of cheap food and raw material for Britain and also to provide the trade surpluses with other countries like the U.S.A. These trade surpluses of India would help Britain meet its balance of payments difficulties with Europe and America. The nationalists also argued that the production of crops like opium and indigo in the 18th and early 19th century was based on a system of physical coercion and economic compulsions. Left-nationalist scholars called this 'forced' commercialisation of agriculture. An important study was the one edited by K.N. Raj and others entitled *Essays on the Commercialisation of Indian Agriculture*. [Delhi, 1985]

Benoy Bhushan Chaudhuri in *Growth of Commercial Agriculture in Bengal, 1760-1900*, [Calcutta 1964] has discussed the system of loans and advances that was used to provide economic inducement as well as financial pressure to compel the peasants to produce cash crops like indigo and opium. The peasants had to be coerced to produce opium because the East India Company had a monopoly over opium and used it to buy the crop at low prices. The peasant could not get adequate remuneration because of this policy. On the other hand the producers of opium in the Malwa region that was not under British control and where the peasants were not subject to this monopoly, were able to profit by the sale of the crop. Amar Farooqui has also discussed the subject. In the case of indigo too physical and economic coercion was involved.

The nationalists and the Marxists have also argued that the need to pay high land revenue in cash also created pressure on the peasantry to produce crops for sale. The timing of the payment of the revenue qist was a factor that compelled the peasantry to borrow from the moneylender. Shahid Amin[1982] has drawn attention to this problem in his study of the small-holding peasantry engaged in the production of sugarcane in Gorakhpur. The Marxists have emphasized the importance of the rent-revenue-credit squeeze as a factor that compelled the peasantry to produce cash crops. The need to pay rent to the state, revenue to the landlord and interest to the moneylenders compelled the peasantry to produce for the market even if they did not find the prospect too attractive in terms of the financial rewards and risk involved.

The work of B.B. Chaudhury [1984], Sugata Mukherjee, Partha Chatterjee [Ashok Sen, Partha Chatterjee and Saugata Mukherji, *Three Studies on the Agrarian Structure in Bengal, 1850-1947*, Calcutta 1982] and others has brought out the element of economic and non-economic pressures influencing the production for the market in Bengal.

The British introduced the Permanent Settlement in Bengal in 1793 in order to encourage the development of agriculture on capitalist lines. Instead there was the growth of sub-infeudation, rack-renting, absentee landlordism and merchant-moneylender domination. In the ryotwari and mahalwari areas too the production for the market did not lead to the development of capitalism in agriculture. Despite production of cash crops like cotton, sugar, jute, oilseeds, groundnut and cereals like rice and wheat for the market on a substantial scale after the mid 19th century there was no significant transformation of the technical basis of production or the clear articulation of capitalist social relations of production in agriculture. Instead there was debt subordination of the peasantry and merchant moneylenders sought to exploit the labour power of the peasantry rather than to take over their lands.

Jairus Banaji argued in the *Economic and Political Weekly* [1977] that the merchant moneylenders in the Deccan cotton producing area preferred to reduce the peasantry to debt bondage rather than take over their lands because this would enable the peasant to exploit family labour to supplement the below subsistence income that he derived from cultivation. If the moneylenders were to evict the peasants and turn them into landless workers they would have to be paid a higher subsistence wage and this would raise costs of cultivation. If the social relations of production were not transformed despite production for the market over almost a century this was because of economic preferences of the potential capitalists.

The early nationalists argued that high land revenue demand, the timing of the payment of the revenue installments and the growing production of cash crops created for the peasant a compulsion to borrow. The ubiquitous moneylender that the British sought to restrain through anti-moneylender legislation was in fact a direct consequence of British land revenue policies. It was argued that this was leading to a social revolution in the countryside that produced the anti-moneylender riots in the Pooana and Ahmadnagar districts of the Deccan in 1875.

Charlesworth [1972] argued that the moneylenders were not taking over the land of the peasantry and that they were interested in income from the land and not the possession of land per se. In numerous subsequent studies of agriculture the distinction between the urban and rural or agriculturist moneylender became a commonplace one. While the urban moneylender was not keen to acquire lands that he could not cultivate the successful peasant producer or rich peasant was eager to expand and buy lands of defaulting debtors. Sugata Bose [1986], N. Charlesworth [1985], and N. Bhattacharya [1985] have made this distinction in studies of Indian agriculture. The rich peasants, who constituted a thin stratum in rural society, were keen to expand acreage but not to make substantial capital investment in land. Therefore the nature of agricultural production was not altered by the emergence of more substantial peasants over time.

The emergence of a class of peasants who had prospered owing to the commercialisation of agriculture was not initially acceptable to nationalist and left wing scholars. Left-nationalist scholars received the arguments of Charlesworth in *Peasants and Imperial Rule* and C. Baker . [1984] in *The Tamil Countryside*

with much skepticism. Over time the argument of a rich peasant stratum has been accepted though it does not seriously alter the pessimistic assessments of the aggregate long-term performance of Indian agriculture. As Tomlinson acknowledged in *The Economy of Modern India, 1860-1970*, the emergence of the rich peasant does not alter the perception of overall stagnation in Indian agriculture. In his introduction to *Growth, Stagnation or Decline? Agricultural Productivity in British India*, [Delhi 1992] Sumit Guha argued that the performance of agriculture during the colonial period was dismal and the gap between the estimates of the two sides in the debate was not very wide.

The estimates of agricultural growth by Blyn, Mukerji and Sivasubramanian were on the low side while those of Heston and Maddison were on the higher side. Even the revised estimates of the performance of agriculture by Sivasubramanian in *The National Income of India in the Twentieth Century* [Delhi, 2000] reveal a dismal performance. Sivasubramanian had earlier estimated that agricultural output at 1938-9 prices had grown by 10.8% between 1900-1947. In his estimates of 2000 he revised the GDP growth rate to 17.3% for this period. While the growth of real GDP in the primary sector, not just agriculture, was 0.5% per year during the first thirty years of the twentieth century it was 0.2% for the next two decades.

The result of various factors- production of cash crops for the market, the rent-revenue-credit squeeze, environmental degradation and natural factors like rainfall levels- led to frequent famines in nineteenth century India. The incidence declined during the twentieth century, but famines did not disappear. Some of the decline was attributable to the creation of a national market and the movement of foodgrains from surplus to deficit areas. Several scholars like B.M. Bhatia, [1965] David Arnold, [1988] Amartya Sen, [1981] Paul Greenough, [1982] Omkar Goswami [1991] and Sanjay Sharma [2001] have explored the history of Indian famines. The responsibility of the colonial state, of deindustrialisation and the advent of the railways has also figured in discussions of famines. Amartya Sen analyzed the impact on mortality and the moral economy of sharing of food within families. Goswami has argued that the famine of 1943 in Bengal was a problem of distribution and price not of production and supply. Sharma has explored the discourse of the colonial state regarding famines and the responsibility of the state in early nineteenth century United Provinces.

Growth of Modern Industry

The nationalists argued that Britain pursued a policy of free trade in India in order to promote the products of British industry in India. If India had been a free country it would have been able to industrialize behind tariff walls as the U.S.A. and Germany did in the late nineteenth century. R.C. Dutt, R.P Dutt and D.R. Gadgil made these arguments in a vigorous manner. The policies pursued by the British in India retarded the development of Indian industry indirectly by allowing the income and purchasing power of the country to stagnate. The colonial state did not in fact follow a policy of free trade because it promoted the interests of British industry by encouraging the cultivation of cotton in western India after the supply from America was cut off by the outbreak of the Civil War. The Government of India also gave a guarantee of a 5% rate of return on investments in railways, regardless of the actual returns on investment, to encourage British investors to put their money in Indian railways. According to Sabyasachi Bhattacharya [1965] the British followed a policy of ‘discriminatory interventionism.’

After the First World War the government granted Tariff Autonomy to India. Following the publication of the Report of the Indian Industrial Commission in 1918 the state tried to encourage Indian industry by a more favourable stores purchase policy and guaranteed purchase of some steel rails from Jamshedpur for the railways. Clive Dewey [1978] regarded this trend as a major factor favouring indigenous enterprise. The policy of tariff protection did provide a measure of protection to Indian industry and cotton, steel, tinsplate and sugar were among the industries that benefited by it as even A.K. Bagchi has acknowledged in *Private Investment in India, 1900-39*.

The pressure from the British business groups to promote British manufacturing interests in India did not disappear as a result of tariff autonomy. The government came up with a policy of Imperial Preferences to provide lower duties on imports from Britain and the Empire compared to the non-Empire countries like Germany, Japan and the United States. The idea came up in the 1920s and led to changes in policy by the 1930s. Basudev Chatterjee [1992] has presented detailed evidence on the long battle that the Lancashire industry fought to ensure that it was not squeezed out of the Indian market during the 1930s.

Colonial scholars and economists were apt to blame social and cultural values for the slow development of modern industry in India. Weber felt that Hindu religion and culture produced values that discouraged the development of capitalism and industry. Caste and religion hindered economic as well as industrial development. The leisure preferences of labour and reluctance to accept the discipline of industrial production created problems of the adequate supply of labour for modern industries. Indians were also lacking in what McClelland called 'achievement motivation'. The sociologists of the Chicago school offered sociological explanations for the lack of modern industrial development in the 1960s. In 1972 *Private Investment* emphasized that Indian economic development had to be explained in economic terms. The performance of industry in India could be understood in terms of economic variables alone.

The main argument of Bagchi was that the emphasis on supply side factors was misplaced and unjustified. The principal reason why Indian industry could not develop was because of the demand constraint or the limited size of the market for manufactured goods in the country. The level of industrial development was not limited by the supply of labour. Morris David Morris had argued earlier that there was no dearth of labour for the cotton mills of Bombay in *The Emergence of an Industrial Labour Force in India*, Berkeley and Bombay 1965] However, the supply of labour for the tea plantations of Assam was a problem. This has been acknowledged even by recent studies like those of Ranjit Dasgupta and Rana Behal and Mohapatra. [1992] The imports of machinery too were not a serious problem and the industries were not held back owing to a serious shortage of capital and funds. The principal reason why industries could not grow during the period 1900-39 was the limited purchasing power of the people and the lack of effective demand for industrial products.

It has been argued that the level of industrialisation could have been higher if the country had tariff protection and if some of the equipment for the railway sector had been produced within the country. As Lehmann had pointed out in 1965 the Indian steel industry could have grown substantially if a certain proportion of the locomotives imported had been produced domestically. The backward and forward linkages of the Indian steel industry were limited and it struggled for survival till it

received a measure of state support in the 1920s. During the Great Depression there was a slow-down in industrial activity in the developed capitalist countries, but it led to import-substitution industrialisation in India. Liberal and Marxist economists are agreed on this though they use different conceptual categories to record this development. The liberals refer to the effects of protective tariffs, the relatively greater fall of agricultural prices during the depression, reducing the raw material costs of industry and increasing the purchasing power of fixed wage urban consumers. The Marxists refer to the crisis of capitalism and the breaking of links with imperialism and to the significance of the redeployment of merchant capital.

Colin Simmons [1985] and Amiya Bagchi both record the growth of Indian industries during the 1930s owing to the decline in imports from metropolitan countries. Levkovsky in *Capitalism in India*, [Delhi, 1966] and Dietmar Rothermund in *India in the Great Depression, 1929-39*, [Delhi, 1992] have highlighted the manner in which there was a redeployment of merchant capital towards industries. Merchant capital, which had been engaged in the movement of agricultural commodities earlier, moved into petty commodity production and industry because the rate of return on investment now appeared adequate and foreign competition somewhat less severe. Christopher Baker in *The Imperial Impact* edited by Dewey and Hopkins had argued along these lines for the impact of the depression in Madras presidency even in the late 1970s.

The behavior of Indian merchant capitalists and expatriate businessmen has frequently been contrasted. Rajat Ray has pointed out that there has been a controversy about which of the two were used to a higher rate of return and therefore reluctant to invest in industry until the 1930s, when there was a decline of income for both groups because of the depression. [Ray (ed), *Entrepreneurship and Industry in India, 1800-1947*] The expatriate businessmen were used to high returns because of their dominant position in the export enclave and the merchant capitalists had derived substantial profits from financing the movement of commodities and from usury. The indigenous merchants were attracted to industry during the depression because of the shrinkage in opportunities in the agricultural sector and the possibilities of industrial investment in certain industries that opened up because of protection and decline in imports.

Several scholars have investigated the consequences of colonialism for the development of Indian business groups. The earlier nationalist scholars believed that there was a sharp negative impact of colonialism on indigenous business groups in the early years of colonial rule. The monopolies created by the East India Company, the Agency Houses and subsequently the Managing Agencies played a major role in the Indian economy and dominated that of eastern India. This reduced the opportunities for the indigenous mercantile community. The decline of the indigenous mercantile community was far greater in eastern India than it was in western India as pointed out by scholars like Bagchi and Tripathi. In *The Oxford History of Indian Business* Dwijendra Tripathi has covered several of these issues.

Rajat Ray has drawn attention to the role of the bazaar economy or the indigenous sector of the economy in a few articles. In the *Modern Asian Studies* in 1995 he argued that the migration of Indian merchants to East Africa and West Asia and to Hong Kong, Burma and Malaya within the British Empire helped Indian mercantile groups to grow and accumulate capital in the informal sector of the economy. The Gujaratis, Memons, Nattukottai Chettiars were able to accumulate capital which they subsequently used to invest in India as well as overseas. Claude Markovits in

The Global World of the Indian Merchants, 1750-1947 traced the migration of the Shikarpur Sindhi merchants to Central Asia and Sindhis from Hyderabad to Egypt and Europe and their fanning out from Panama to Japan. Colonialism permitted the limited accumulation of capital within the informal and agricultural sectors of the Indian economy. Omkar Goswami has drawn attention to the manner in which Marwari merchants engaged in the jute trade in eastern India were able to acquire both the capital and the knowledge required to try and buy out the shareholders of the jute mills of Calcutta during the 1930s. The Marwaris were moving from trade to industry in Bengal in the 1930s. The 1930s witnessed the movement from trade to industry in several parts of the country.

The Second World War gave a great boost to industrial production in India. The wartime demand for the products of industry boosted output but restrictions on the use of foreign exchange and difficulties in the supply of machinery from Britain meant that the installed capacity of the Indian industrial sector could not be increased. Industrialists amassed huge profits during the war and nursed ambitions of embarking on new projects in the post-war period. The businessmen came up with the Bombay plan for India's industrialisation based substantially on the private sector. The Government of India and the Congress party were more concerned with a mixed economy, supportive of nationalisation of some industries and a strong role for the state in the economy.

Although the industrialisation of the country was never the purpose of British rule in India during the closing years of colonial rule British private business groups and companies were willing to assist in India's industrial development. Some experts have attributed this to the changing relationship between Britain and India. Aditya Mukherjee, while recognizing this new trend, argues that it was the outcome of anti-imperialist struggles and not the magnanimity of the colonial rulers.

Money and Finance

The critique of colonial rule that achieved great popularity with Indian nationalists focused on the tariff policy of the government- the policy of free trade imperialism during the nineteenth century and the policy of limited protection and imperial preferences during the inter-war period. In the 1920s and 1930s there was also a discussion of the rupee-sterling exchange rate and the negative consequences of the high exchange rate. It was argued that fixing the rupee at one shilling and six pence instead of one shilling and four pence was harmful to Indian economic interests. The higher exchange rate would reduce the earnings of agriculturist exporters who would get 12.5% less in terms of rupees for the produce that they sold.

The nationalists argued that the benefit of cheaper imports, as a result of the higher exchange, would not benefit the masses as they consumed only 10% of the imports. The upper estimate was 40%. Representatives of business like G.D. Birla, Purshottamdas Thakurdas and B.F. Madon were aware that a lower ratio, though it would adversely affect the importers was not in the larger interests of the country. The agriculturists, exporters and debtors would be adversely affected by the higher ratio though it would help the importers and creditors. It would also increase the real burden of debt in the countryside.

The nationalists also criticized the argument that the higher ratio would lighten the burden of sterling obligations or improve the revenue position of the government, as it would be able to meet its remittance requirement with fewer rupees. Aditya

Mukherjee has argued in *Imperialism, Nationalism and the Making of the Indian Capitalist Class, 1920-1947* [Delhi 2002] that the Indian capitalists criticized this argument in the same manner as Dadabhai Naoroji had in the late nineteenth century. Naoroji had argued that the burden of the sterling obligations could be reduced only if gold prices were to fall. The burden could be reduced only if the same amount of gold could be procured by exporting less produce. Bipan Chandra too had cited Naoroji's views in this regard in his book on economic nationalism. B.F. Madon pointed out that India paid for its sterling obligations through commodity exports and not in rupees. As far as the amount of sterling obligations and the produce necessary to meet it was concerned it did not matter whether the exchange rate was one shilling six pence or one shilling four pence.

In *John Bullion's Empire* [1996] G. Balachandran has argued that the rupee-sterling ratio was not as much of an issue as some of the nationalists had argued. The colonial government did want to encourage cotton imports into India and to restrain efforts to put up barriers against British imports. However, the primary objective of British officials was to reduce imports of gold into the country rather than to increase imports of cotton cloth. Further, cotton imports were encouraged mainly to ensure that gold imports were reduced. With a rupee revaluation all cotton imports into India would become cheaper, not only the products of British industry. In so far as revaluation led to depressed incomes both cloth and gold imports would be adversely affected. Balachandran argues that until the depression the nationalists failed to link the issues of trade and liquidity. Their espousal of a lower exchange rate appeared to be a case of special pleading because of this failure.

According to Balachandran the principal objective of British policy was to prevent the outflow of gold to India that could adversely affect the position of the pound sterling after the First World War. The attempt to stabilize the currency at 18 pence led officially to a decline of 120 million rupees in terms of coins and notes during the 1926/27 busy season. The true extent of the contraction was probably as high as 220 million rupees. The need to preserve the high exchange rate led to monetary contraction. Indian trade surplus halved between 1925/6 and the two years thereafter. Indian gold imports declined from 52 million pounds in 1924 to 15 million pounds per year on an average between 1926-1929. It was as a result of these policies that the expansionary effects in the world economy after the mid 1920s bypassed India.

During the depression the pro-cyclical macro-economic policies of the government led to sustained gold exports from India. These gold exports were important for Britain's balance of payments. Indian gold exports had an expansionary influence globally as Keynes had prophesied much earlier. Without the inflow of gold from India the British economy would have been vulnerable to competitive American depreciation. Britain was thus able to use private Indian gold reserves as an important contra-cyclical device during the depression. Mukherjee, Rothermund and Balachandran have criticized the negative consequences of the deflationary policies that the British government pursued in India.

R.P. Dutt in *India Today* had argued that the crisis of capitalism during the depression and the Second World War had reduced the importance of the Indian market for British business. He had also highlighted the struggle of the Indian people against colonial rule. Tomlinson in *The Political Economy of the Raj, 1914-47* argued that the decline in Britain's economic stake in India, because of the progressive shrinking of the Indian market for British exports, made it easier for the British to make the decision to quit India. In both the early Marxist and the liberal perception

the economic value of India during the inter-war period, from the British standpoint, declined slowly but steadily. On his part Balachandran has argued that Britain derived tremendous benefit during the inter-war period from the control over Indian currency and exchange. Although the value of India as a market for Britain's staple industries was declining during the interwar period Britain was able to manipulate Indian monetary and currency policy to promote British economic interests. The liquidation of private Indian gold reserves helped to shore up the position of the pound sterling and to make the Sterling Area of the 1930s a viable proposition.

In their wide-ranging survey of the British Empire Cain and Hopkins argue that the competitive advantage of Britain lay in finance rather than industry after the First World War. Therefore it made sense for the 'gentlemanly capitalists' who controlled the British state to attach greater priority to overseas financial interests rather than markets for industrial goods. The decision to protect the position of the pound sterling as an international currency and to create the Sterling Area represented the dynamism rather than failure of British capitalism. The empire helped Britain maintain its position as the provider of finance and services. The manipulation of the monetary and exchange policies of India helped in sustaining the British economy. Unlike other economists, who believe that the cushion for Britain's industrial exports provided by the empire hastened its industrial decline, Cain and Hopkins argue that the empire helped Britain maintain its position as the supplier of finance and services. The British economic stake in India had not declined as much in the inter-war period as the scholars had argued earlier. The process of winding up the empire, at least in India, cannot be explained in terms of a steady decline in Britain's economic stake in the interwar period.

3.4 NEW TRENDS

Labour

The recent work in economic history has been exploring themes that were not completely absent in earlier studies but did not produce a substantial body of work. Chandavarkar, Chakravarty and Clark have explored the role of labour and the working class over the last decade or so. The high proportion of casual workers in the industrial workforce of Bombay in the early twentieth century can be explained in terms of the preference of the owners and the managers of enterprises. Chandavarkar has argued in *The Origins of Industrial Capitalism* [Cambridge 1994] that managers chose to have a large temporary workforce in order to control variable costs in a climate where there were fluctuations in demand. It was not the lack of commitment of the workers but the attitude of management that was responsible for a large casual labour force. On the other hand Wolcott and Clark have argued [1999] that the performance of cotton mills in the 1930s was affected by the inability of managers to bring down nominal wages in the depression years when the real wage had risen. Industrial competitiveness was hampered by the inability of management to bring about a downward adjustment in nominal wages. The opportunity costs of labour were not very high in the 1930s and therefore Wolcott and Clark argue that industrial wages were higher than they should have been. The argument can also be understood in terms of the worse economic conditions in agriculture during the depression as has been pointed by several studies. This appears a reasonable response to the argument of Clark since the wages of agricultural workers were used to estimate the opportunity cost for the mill workers.

In *Rethinking Working Class History, Bengal, 1890-1940* [Princeton and Delhi, 1989] Dipesh Chakravarty argued that since the mill owners did not provide basic

amenities to the workers jobbers played a significant role not only in providing employment but also housing, provisions and patronage. In the absence of modern bourgeois values the workers did not produce stable trade unions. Only in periods of strikes and struggle did the workers join the unions in large numbers. Once the movement had subsided, regardless of whether it had been successful or not, the unions collapsed. The values of the workers were not shaped by ideas of class and even the leaders of the jute workers, who often came from middle class and radical backgrounds, referred to workers as the underprivileged and the poor, the daridra-narayan, rather than the proletariat. Patrician values influenced the attitude of the leaders from outside the working class.

There have been studies of the emergence of landless agricultural labour from the standpoint of ideology as in *Bonded Histories* by Gyan Prakash. In this study of the emergence of landless labour in Gaya and Shahabad districts of Bihar the origin myths of the bhuinyans were explored as well as the changes in their economic situation over time. Lorik literature, spirit cults and kamia-malik relations were explored in both economic and anthropological terms. Dharma Kumar in *Land and Caste in India* pointed out the emergence of a landless labour force in India, even in the pre-colonial period, as early as 1965. She argued that despite the availability of cultivable land a class of landless labour existed in the early nineteenth century in Madras presidency because of caste restrictions that prevented lower caste groups from cultivating land on their own. The role of gender was explored in Sen's study of the jute industry.

The role of caste in relation to the performance of artisanal work has been explored in several studies. A class of people engaged in the production of household utensils became more prominent in Bengal in the 19th and early 20th century. The demand for bronze/ copper vessels increased after the import of imported metal sheets made it possible to produce utensils of good quality at a reasonable price. The kansarias became a more numerous caste as many were attracted to this occupation. Tirthankar Roy has pointed it out and Harnetty that skilled artisans like the Padmasalis and Momins preferred to carry on with artisanal production rather than accept low skilled jobs in industry or work as agricultural labour. They managed to survive by adopting techniques suitable for enhancing productivity. Gyan Pandey explored the connection between the decline of artisanal production and communal attitudes in the United Provinces in his study of the 'bigoted julaha.'

Irrigation

The study of irrigation and forests has always been important from the standpoint of economic and social history. Although a lot of work had been done on the various economic aspects of irrigation by agronomists earlier the matter has received more attention from the standpoint of caste, ecology and technology. Although Elizabeth Whitcombe had drawn attention to the harmful effects of overuse of irrigation water by peasants and the blocking of drainage channels by rail and road development. Ian Stone had brought out the overall beneficial consequences. In *Canal Irrigation in British India: Perspectives on Technological Change in a Peasant Economy* he brought out the fact that the higher level of agricultural development in the western districts of the United Provinces as opposed to the eastern districts accounted for the difference in the economic dynamism of the two regions.

Imran Ali in *The Punjab under Imperialism, 1885-1947*, [Delhi, 1989] brought out the connection between irrigation, colonisation and military recruitment in the

Punjab from the late 19th century onwards. The creation of Canal Colonies played an important role in reducing congestion in the heavily populated areas of Punjab and for some time widening the support base for colonial rule. The rural-urban divide in the Punjab could not have been possible without the role of irrigation and colonisation. Gilmartin [1995] has argued that the colonial state tried to incorporate indigenous local and 'natural' communities into a larger scientifically defined hydraulic environment. In the process of doing so the colonial state undermined the local environmental foundations of the local communities it claimed to rely on. Many movements of cultural and political reform in the rural areas were coordinated responses to both state policy and environmental transformation in the Indus Basin. Economic historians like Mufakharul Islam [1997] focus on technological and economic change in Irrigation and Agriculture in the Punjab. Islam and Mukherjee do not accept that the long term benefits were substantial. *A Century of Change* examines social and economic change in the irrigated areas of the Madras presidency. Yanagisawa argued that there was a decline in the ownership of land by the upper caste Brahmin groups over a period of time.

The ecological context of agricultural production has been explored in several studies. In *Peasant Labour and Colonial Capital: Rural Bengal Since 1770* [Delhi, 1993] Sugata Bose had argued that the eastward movement of the Ganges river over time produced the rich alluvial delta of East Bengal. The rich soil enabled the smallholding peasantry to engage in jute cultivation successfully year after year. The crop had a ready market and despite the dominant position of the merchants yielded an adequate income in cash. The cultivation of jute was a survival strategy for the peasantry since it yielded an adequate income from tiny plots of land. The eastward movement of the Ganga and the blocking of the natural drainage channels owing to the building of railway tracks and embankments in western Bengal led to the spread of malaria. Goswami in *Industry, Trade and Peasant Society: The Jute Economy of Eastern India, 1900-1947* [Delhi, 1991] has argued that during the first two decades of the twentieth century the jute cultivating peasantry did prosper from successful production for the market. In the account of the comparability of the living standards of weavers in late 18th century Britain and South India Parthasarthy emphasized the productivity of agriculture in the *Past & Present* of 1998. The production of substantial output, based on the natural fertility of the soil and double cropping, enabled Indian weavers to maintain an adequate standard of living.

Environment and Forestry

In recent years the study of forests, tribes and ecological change has become important for economic and social historians. Ramachandra Guha studied the chipko movement in the Garhwal Himalayas in *The Unquiet Woods*. [Delhi, 1989] Although this was not the first study of popular protest against forest policies and felling of trees it was important in the rise of environmental history in India. *This Fissured Land: An Ecological History of India* in 1992 by R. Guha and Madhav Gadgil in *Nature, Culture, Imperialism* edited by David Arnold and R. Guha in 1995 are important contributions to the subject. Several scholars including David Hardiman, Ajay Skaria and Sumit Guha have explored the relationship between forest people, settled agriculturists and the colonial state.

Some of the issues of tribal protest and reactions against the patterns of colonial forest use had emerged even earlier in scattered studies. Ranajit Guha's *Elementary Aspects of Peasant Insurgency in Colonial India* [Delhi, 1983] and the volume edited by A.R. Desai entitled *Peasant Struggles in India* [Bombay 1979] had also

referred to tribal movements and their response to colonial policies, both economic and political. The protests by Santhals, Mundas and Oraons were also incorporated in the history of anti-colonial struggles by Shashi Bhushan Chaudhuri in his study of civil rebellions and popular protest before the Revolt of 1857 and by Kumar Suresh Singh in his study of Birsa Munda.

The substantial study of the interaction of tribal groups to settled agriculturists and centralizing states adjoining forest polities has been studied by Ajay Skaria in *Hybrid Histories: Forests, Frontiers and Wildness in Western India*. The sharp distinction made between tribal groups and a settled agricultural community is not historically justified. The difference between the dang, the desh and Gujarat was not very substantial. The people of the plains and the Dangs in western India frequently left land fallow, moved to areas where more land was available, abandoned villages when the rulers became oppressive, and moved from field to field within the same village. Skaria goes so far as to argue that the giras claimed by the forest chiefs was like the chauth claimed by the Marathas. Both were sustained through raids and were about shared sovereignty. The movement of communities, like the Koknis and the Bhils, between the forest and the plains also accounted for the physical and cultural similarities of the two regions.

The role of forest polities was substantial in the western region where there were a number of small states. In *Ethnicity and Environment in India* Guha takes a long term view of the changing relationship of the tribal and peasant societies and polities of western India from the pre-colonial to the late colonial period. It reinforces recent work that argues that the tribal and forest people were never isolated and primitive groups. In fact the decline in the status of several tribal groups was the product of changes during the colonial period. Bhil chiefs played a substantial role in supporting or threatening the position of smaller states. Bhils and Rajputs were not as sharply differentiated in the pre-colonial and early colonial period. Rajput chiefs were willing to enter into matrimonial alliances with powerful Bhil lineages. By the 20th century the position of the Bhils had declined.

The object of British policy was to exploit the natural resources of India and to develop the colony as a useful adjunct to the British economy. The establishment of colonial rule in the Doab in 1801 led to the destruction of the ecology of the region within thirty years. The destruction of the thick forests in the central and lower Doab, in the region between Delhi and around Kanpur, led to climatic change. The severe drought of 1837-38 was a product of natural and man-made causes. Deforestation made the pre-monsoon winds hotter and led to soil erosion, drying of the river sources and the warming of the soil. Salinisation led to the abandonment of whole villages. Intensive farming and deforestation led to the decline in yields during this period. [Michael Mann, 'Ecological Change in North India: Deforestation and Agrarian Distress in the Ganga-Yamuna Doab 1800-1850,' in Grove, Damodaran and Sangwan (eds), *Nature and the Orient* Delhi 1998]

Skaria takes a position on British forest policy that does not accept the viewpoints of either Guha or Grove. While the former argued that scientific forestry in India was nothing more than commercial forestry Grove argued that desiccations ideas about the need to conserve forest cover to prevent droughts and soil erosion shaped official forest policy. Rangarajan argued that some of the differences between the two perspectives could be understood in terms of the different time periods that the two authors explored. Grove's analysis was for the mid-nineteenth century while Guha explored the period from the late nineteenth century onwards. According to

Skaria forest policy was a product of both desiccationism and commercial considerations and the concern for the 'rational use' of forests. Scientific forestry was not merely the logical culmination of imperial desiccationism, but by the early twentieth century it helped in securing some of its objectives. Teak became dominant in the Dangs forest, but not to the extent chir trees became dominant in the Kumaon region. The policies of the period have been characterized as a form of green imperialism because they worked against the interests of the poor local communities that lived in and around the forest.

In an article in 1987 C.A. Bayly observed that there was a process of peasantisation of nomads in the nineteenth century. This formulation denies the traditional argument about the proletarianisation of peasants. Neeladri Bhattacharya [1995] has argued that both the viewpoints assume that the process of commercialisation of agriculture and agrarian expansion led to the transformation of vulnerable indigenous groups. In one account the peasants become paupers and in the other the nomads become peasants. The transformation in fact was far more complex since pastoralists turned to cultivation, trade and wage labour. Others tried to continue with their pastoral activities despite the changing legal and social context in which the state claimed forests and 'wastes' as state property. The pastoralists, who had both collective and segmented rights to use pastures based on a pattah in the pre-colonial period, had to pay grazing dues to the state which rose over time during the colonial period.

There was a relationship of interdependence that developed between the pastoralist and agrarian zones in the Punjab. While the Canal Colonies and the central Punjab zone provided foodgrain and fodder to the pastoral zones the south-east semi-arid zone provided the bullocks for ploughing and drawing of water from wells. The pastoralists retained their cows for breeding and for the milk that they provided. As the colonial state developed its regime of property on the basis of agricultural property rights the rights of the nomadic pastoralists became increasingly incomprehensible and illegitimate. Over time the enclosure of forests and expansion of acreage led to a crisis in the pastoral economy and to soil erosion and shrinking of pasture land that was overgrazed. The rights to use forest and pasture declined and the agricultural sector too suffered because of the decline in the availability of manure and plough cattle.

Women in the Colonial Economy

Environmental history has attracted a lot of attention since the late 1980s. The study of women in the economy has yet to attract the same sort of academic attention. The enormous growth of women's study has been focused on questions of culture, literature, education and legal rights. There are some studies that explore the role of women in the productive sphere of the economy, like *Women in Colonial India: Essays on Survival, Work and State* edited by J. Krishnamurthy, but there are few major texts. The role of women in the traditional industry of India has been the subject of study for quite some time. The role of the women in spinning, basket weaving, rope making, pottery et al has been the subject of mainstream economic history as well. The role of women spinners in the 19th century and the classification of female workers in the Census of India reports formed a part of the debate on deindustrialisation in the works by Thorner, Bagchi and Marika Vicziany. The discussion of the concept of full time job equivalent or FTJE would not have emerged but for the role of part time workers in the secondary sector. Many of these casual or part time workers were women.

The Factory Acts of the 1880s did not have any impact on the pattern of employment of women workers in factory employment. According to Morris the proportion of women and children combined in factory employment hovered around 20% during the 1892-1946 period. [CEHI Vol. II. P. 645.] On the other hand Chandavarkar had argued in *The Origins of Industrial Capitalism* that the inflow of female labour into the Bombay mills was indeed restricted by the Factory Act. The period 1871-1921 was marked by high mortality rates throughout the country. The mortality of females was higher than that of males in this period. This can be attributed to the lower life expectancy at birth of females in both the colonial and pre-colonial period according to Pravin Visaria in the CEHI Vol. II. [pp. 498-500] In the northern region the deficit of females was as high as 15% in some areas. This was substantially influenced by female infanticide and by marriage practices.

The role of women in agriculture is undeniable and has been acknowledged in the literature. Bina Agarwal [1994] has explored the attitude towards women with regard to land rights and property rights. However most studies bring out the role of women in broadcast sowing, transplanting of rice, the task of threshing of the crop, work in the production of household goods and handicrafts. There are few substantial texts devoted to the study of women workers although their role in peasant and tribal movements has been the subject of several studies. Samita Sen [1999] and Chitra Joshi [2002] have explored the role of women in the jute mills of Calcutta and the cotton mills of Kanpur. On the whole the role of women in the economy of the colonial period needs more detailed exploration. In the literature of the post-independence period the participation of women in the economy as well as in the environmental movement has been studied with greater vigour and enthusiasm.

3.5 SUMMARY

The British colonial scholars were proud of the achievements of the British Empire in India. The nationalists were sharply critical of the negative consequences of British rule for the Indian economy. British rule did not modernize India and the drain of wealth from India impoverished the people. The Marxists developed their critique of colonialism in terms of a certain understanding of capitalism and phases of capitalism. The arguments of colonial as well as neo-liberal economists are not acceptable to Marxist scholars. Nevertheless some of the arguments of the left nationalist school are not as convincing today in the light of new work.

The eighteenth century is no longer a period of decline and decay. The economy was growing and the political turmoil did not lead to economic decline. There were negative trends in the Indian economy during the nineteenth century – deindustrialisation, drain of wealth, and increase in famines. The Indian economy made some progress in the twentieth century in terms of industrial growth. Recent works on the Indian economy are concerned with issues of environment, labour and gender. The linkages of the economy with society and the environment have become more important in recent times.

3.6 EXERCISES

- 1) Give a critical account of the major trends in colonial historiography.
- 2) Discuss the Marxist interpretation of the colonial viewpoint. Evaluate the neo-liberals' critique of Marxist historiography.

- 3) What are the dominant features of the 19th century colonial economy?
- 4) In what ways was commercialisation of agriculture based on a system of economic compulsions and physical coercion?
- 5) Give a historiographical sketch of the economic impact of colonial rule.
- 6) Discuss the new historiographical trends in the study of the economic history of the colonial period.

3.7 SUGGESTED READINGS

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UNIT 4 ENVIRONMENTAL ZONES AND INDIAN ECONOMIC HISTORY

Structure

- 4.1 Introduction
- 4.2 Monsoon Seasons in South Asia
- 4.3 Seasons and Economy
- 4.4 Mapping the Agrarian Space
- 4.5 Environments of History
 - 4.5.1 Northern River Basins
 - 4.5.2 High Mountains
 - 4.5.3 Western Plains
 - 4.5.4 Central Mountains
 - 4.5.5 The Interior Peninsula
 - 4.5.6 Coastal Plains
- 4.6 Lines of Communication
- 4.7 Summary
- 4.8 Exercises
- 4.9 Suggested Readings

4.1 INTRODUCTION

The present Unit focusses on the emergence, continuity and changes in the economic structures as they are informed by ‘environment’. Specialised formations of agricultural knowledge developed in agro-technological regions. The forests and geology helped to spatialise formations of knowledge, for instance, about granite carving in the Deccan. Livestock breeding, for instance, became a speciality of dry-farming regions. Differences among regions arose as ‘agrarian environments’.

Physical environments that directly influence Indian history stretch from Turkestan to Burma. Monsoon rhythms define the climate of South Asia proper, which embraces eastern Afghanistan, Pakistan, India, Nepal, Bhutan, and Sri Lanka, where natural environments enter history by defining agrarian conditions that emerge in the cycle of monsoon seasons.

4.2 MONSOON SEASONS IN SOUTH ASIA

South Asia occupies a transition zone between arid Southwest Asia and humid Southeast Asia. As we travel east from the high, dry Sulaiman slopes, across the arid Peshawar valley, Salt Range, Punjab and Indus valley; and then east down the increasingly humid Gangetic Plain to the double delta of the Ganga and Brahmaputra Rivers; we move from arid lands dotted by fields of wheat and millet to a vast flatland of watery paddy and fish farms.

Each year, the sun moves the months of humidity and aridity that mark monsoon seasons. Winter cold and summer heat are more pronounced in the north, where they influence the extent of wheat cultivation, but otherwise do not have major implications for farming, except at high altitudes. The same crops can be grown everywhere in South Asia with suitable inputs of water. Everywhere, the agrarian calendar is pegged not to moisture.

Seasons describe a cyclical narrative, roughly as follows. In January, the sun heads north across the sky from its winter home south of the equator, as the air dries out and heats up. Days lengthen and winter rains dissipate. April and May are the hottest months when it almost never rains. In June, Himalayan snow-melt gorges rivers in the north as the summer monsoon begins. The leading edge of the monsoon moves north-west from May through July, from Myanmar into Afghanistan. By late May, monsoons hit Andaman Islands, Sri Lanka, Kerala, and Chittagong.

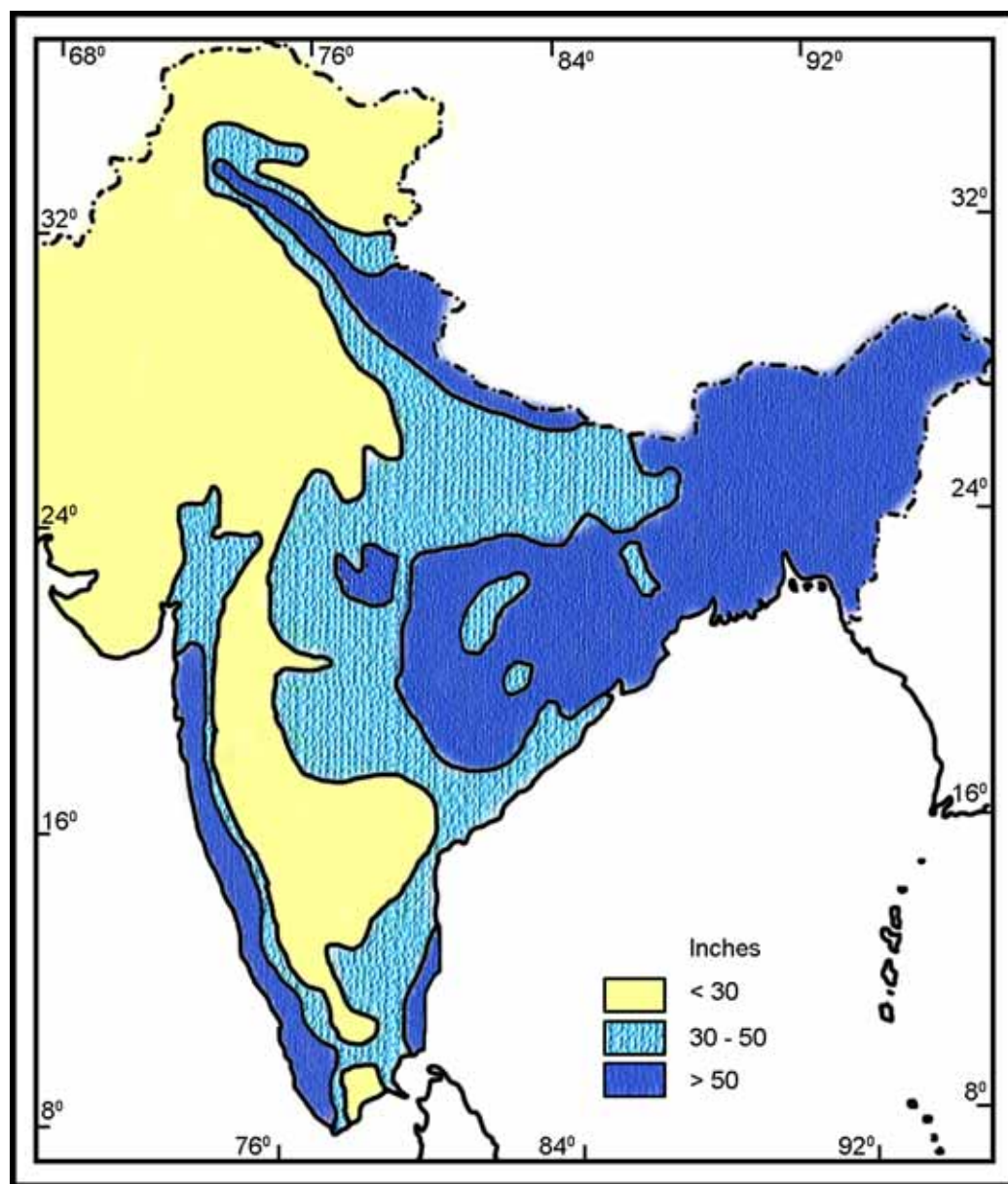
The earliest, heaviest, and longest monsoon season engulfs the far south (Sri Lanka and Kerala); the north-east (from Bihar to Assam and Chittagong); and the central-eastern regions of Orissa, Chhattisgarh, and Jharkhand. These are the most tropical regions with the most intense natural forest cover and extensive jungles. At the summer solstice, when the sun begins to move south again, the summer monsoon will have touched all of South Asia, providing the least rain to the arid western plains and north-west, which have the shortest, driest rainy season, and little rain to the interior of the Indian peninsula, in the rain shadow of the Western Ghats.

From July onward, the days begin to shorten and monsoon rains scatter, as a second season of rain begins, called the winter monsoon, which pours unpredictably on the south-east and north-east and often brings cyclones off the Bay of Bengal to attack Andhra and Bangladesh. Damaging cyclones were recorded in Bengal in 1831, 1832, 1833, 1840, 1848, 1850, 1851, 1864, 1867, 1874, 1876, 1885, and 1942. The worst by far were in 1864, 1867, 1874, and 1942. This fickle second monsoon lasts into January, when dry months begin again.

The seasonal calendar is marked by festivals, astrological signs, and natural phenomena, which articulate agriculture with a vast array of social activities. People enjoy the cool of December and January. As the sun moves north and summer begins, the sun becomes harsh, hot days accumulate, water bodies evaporate, the earth hardens, and farm work slackens. It is time for travel, migration, and moving herds to water and pasture in the hills; time for hunger, cholera and smallpox, skin and eye infections, malnutrition, dehydration, crying babies, and scavenging; time for trading and transporting, stealing, guarding, and fighting; time for rituals of honour and spectacle, and for building, repair, loans and debt, sometimes desperate commitments that will influence social relations of agriculture for seasons to come. Dry months are full of preparations for the rainy season sustained by the past harvest.

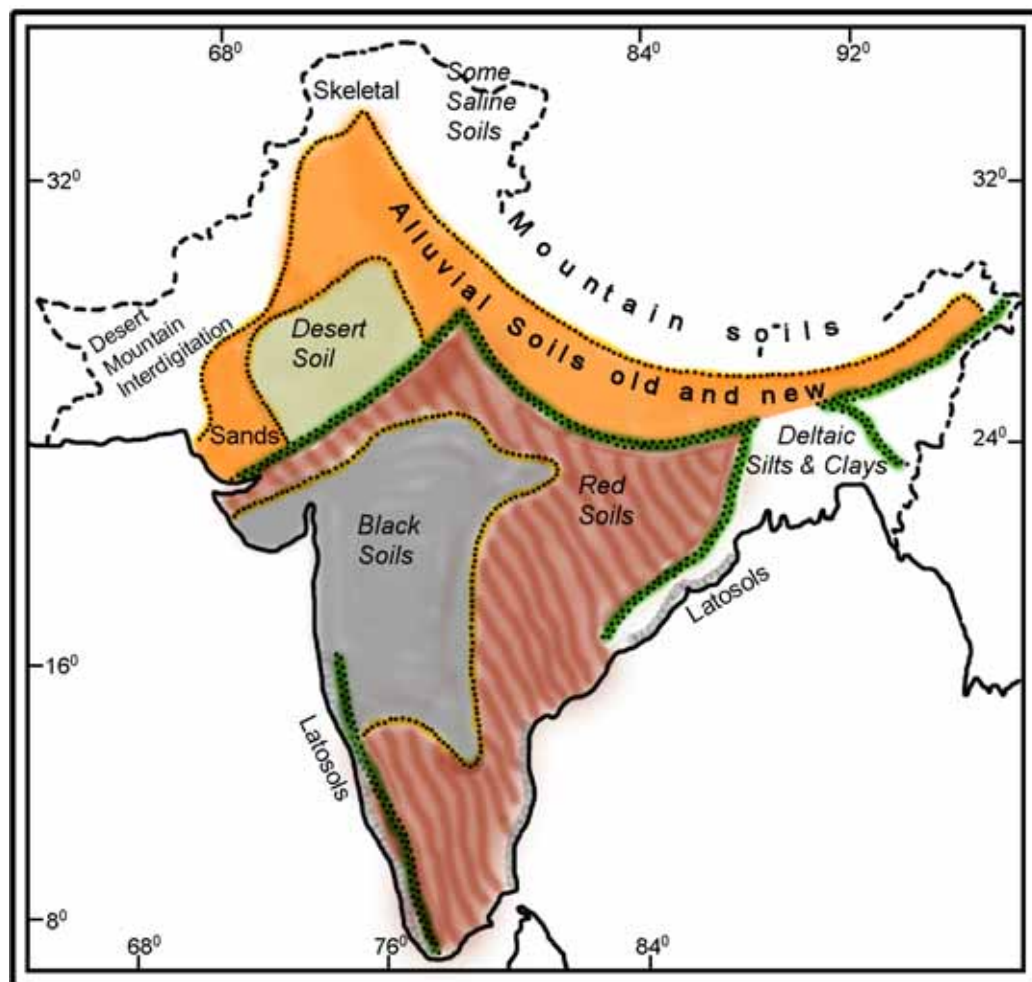
Crops move off the land most profusely during the second and third months of each monsoon, and the biggest harvests fill September-December. Regional differences appear most dramatically at harvest time. For example, the north-east, with its high rainfall, has three major harvest seasons. The *rabi* season covers March, April, and May, and yields mostly rice but in Bihar also wheat, barley, and pulses. *Bhadoi* crops include millets in Bihar and Chhotanagpur, in addition to rice, and arrive in August-September. The *aghani* season – called

kharif in north India – covers November, December, and part of January and brings the great harvest of the year. Winter rice, called *aman*, “was incomparably the most important and often the sole crop grown in the districts of Bengal, Bihar and Orissa” at the end of the nineteenth century, covering almost half the total land under cultivation.



Average annual rainfall. After Irfan Habib, ‘The Geographical Background’, in Ray Chaudhury, Tapan and Irfan Habib, *The Cambridge Economic History of India*, Vol. I, Delhi, 1982, p.7.

By contrast, in dry western India, the agricultural year begins abruptly in May, as it does for Bhils in the Narmada basin. Amita Baviskar’s study shows that the Bhils, after long, hot months without rain or work, “cannot sleep in the afternoon” because it would “appear indolent, and nature bestows her bounty only on those who bring it their industry as tribute.” As rains appear, “people who had migrated to the plains return home for the start of work.” Harvesting maize and *bajra* millets begins in August, and harvesting *jowar* millets and groundnuts continues through October. In November and December, “people sell chula, groundnuts, and other cash crops, carrying them to the traders.”



Soil Types. After O.H.K. Spate and A.T.A. Learmonth, Bombay, 1972, p.98.

Trade Winds

The monsoons are the backbone of Indian agrarian economy. Its discovery by Hippalus (c. 45 B.C.) also revolutionised the Oceanic trade. Monsoon winds blow in the subcontinent in both the seasons – summer and winter. Summer monsoon, known as southwest monsoon, begins with strong winds blowing southwest over the Arabian Sea. The winter monsoon takes the opposite direction when the wind blow from the continent (northeast), towards southwest. It is also commonly known as northeast monsoon. Both the monsoons have deep oceanic impact. We have already discussed the impact of the summer monsoon that brings torrential rains benefitting the agrarian sector of the economy. It also has deep impact on oceanic circulation. Merchants exploited monsoon winds for sailing their ships. It drastically reduced the total time-taken by a ship to reach the Indian ports. The merchants started their vessels with the beginning of the summer monsoons in July when the wind flow is towards southwest and used to leave the Indian shores in winter when the wind direction in the winter monsoon is directed towards northeast. In the early centuries it completely transformed the character of the Indo-Roman seaborne trade. Merchants exploited the knowledge of the sea wind changes to their advantage. They would sail in the month of July down the Red Sea to the Gulf of Aden (southern tip of the Arabian peninsula) sailing directly to the Indian ports. Though winds were incredibly strong, dangerous and hazardous at times, nonetheless it facilitated the faster movement of the ships with less efforts, for the ships were moving in the wind direction. The return journey used to begin in November when the wind direction changed towards northeast. The movement became so fast that now a ship could

reach from Egypt to an Indian port in three months time (if a ship started in July it was on Indian shore by September end) getting enough time to offload and reload the commodities to start back in November again. Now direct trade with western Indian ports replaced the hopping coastal trade. Vessels now started directly plying from Egypt to Gujarat as well as Kerala coasts directly.

4.3 SEASONS AND ECONOMY

After every harvest, crops take new life in the realm of circulation. They assume new material forms as moveable measures and stores of grain, fruit, pulses, and vegetables, in stocks, carts, trucks, bags, head loads, and shops. Crops become food, cuisine, feasts, stocks, clothing, and adornments, and seek their symbolic potential as gifts, offerings, tribute, largesse, shares, alms, commodities, and credit advances.

Agrarian wealth arises from the articulation of two economic seasons – of cultivation and circulation – because prices rise before the harvest, drop at harvest time, and then rise again as the heat prolongs. Speculators seek returns accordingly. The calendar differs for animal and vegetable products, for fish, fruit, and forest products, and for different grains in every region; but everywhere, it moves to the rhythm of sun, rain, and harvest. Commodity prices and markets – and thus profits and revenues for business and government – move along the temporal path of agricultural seasonality. Today, seasons influence the timing and outcome of elections and set the stage for most major political decisions in South Asia.

In the hottest months, in the season of circulation, crops move off the land and people move out in search of work. In years of plenty, people on the move can find food close to home, but during droughts, they go farther afield. With predictable regularity, food becomes costlier as labour is let loose from the farm, in the hot season. For those who must work for others, this is a time of distress, when historically, seasonal workers have moved in large numbers into warfare, manufacturing, building, and hauling, all perennial options. Opportunities for hot-season non-farm work are major determinants of landless workers' annual income.

Cheap labour, dirt roads trampled hard, and riverbeds dried up in the hot sun make dry months a good time to transport people, grain, animals, and building materials. Haulers, herders, carters, and grazing land are badly needed. Water and fodder for animals is a problem. Herders take flocks to the hills for grazing. Herds moving up and down slopes for grazing are major elements in mountain ecology, where farming and grazing often compete for land, as they do today in the Siwalik hills and higher ranges above Punjab.

Supply, demand, people, goods, and news on the move travel through towns and cities, where social needs, social accumulation, and social power mingle in markets, on the streets, and under the eye of the ruler, engendering conflict, competition, negotiation, and exchange. Markets and urban centres are places where various people mingle under rulers who order the social environment and receive riches from the land in return.

The season of circulation is a time to raise armies and mobilise demonstrations in towns and cities. The land is free of crops, so this is time to mobilise gang labour for clearing jungle, digging wells and canals, and building dams, temples, mosques, monuments, palaces, and forts. When the sun is most unrelenting, bandits are

desperate and feed off travellers on the road, a popular theme in ancient literature that rings true even today in the tales of Chambal Valley gangs who rob passing trains. The hot season is belligerent. Benevolent rulers need force to keep the peace and ambitious rulers use hungry soldiers to extend their territory.

In late May, all eyes turn to the sky and labour moves back to the land. This time is for preparation and expectation. Cultivation begins with a promise of rain. Work for preparing fields varies in timing, complexity and demand for workers, animals, and equipment, depending on the crops to be sown, soil to be planted, rainfall timing and quantity, and water supplies from other sources, like wells, tanks or streams; and also depends on the kind of assets that can be invested in anticipation of the harvest in specific places, because rich farmers can afford to make more elaborate preparations, and new technologies allow for new investments before planting begins. Expertise and experience are crucially important and highly valued. The accumulated wisdom of farmers, patriarchs, astrologers, almanacs, sutras, scientists, old sayings, magicians, holy men, textbooks, scientists, extension officers, radio, and TV pandits all come into play.

Prediction and calculation continue each day based on the amount of rain and water in rivers, streams, and reservoirs, for it is not only the amount of rainfall that determines the harvest but also its timing. Bad signs encourage conservative planting strategies for farmers living close to the margin. But farmers with extra assets often interpret rumours or signs of an impending bad monsoon or war as an indication of potential profit during subsequent scarcity and high prices; and this might stimulate a calculated gamble, extra planting. Such gambles often fail.

Whatever the expectation of rain, any extra planting or investments in potentially more profitable crops – like cotton, jute, rice, wheat, vegetables, sugarcane, tobacco, and plantain – often require loans. Historically, the expansion of farms into forests has typically involved credit, and the increasing capital intensity of farming (with irrigation, fertilisers, machinery, processing equipment, animals, or labour) depends upon credit. K.P.Agrawal, V.Puhazhendhi, and K.J.S.Satyasani's study reveals that with the increasing intensity of cultivation in India since 1970, credit has risen as a percentage of total capital formation in agriculture and allied sectors in India from 19% to 33%; and compound growth rates rose from 20% during the 1970s to 35% after 1980. For farmers close to the margin, debt may finance the next meal, and poor workers often enter the planting season already in debt because of food loans during the dry months.

The time when crops must be sown is a time of urgent investments, when gains from the past go to work, food prices are high, and people are hungry for work. Past losses hurt and farmers who have gambled and failed or lost labour in their households due to death or migration cannot carry on without help. Conflicts over resources rage at this time of year, especially over water and good land. Fights that stew for years erupt as time approaches to plough, plant, fertilise, and apply irrigation. Newly acquired assets go to work: cattle purchased at summer fairs; land bought, leased, or conquered; new fields cleared from forest; dams built and channels dug; wealth secured by marriage; the labour of growing children; and a good reputation that builds credit worthiness on solid standing in the community. Many farmers need advances of seed, food, and cash to accomplish planting, and advances may or may not enrich creditors, but the commitments they involve create social bonds that are critical on all sides.

In addition to market, social commitments within families, communities, sects, castes, and other groups enable farmers to acquire what they need to plough and plant. Reciprocity and redistribution now enter their productive phase, as horizontal solidarities and vertical bonds of loyalty and command facilitate planting. Gods also play their part and hear many prayers at planting time. Many interactions that animate the heady season of ploughing and planting bring villagers into town and city folk into villages. In cities and towns, past returns from trade, taxes, and sacred donations seek returns on the land. Creditors, tax collectors, landlords, merchants, and lawyers come from town to invest in crops and ensure they will get their due.

Too many rainless days after planting bring despair and high prices. Scarcities become famines after July when past seasons have been bad and food stocks are low. The poorest people must do whatever they can for food, which often means committing themselves or their children in desperate ways – in this context, what we call “bonded labour” can be seen as exploitation and also as protection against starvation. The scattered, unpredictable nature of monsoons and the possibility of flood or devastating storms make the maintenance of subsistence options in times of dire distress a critical life-strategy for many people.

Rains bring hope, mosquitoes, flooding, and waterborne diseases. As crops mature, so do estimates of yield and calculations of payments for obligations incurred to plant. All interested parties evaluate potential returns, as speculation and negotiation proceed with uncertainty about the harvest. The connection is again being forged between wet and dry months, between seasons of cultivation and circulation, between times of investment and reward.

Crops must be protected as they ripen, and predators take many forms. Conflicting interests – among landlords, farmers, labourers, creditors, and tax collectors – mature with the crop. Farm labour becomes most critical as the harvest approaches. Timely work is needed for watering, weeding, cutting, hauling, winnowing, drying, and storing the crop. Disruptions of work at this climactic phase can ruin crops and spoil futures planned on predictions of yield. As a result, enmity can take a nasty turn. As the harvest begins, reliable commitments of labour become more valuable and the market value of labour increases.

At harvest time, crop prices fall as labour demand is peaking. Labour demand is highest when another crop will be sown immediately, in regions that benefit from the winter monsoon or where irrigation allows a second or third crop to be planted. The most hectic work time hits all farmers at once, in each locality, and at this time, social stability and harmony are critical for everyone who invested in the crop. Conflicts also begin to intensify over the division of the crop and the fulfilment of promises.

Struggles over the crop intensifies in the season of circulation, especially when the yield is worse than predicted. Tax collectors, creditors, in-laws, and landlords can now become nasty. For all South Asian states that have depended on agriculture, the revenue year has conventionally begun with the summer monsoon. The fiscal (*Fasli*) year, derived from Mughal practice and retained by modern states, begins in July, when the summer session of the Indian Parliament also begins. Elections are generally timed to precede the monsoon, which makes the planting season a time of period of political promises as well.

4.4 MAPPING THE AGRARIAN SPACE

To analyse the history of social power in agriculture and its articulation with states and environments, we can look for dispersed activities that constitute agriculture and are scattered across *agrarian space*. A single logic or dominant form of social power may not control agriculture in such territory, but the markings of agrarian territorialism can be mapped, and their changing formations of social power can be charted chronologically. Mapping patterns of control and order, including internal resistance and external disruptions, defines the historical geography of agriculture. States help to organise agriculture by forming zones of power which co-ordinate many kinds of social activity that intersect on the farm. But many types of circulating elements inhabit agrarian space. Farms are only the most immediate point of contact between land and labour – the most tangible site of production – and most of what constitutes agriculture circulates far beyond the boundaries of the farm and well beyond boundaries of cultivation. Institutions that organise the movement of materials and activities into and out of farm land – including the state – organise social power in agriculture. States exert their powers by defining, enclosing, and regulating territorial units of agricultural organisation.

Knowledge is a critical element in farming and brings the other elements together in the organisation of agriculture. Texts depict territories of social power. Ideas moving among farmers create territories of knowledge. An elusive geography of ideas surrounds farmers who need to know how to make the best (or even safest and simplest) gamble with the rains. Each farmer needs to know about soil preparation, seed selection, planting, watering, manuring, and weeding for the specific combination of water, crops, soil, and labour conditions on each farm. Ways of knowing come from generations of learning in wide regions. Every individual calculation and decision on each farm is the result of conversations among many farmers and other people, which accumulate over generations. Textual representations of old forms of agricultural knowledge can be found in Sanskrit texts from the first millennium of Christian era, like the *Krisiparasara* and *Varahamihira's Brhat Samhita* (c. 6th century AD), which give astrologers and people who control powerful mantras and rituals key roles in agriculture. *Brhat Samhita* verses say that all astrologers must know “indications of the approach of the monsoon ... signs of immediate rainfall, prognostication through the growth of flowers and creepers ... [celestial influences on the] fluctuation in the prices of commodities [and] growth of crops ... treatment and fertilising of trees, water-divination [etc.]” [No.16] Because deities enjoy trees and water [No.537], the astrologer needs to know signs on the earth that indicate water sources below [No.499-61]. He needs to know portents of famine: sunspots are a dire signal, but also certain rainbows [No.29], shapes on the moon's face [No.36-8], eclipses [No.58], dust storms [No.67], appearances of Venus [No.105], and comets [No.146- 51]. The *Brhat Samhita* introduces its treatment of portents of rain with phrasing that we often find in old texts: “As food forms the very life of living beings, and as food is dependent on the monsoon, [the monsoon] should be investigated carefully.” [No.230] Seven chapters consider rain signs – and just like Tamil proverbs recorded in the 1890s – focus on configurations of the planets and signs like rainbows, cloud shapes, insect and animal behaviour, the sounds and shapes of thunder and lightning, and rainfall during each divisions of the solar and lunar calendar. Many agricultural proverbs recorded in modern times refer to the wisdom of

astrologers, who provided guidance for farmers. In 1802, Benjamin Heyne found a set of instruments in Mysore for measuring rain that were used to compile almanacs and to presage “the quantity of rain allotted to each country”; and the *Brhat Samhita* shows astrologers how to make such rainfall measurements accurately [No.245-6]. The *Krishiparasa* gives mantras to ward off insect and animal pests from the field, while the *Sarangadharapadhati* describes effective natural pesticides. In the 1870s, Lal Behari Day recorded a range of local curses, omens, and magical powers at work on Bengal farms.

Finally, mythologies and sacred geographies define agrarian space, because no farming population has ever believed that activity on the farm itself is sufficient for success in farming. Propitiating deities, paying homage to holy persona, visiting sacred places, and gathering with one’s own people to create ritual conditions for success on the farm are essential in agriculture.

Agriculture thus involves the exertion of powers of control over many moving elements – including esoteric knowledge, supernatural beings, human migrations, prices, commodities, and elements of nature – within which farmers apply labour on the land. Control over the means of production is thus no simple function of property rights, caste, or class structure. Agriculture is an aspect of social institutions and power relations within which farms and farmers work. It is an aspect of civilisation which generates, combines, and focuses physical powers over naturally moving and socially moveable objects in production. The historical geography of agriculture is therefore not simply described by the extent of fields and farms, or by the boundaries of states, or by cultural regions, although fields, farm territory, and political and cultural powers do mark territorial boundaries in agrarian space.

4.5 ENVIRONMENTS OF HISTORY

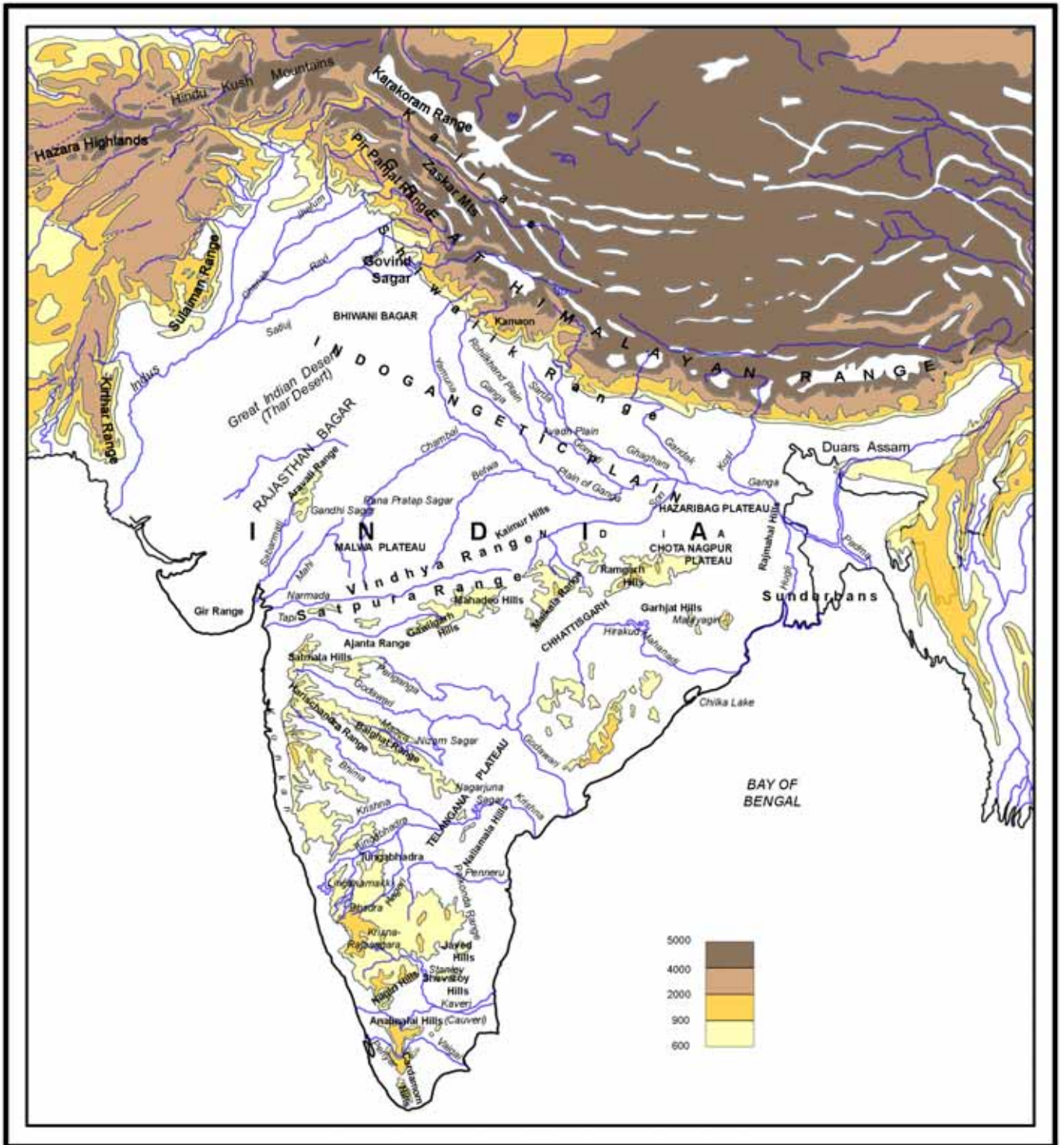
Historically, a majority of social activities and institutions in South Asia have had some agricultural aspect or dimension. This is what makes a cultural environment *agrarian*. A region is agrarian not because farming forms the material basis for other activities, but rather because a preponderance of social activity engages agriculture in some way or another, during seasons of cultivation and circulation.

For most of human history, there has been little organised co-ordination of agricultural activity across large expanses of agrarian space. Nature’s variability discourages overbearing, non-local control over the intimate, everyday conduct of farming. And yet, agrarian space is never haphazard. Spatial order appears in natural landscapes where many interconnected agrarian activities articulate with agriculture.

South Asian historical territories have assumed distinctive forms in six kinds of agrarian environments, which we can divide roughly, as below, into forty geographical units, all with ancient histories. In centuries *circa* 1500-1850, their territories came together in agrarian regions, culturally coherent, spatially organised territories of social power, which were further institutionalised, integrated, and differentiated by modern history.

Agrarian Environments		
I. Northern River Basins	II. High Mountains	III. Western Plains
1) Punjab	7) Kashmir	12) Indus Valley
2) Western Ganga-Yamuna Plain (Delhi-Agra-Mathura) etc.	8) Western Mountain Regions (Punjab, Himachal, Uttar Pradesh)	13) Sindh
3) Central Plain and Doab (Lucknow-Allahabad)	9) Nepal	14) Rajasthan
4) Eastern Ganga basin (Gorakhpur, Benares, Bihar)	10) Bhutan and Saurashtra	15) Northern Gujarat
5) Bengal, Ganga-Brahmaputra Deltas (West Bengal, Bangladesh)	11) Eastern Mountains (around Bengal and Assam)	16) Malwa
6) Assam (Brahmaputra Basin)		
IV. Central Mountains	V. The Interior Peninsula	VI. Coastal Plains
17) Malwa	24) Khandesh (Tapti Basin)	32) Gujarat
18) Bundelkhand	25) Berar (Waiganga Basin)	33) Konkan
19) Baghelkhand	26) North (Maharashtra) Deccan (Maharashtra; Godavari and Bhima Basin)	34) Karnataka
20) Chhotanagpur and Jharkhand	27) South (Karnataka) Deccan (Karnataka; Krishna-Tungabhadra Basin)	35) Kerala
21) Chhattisgarh	28) Mysore Plateau (Palar Ponnaiyar Kaveri Basin, above the Ghats)	36) Sri Lanka
22) Orissa Interior	29) Telangana (Krishna-Godavari Interfluvium)	37) Tamil Nadu
23) Bastar	30) Rayalaseema (Krishna-Pennar Interfluvium and Pennar Basin)	38) Andhra
24) Khandesh (Tapti Basin)	31) Tamil uplands (Vaigai, Kaveri, Ponnaiyar, Palar Basins, below the Ghats)	39) Orissa
25) Berar (Waiganga Basin)		40) Bengal

Agrarian environments are not defined in part by physical qualities, but also by long-term interactions of geography, culture, technology, and social power. South Asian environments can be divided schematically into two binary oppositions: mountains versus plains, and semi-arid versus humid tropics. Most farmland lies in the semi-arid plains, including river valleys and plateaux, and most of the remainder is in the humid lowlands, which have a higher proportion of population than farmland. Divisions, interactions, and intersections of uplands and lowlands and dry and wetlands occur amidst changing conditions. Rivers change course, deserts expand and contract, dry lands receive irrigation, forests grow and disappear, cropping patterns change, human settlements alter nature, and farms give way to city streets. We can however outline spatial units of long-term historical geography that allow us to track changes in the land and changes in their human content over long spans of history in South Asia. Historically, Gujarat, Malwa, Bengal, Assam, Khandesh, and Berar are at the intersection of landscapes, and they are thus repeated in the list of landscape subdivisions.



Rivers, Hills, and Mountains

4.5.1 Northern River Basins

The basins of the upper Indus and its tributaries, the Yamuna, Ganga, and Brahmaputra form one of the largest expanses of riverine farmland in the world. Soils are mostly alluvium. Farming is challenged and enriched by river drainage from mountains all around. Rivers bring moisture and nutrients, but floods also wreck havoc. Christopher V. Hill records that in 1875, the notorious Kosi River destroyed all the farms in its path, and an indigo planter wrote that, “miles of rich land, once clothed with luxuriant crops of rice, indigo, and waving grain, are now barren reaches of burning sand.” The Indus and Ganga provide natural routes for transit and shipping to the Bay of

Bengal and Arabian Sea. Bounded by desert and mountains, the climate in basins changes gradually from aridity in the west to humidity in the east. Along this gradient, monsoon rainfall and drainage from the hills increase and the dominant food grains shift from wheat to rice. Since 1960, wheat and rice cropping has overlapped because quick-growing varieties have allowed farmers with adequate irrigation to grow both in rotation, and today almost a quarter of the net sown area in Bihar, West Bengal, UP, Haryana, and Punjab grows wheat-and-rice, which is very rare outside the Indo-Gangetic basin.

In the north-west, separated by a low watershed from the Ganga basin (in Haryana), the Punjab is a triangular territory formed by the Indus and its tributaries (Jhelum, Chenab, Ravi, Beas, and Sutlej), and rimmed by mountains on the west and north (Sulaiman Range, Salt Range, Panjal Range and Lesser Himalayas). Rainfall increases with proximity to the northern hills from the Jhelum eastward, and aridity increases to the west and south. Groundwater recharge is most fulsome near riverbeds and closer to mountains, and the up-river Punjab also has more alluvial soil. Moving downstream toward the base of the Punjab at the confluence of tributaries with the Indus, rain and groundwater diminish, and soils become brown and sandy, as the Punjab shades into the arid Western Plains in Rajasthan.

C: In Punjab, as in general throughout the northern basins, the long-term geographical spread of intensive agriculture moved outward from places where drainage is easier to use on farms to places where more strenuous controls are necessary. Thus in drier regions, like Punjab, agricultural intensification moved from naturally wetter into drier areas; whereas in the flood plains and humid tropics, it moved initially from higher and drier parts of the lowlands into the more water-logged areas at river's edge. Everywhere, agriculture also moved up river valleys into the highlands. In the Yamuna-Ganga basin, the general trend of expansion of intensive agriculture has been from east to west and upland from the lowlands; and in the Punjab, from north-east to south-west. A major modern stage in this long process of expansion began with the construction of a vast canal network during the nineteenth century, and the most recent stage being the spread of motorised pumps and tubewells, since the 1960s.

In eastern regions of the northern basins, Bengal and Assam have the highest rainfall and volume of river water. Dense tropical jungles have historically presented the major challenges to expanding paddy cultivation. Today, the density of the human population is often seen as an obstacle to prosperity, but historically it has been more commonly a sign of the great fertility of the land. The Ganga delta shifted eastward over centuries and in 1787 joined the Brahmaputra in what is now Bangladesh. Agricultural frontiers in Bengal have moved east with the river, south into the Sunderbans, and also, as throughout the northern basins, up from the lowlands into high mountains.

Mountains border the Northern Basins on all sides, except in Rajasthan. Rivers come from the mountains, where reservoirs of timber and grazing land lie in the homelands of distinctive mountain societies. Lowland people have historically extended their power upriver into their surrounding mountains to colonise, conquer, and annex territory. Rajputs conquered up into Uttarakhand and mountains above Punjab. From ancient times, upper reaches of the Chambal and Parbati (tributaries of the Yamuna running down the craggy ravines of the Malwa Plateau) were attached to the agrarian economies of the Gangetic Plain, though they belong physically to the Central Mountains and they shade off in the west into the Western Plains.

4.5.2 High Mountains

From the Makran Range in the west, running north across the Sulaimans and Hindu Kush, and curving east across the Karakoram Range and Himalayas to the Naga and Manipur Hills, a vast high altitude landscape connects South Asia with Central Asia, Tibet, China, and Myanmar. It has steeply sloping mountain terrain, sharp valleys, and countless rivers, which mark natural routes of transportation and drainage, rushing down into the plains below and leading upward to the high plateaux of inner Asia. Winters are much colder than below in the plains, and summers, much cooler, creating different, complementary ecologies for animals, vegetation, forests, farmers, and markets. Like the lowlands, climates change from extremes of aridity in the west and to extremes of humidity in the east, with attendant changes in natural vegetation and agricultural options. Run-off is rapid, snowmelt gorges rivers in the spring, and erosion is severe. Forests are basic natural resources. Agricultural territories formed in valleys and extended upward, growing wheat and millets in the west and paddy in the east. Shifting cultivation, often called *jhum*, has remained most prominent in the east.

Localities are connected by valleys and passes, and separated by high ridges and peaks. Large political territories have formed only in the Vale of Kashmir, Kathmandu Valley, and upper Brahmaputra basin. Great distances and obstacles to travel separate territories in the High Mountains from one another, and these territories are connected more to proximate lowland regions than to one another. In the west, Baluch and Pashtu mountain societies live in corridors between Iran, Afghanistan, the Indus basin, and Punjab. Kathmandu is at cross-roads of South Asia and Tibet. Assam is not only intensely engaged in the history of Northern Basins, but also participates in the history of Southeast Asia and China.

Except in Bhutan, all High Mountain societies live under the authority of elites in valleys below, but rebellions today in Nepal, Nagaland, Mizoram, Baluchistan, Kashmir, and Chittagong Hill Tracts indicate struggles for political autonomy. Across the high mountains, from Yusufsai borderlands with Afghanistan to the Chittagong Hill Tracts, cultural oppositions between peoples of the hills and lowlands are typically stark. The term “tribe” is most often applied in modern times to the smaller scale social formations that thrive in the small, relatively isolated agrarian spaces of the High Mountains.

4.5.3 Western Plains

Semi-arid Western Plains run into High Mountains in the west and merge gradually with Northern River basins (in Haryana) and Central Mountains (in Malwa and Gujarat). They form a connective zone for long-term historical movements of people in every direction. Rainfall is very low, and spatially, the plains are dominated by the Thar Desert. In prehistoric times, the river Saraswati ran deep into western Rajasthan before it ran west into its inland delta near the Indus; and Rajasthan, the Indus basin, and Sindh seem to have become increasingly dry over millennia. There is indirect evidence that Rajasthan dried up noticeably in medieval centuries. The scrub-covered, rocky, and scattered Aravalli hills rise abruptly from flatlands in the east, providing fortress material and drainage for adjacent valleys. Irrigation, mostly from wells, and good monsoons are more common in the east, where they create good rich farmland for bajra, maize, wheat, jowar and cotton cultivation. Soil becomes increasingly sandy to the west; and in the south, grey-brown sandy soil becomes

good red loam, creating a naturally favoured zone for farming that runs along a corridor from Haryana through Jaipur and Ajmer into Gujarat.

As in all arid regions, people and animals have always travelled this landscape in search of water and wealth, and agrarian life here has always featured mobility, nomadism, pastoralism, stock rearing, and migration for trade and conquest. Medieval warriors and merchants – most famously, Rajputs and Marwaris – moved from old centres to acquire more wealth in regions of better farming in the east, north, and south. Dense population centres in the western plains are based on locally irrigated farms, strategic locations on trade routes, and extensions of political power embracing numerous similar centres across expanses of sparsely populated land. Trade connections to bordering regions on all sides and to sea-lanes are critical for economic vitality. Like the camel – its characteristic pack animal – this land has always had a tendency to wander uncontrollably into its surroundings, making its boundaries vague.

4.5.4 Central Mountains

This landscape of interlacing mountains, valleys, rivers, plateaux, and plains extends from Gujarat in the west, along the rim of the Gangetic Plain in the north, to Chhotanagpur in the north-east, to the Deccan plateau in the south, and to the edges of the Godavari River basin in the south-east. Its territories have formed amidst an interlaced complex of river basins that run in every direction to feed all rivers north of the Krishna and east of the Indus. The Chambal, Parvati, Betwa, and Ken run north from the Malwa Plateau and Bundelkhand into the Yamuna; their valleys form historic highways into the Gangetic Plain. The Vindhya and Satpura Ranges form the valley of the Narmada, which like the Tapti, drains west into the Gulf of Cambay. The Mahi drains Malwa into the Gulf, arching north and then running south. East of Malwa and Bundelkhand, in Baghelkhand, waters from the Maikala, Mahadeo, and Ramgarh mountains send the river Son north-east into the Ganga; they send the Narmada west, the Mahanadi east through Chhattisgarh into Orissa and the Bay of Bengal, and the Waiganga south into the Godavari. East of Baghelkhand, the Ranchi and Hazaribagh plateaux dump the Damodar River into the Hooghly and send the Subarnarekha straight into the Bay of Bengal. Ringed by mountains, Chhattisgarh forms a bowl-shaped radial drainage basin, from which the Mahanadi flows east into the Bay of Bengal. South of Chhattisgarh lie the dense hills of Bastar and inland Orissa, from which the Indravati drains into the Godavari.

Like the High Mountains and Northern Basins, which it parallels geographically, the Central Mountains are dry in the west and wet in the east. In the west, the barren scrublands of the Chambal ravines carry torrents of mud in the monsoon and then bake hard in the summer heat. In the east and south, tropical forests cover Jharkhand, Orissa, and Bastar. Like the High Mountains, too, this landscape is dominated by intersections of mountains and valleys, forests and lowlands, and their respective societies. Farms have been cut historically into the forest to foment interactive struggles within and among communities of farmers, hunters, and pastoralists. Shifting cultivation and tribal populations are prominent; and India's largest tribal groups live here, the Bhils (in the west), Gonds (in the central regions), and Santals (in the east). 1981 census figures show that all the groups of Bhils totalled 7,367,973 in southern Rajasthan, western Madhya Pradesh, Gujarat, and northern Maharashtra; the many Gond groups added up to 7,388,463, spread over seven states but with 5,349,883 in Madhya Pradesh; and Santal groups comprised 4,260,842 people in Bihar, West Bengal, Orissa, and Tripura.

More than in the High Mountains – because of better soils, wider valleys, longer summers, and constant invasions by agrarian powers on all sides – the trend in land-use and social power here has strongly favoured the hegemony of lowland farming communities and the expansion of more intensive farming regimes among hill people. Farms today show great variety in techniques and options, ranging from irrigated wheat farms in the Narmada and upper Chambal valleys to rice mono-cropping in Chhattisgarh, to shifting cultivation in Bastar, and to mixed forestry and millet farming in Baghelkhand. This variety parallels the variety of social formations, which combine tribal and caste elements more widely than elsewhere. Intensive farming is most dominant where soil, water, and states favoured a few extensively controlled, homogenised tracts – in the Narmada valley (which benefits from deposits of black cotton soil), the upper Chambal valley, the Waiganga valley (Gondwana), and Chhattisgarh. Khandesh and Berar participate in the history of the central mountains but also in that of the interior peninsula.

4.5.5 The Interior Peninsula

This semi-arid landscape consists of river basins and interfluvial plains; its agricultural character derives from lines of drainage, seams of good soil, and underground water in the rocky substrate of the Deccan trap. Geologically, these features come from volcanoes that left behind caverns of underground rock, boulders on the land, and black soil under foot. In the south-east, rocky outcrops become the Nallamalai, Eastern Ghats, Javadi, Shevaroy, and Pachaimalai Hills, which mark the descent of the peninsula into the eastern coastal plain. Framed by the Eastern Ghats, south of the Godavari, by the Western Ghats, on the west, and by central mountains, in north-east, the interior peninsula landscape touches the western plains in Gujarat, where Saurashtra forms the north-western corner of the Deccan Trap.

South of the Tapti and Narmada, all big rivers of the peninsula drain the Western Ghats and run most of their distance across predominantly dry, flat plateaux, sloping from west to east on the NW-SE bias of the Krishna-Godavari system. Fertile black soils run in wide seams along the Narmada basin, the upper Godavari, and the Krishna and its tributaries, Bhima and Tungabhadra. Outside the black soil tracts, the northern Deccan soil is predominantly medium black; and the southern soils in Karnataka and upland Tamil Nadu mix red with patches of black. All these soils are quite fertile when water is sufficient – which it usually is not – and the blacker the soil is, the more it can produce good crops with meagre moisture.

Getting enough water is the main problem for farmers, because most land lies in the rain shadow of the Western Ghats, and everywhere, monsoons are fickle. Historically, intensive agriculture has expanded outward from small regions favoured by river water and good soil. South Asia's east-west rainfall gradient here runs the north-west to south-east. In the north-west Maharashtra Deccan, wells provide most irrigation, even today, despite the spread of large river dams and canals. On the Karnataka plateau and around Hyderabad and Warangal, tank irrigation is more important, and becomes more so as we move further south-east. The gradual increase in drainage availability from north-west to south-east has allowed a parallel increase in irrigated acreage, multiple cropping, and population density; but a major hole in this overlapping set of gradations lies in the North Deccan interior and Pennar-Krishna interfluvium (Anantapur,

Bellary, Kurnool, Adoni, Raichur, Bijapur), where numerous tanks have long supported meagre irrigation and low population densities. There is indirect evidence of increasing desiccation in the driest parts of peninsula since the nineteenth century.

Agriculture has expanded over centuries into three forest types that distinguish the peninsula from Punjab, Rajasthan, and Gujarat. Originally, dry tropical forest of deciduous trees covered the flatlands, where only scrubby savannah remains. Monsoon forests that lost their leaves in the dry season once covered high plateaux and Eastern Ghats, which were once full of teak, most now gone. Evergreen rain forest originally covered the Western Ghats, and some remains. Into each forest type, farms pushed over the centuries, and overall, the peninsula's north-west-south-east gradient organised the geographical diversity of agro-technological milieus. Pastoralism and long-fallow millet cultivation dominated the driest parts, especially north and west, into the nineteenth century. Shortening fallow and well irrigation enabled more intense dry farming to take over where rainfall, technology, and water table allow. Rainfall and drainage have long made wet paddy cultivation more prominent in the south. Variegated soil and water conditions create various cropping regions, in which, millets, cotton, and oilseeds predominate, with patches of intensive well cultivation and irrigated paddy (especially in the south), and expanses of animal raising and pastoralism, especially in the north.

4.5.6 Coastal Plains

This composite landscape along the seacoast is formed of river valleys, plains, and deltas with adjacent interfluvial flatlands; and everywhere, it includes adjacent uplands and mountain sides, though dominated agriculturally by riverine plains, alluvial soils, and paddy fields. Its mountain border (on the west coast) and proximity (in the east) to tropical depressions that form the winter monsoon in the Bay of Bengal, bring it much more rain than the interior peninsula. On the whole, it is more tropical in appearance, even its driest parts, along the Tamil and Andhra coast. It is a borderland with the ocean, and thus includes a fishery ecology and social life along the beach that is an integral part of its history, as are coastal sea trade and connections to coasts everywhere in the Indian Ocean, Bay of Bengal, and Arabian Sea.

Some of its territories are relatively isolated from inland corridors – Chittagong, Orissa, parts of Kerala, and above all, Sri Lanka – and coastal regions communicate most intensively by sea, often more so with one another than by land with adjacent inland territories. The Tamil and Kerala coast are part of a cultural space that also embraces coastal Sri Lanka, and the cultural traffic between the South Asian littoral and Southeast Asia is constant and very influential over the centuries. Bengal's most prominent connections have always been run along waterways to Orissa, Assam, and Bihar. Migrations are common among these coastal regions, which logically have similarities in diet, featuring more fish, and in occupations, with more fishing communities and water transportation. Rice is the dominant food grain everywhere on this watery landscape.

4.6 LINES OF COMMUNICATION

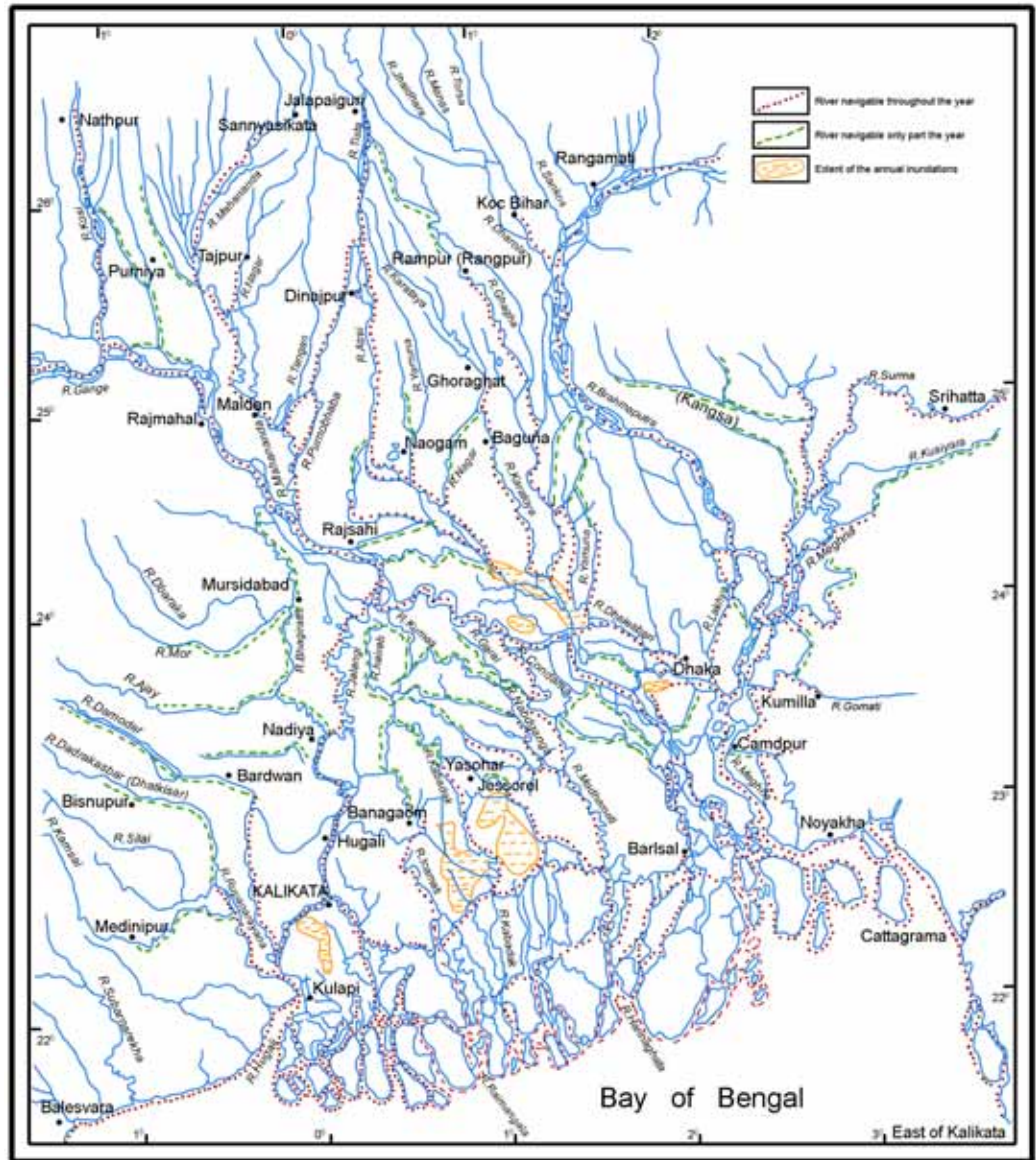
One zone of mobility defines South Asia overland inside inland southern Asia. This zone includes two broad corridors: one connects the Ganga-Brahmaputra delta in the east with Iran and the Palestine in the west; the other runs north-

south from central Asia into central India and the southern peninsula. These corridors intersect in two strategic regions: Kabul, Herat, and Mashad lie astride corridors that connect south, central, and west Asia; Delhi, Ajmer, and Bhopal lie astride the intersecting corridors that connect Kabul, Bengal, and Gujarat with the Deccan and southern peninsula. Though mountains are often seen as natural boundaries to mobility – most prominently, the Himalayas and Vindhyas – they do not so much obstruct as channel the movement of elements that influence agrarian history. Travels across Nepal to and from the Gangetic plain have always been less prominent than along routes running through Kashmir; and overland treks from Assam into China are fewer still. But to the west and north-west, barriers to mobility across the Hindu Kush, Iran, Central Asia, China have been erected mostly by military force – by Mauryans against the Indo-Greeks, Turks and Afghans against the Mongols, and British against the Russians. In the east, dense tropical jungles have restricted transportation over the high mountains, but in the west, battle lines have been more effective determinants than transport costs along the inland corridors of southern Asia. (For details see Unit 8, Maps 3, 4, & 5)

A second zone of mobility defines South Asia in the Indian Ocean. The sea is not a barrier but a watery terrain of low transportation costs. It creates a historical geography of shorelines that run from East Africa and the Red Sea to Southeast Asia and China. Over the centuries, technological change dramatically lowered transport costs. Long distance and bulk transportation were always cheaper, safer, and quicker, until the railways; and in Roman times, waterways connected South Asia with the Mediterranean and South China. In the day of Delhi Sultans, sea routes spanned Eurasia. By Akbar's time, they crossed the Atlantic and Pacific to connect coastal regions around the world. Coastal South Asia spread north along waterways in Bengal past Dhaka and west up the Ganga as far as Patna, as the Ganga also formed a highway inland up to Agra, along which flowed the Mughal revenue. Along the coastal shore lands, boats could land anywhere, moving with monsoon wind. Waterways formed open zones of interaction all along the coast, but some inland areas were much better connected to sea than others. From the mouth of the Indus to the Konkan, and from Kanya Kumari to Chittagong, the inland areas are more accessible to the sea, but Afghanistan, Kashmir, and Nepal are very distant. The coast of Myanmar-Malaysia is cut off by mountain forest and jungle from the inland corridors of southern Asia. The coastal regions of Orissa and Kerala are also relatively isolated by mountain forests from the inland corridors. (For communication network see Unit 24)

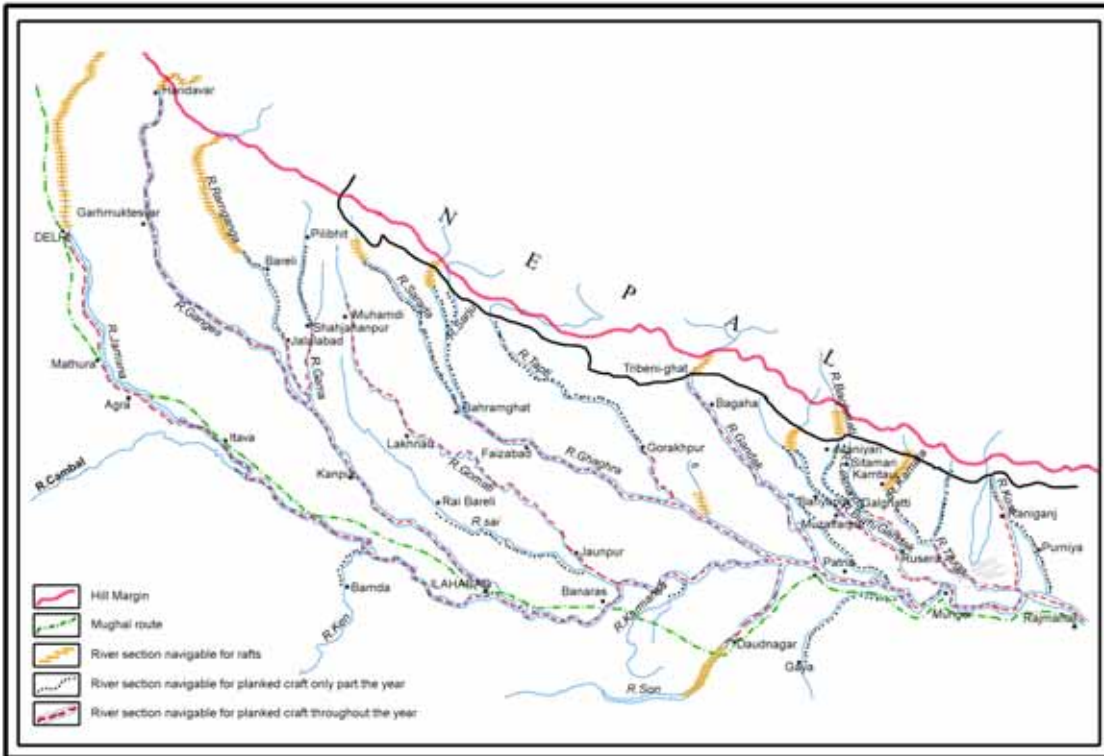
Fluvial Routes

Prior to the introduction of railways in India river transport occupied an important place in the communication network of India. The water transport was not only cheaper and faster as compared to land, but transporting bulky goods was made easy in the absence of modern means of communication in the past. To construct the Konark temple stones were queried and brought through fluvial route to Orissa from as far as Nilgiri Hills. Firuz Shah Tughluq (AD 1351-88) got Ashokan pillar transported to Delhi (installed at Firuz Shah Kotla, New Delhi) from village Navera near Khizrabad via Yamuna on boats. The rivers of the plains were fordable and navigable all the year round. It made possible to use them effectively for transportation.

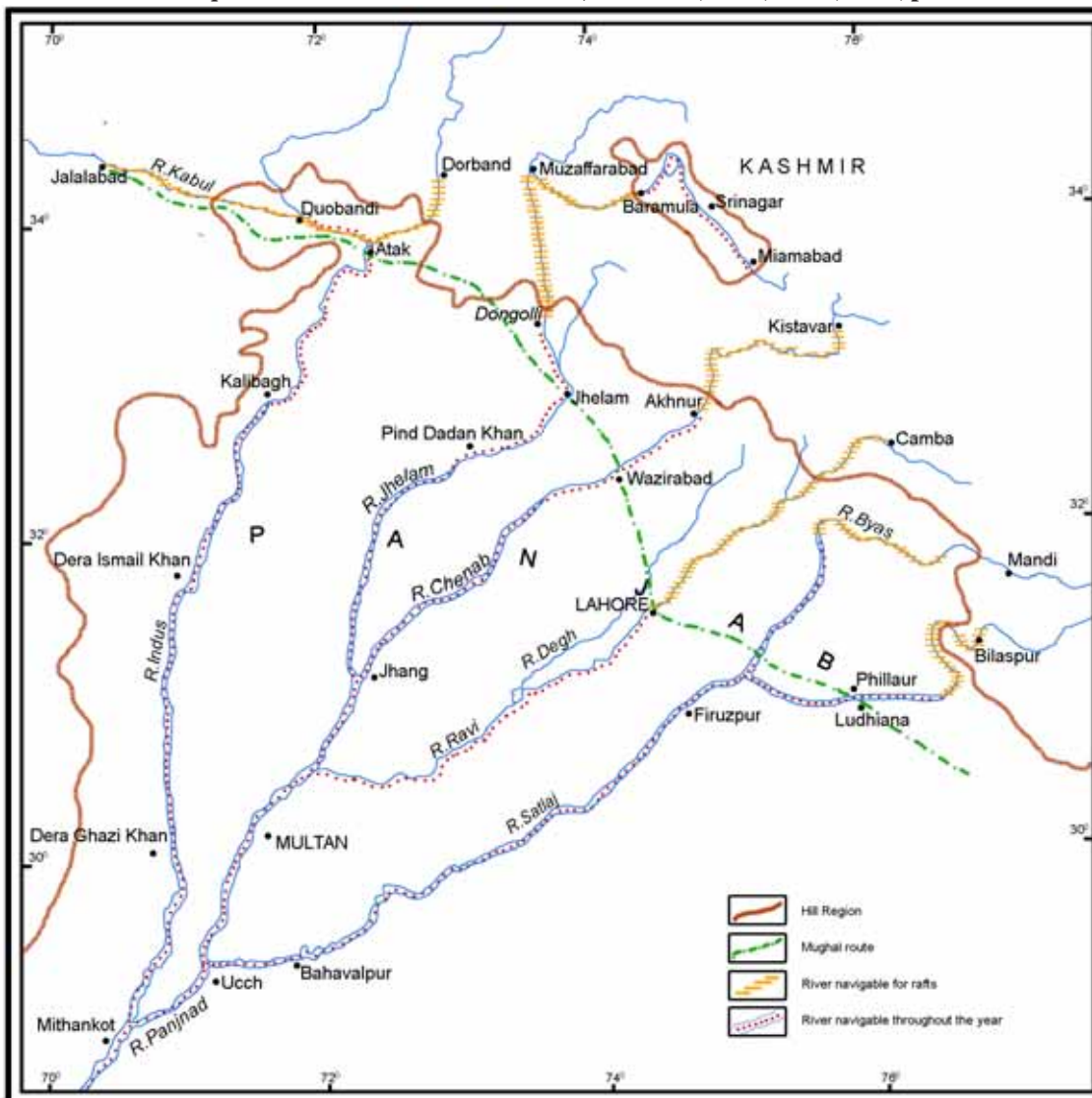


River Navigation in Bengal. After Deloche, Jean (trs. from French by James Walker), *Transport and Communications in India*, Volume 2, OUP, Delhi, 1994, p.25.

Indus and Ganga rivers are used for transportation from the earliest times. ‘Bengal’s fluvial ramifications, comments Jean Deloche, constitute perhaps the world’s most complete and convenient inland navigation....Bengal, therefore benefits from an exceptional navigational network.’ James Rennell’s, (first Surveyor General who explored the river systems of Bengal during 1767 to 1776) survey of Bengal’s riparian tracts is perhaps the most comprehensive study. Two major deltaic regions – Ganga and Brahmaputra – flank Bengal. ‘The Ganges and Burrampooter rivers, together with their numerous branches and adjuncts, intersects the country of Bengal..., as to form the most complete and easy inland navigation.’ ...’Nor will it be wondered at, when it is known, that all the salt and a large portion of the food consumed by ten millions people are conveyed by water within the kingdom of Bengal and its dependencies.’ (see Map for navigational network of Bengal)

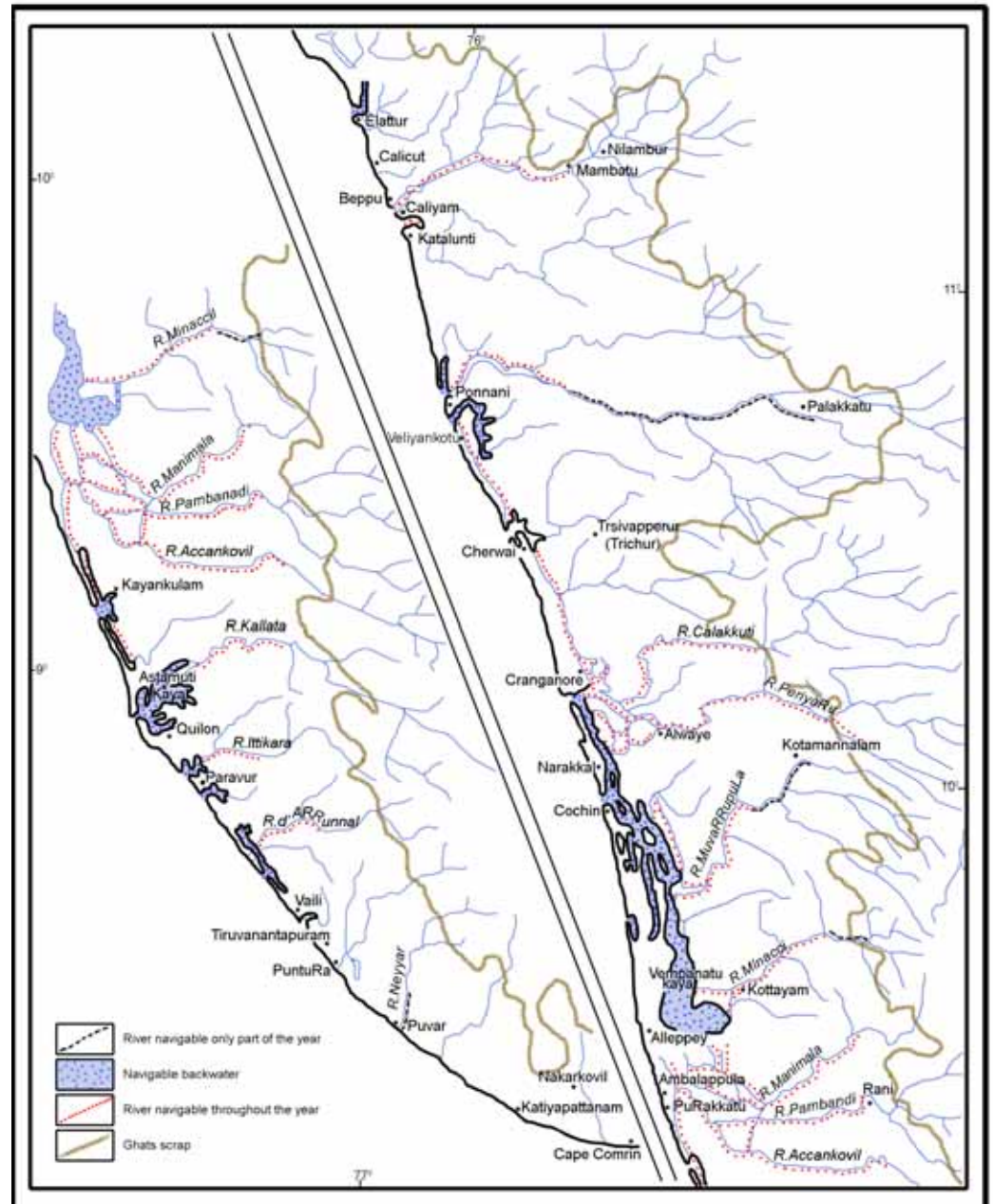


River Navigation: Ganga and its Tributaries. After Deloche, Jean (trs. from French by James Walker), *Transport and Communications in India*, Volume 2, OUP, Delhi, 1994, p.20.



River Navigation: North-West. After Deloche, Jean (trs. from French by James Walker), *Transport and Communications in India*, Volume 2, OUP, Delhi, 1994, p.16.

However, the peninsular India does not possess the same advantage. Courses of Narmada and Tapti were traversed by 'large tracts of basalt rocks'. Similarly, Krishna and Kaveri are at many points obstructed by granite rocks of Deccan plateau. Godavari passing through thick forests of Gondvana region; Krishna and Kaveri on account of their turbulent nature largely remained unfit for navigation. Nonetheless, boatmen did utilised Mahanadi for transportation. From Chhattisgarh plains upto the eastern coast, before it finally submerges into the Bay of Bengal the river is fordable. Bulky goods, particularly grains from the hinterland were transported to Orissa and boats returned with salt and other coastal manufactures to the hinterland.



Navigation Network: Kerala and the West Coast. After Deloche, Jean (trs. from French by James Walker), *Transport and Communications in India*, Volume 2, OUP, Delhi, 1994, p.88.

In the coastal region, however, Kerala is gifted, for, here the water channels form lagoons and are available for navigation for almost 300 kilometres. (compare coastal navigation of Kerala region to that of Bengal).

4.7 SUMMARY

Agricultural landscapes emerge over long periods of time from farming activity that conditions the natural world of human aesthetics. Agrarian history unfolds in the seasons of everyday life in agricultural societies. Seasons connect farming time to natural time and divinity. The physical quality of seasons in South Asia form a huge transition zone between the aridity of Southwest Asia and the humidity of Southeast Asia. Seasons and monsoons not only determined the agricultural map of the subcontinent, it steered in the past, to a large extent, the trading activities of the region. With the discovery of monsoon Indo-Roman trade increased greatly. Along the rivers, not only flourished the earliest and the greatest Indian civilisation – the Indus valley civilisation – but also there emerged a number of towns and cities. Rivers occupied a ‘key’ position in communication and transportation of goods all through the pre-railway era.

4.8 EXERCISES

- 1) Locate the monsoon and rainfall pattern on a map. Analyse the relationship between seasons and economy.
- 2) To what extent geographical regions determined the agricultural map of India.
- 3) Discuss the factors that determined the agrarian environment of Indian subcontinent.
- 4) Punjab presents a curious contrast lying between heavy rainfall and extreme arid zones. In what respect it affected the agricultural map of the region?
- 5) ‘High mountain zones were relatively isolated agrarian spaces.’ Comment.
- 6) Analyse the importance of travel and migration in the arid regions.
- 7) Examine the factors influencing the migration pattern in the coastal regions.
- 8) Compare the river systems of the northern plains with peninsular rivers.
- 9) Examine the importance of navigational and fordable rivers for communication and transportation.

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M.A. History

List of Courses

Course Code.	Title of the Course	Credits
MHI-01	Ancient and Medieval Societies	8
MHI-02	Modern World	8
MHI-03	Historiography	8
MHI-04	Political Structures in India	8
MHI-05	History of Indian Economy	8
MHI-06	Evolution of Social Structures in India Through the Ages	8
MHI-07	Religious Thought and Belief in India	8
MHI-08	History of Ecology and Environment: India	8

MHI-05 History of Indian Economy

Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
- Block 2** : Emergence and Structure of Complex Economy
- Block 3** : Early Medieval Economy and its Continuities
- Block 4** : Expansion and Growth of Medieval Economy-1
- Block 5** : Expansion and Growth of Medieval Economy-2
- Block 6** : Trade and Markets
- Block 7** : The Rural Economy
- Block 8** : Craft Production, Technological Change and Industrialisation

UNIT 5 ORIGINS OF AGRICULTURE, ANIMAL DOMESTICATION, CRAFT PRODUCTION TO URBANISATION (CASE OF THE HARAPPAN CIVILIZATION)

Structure

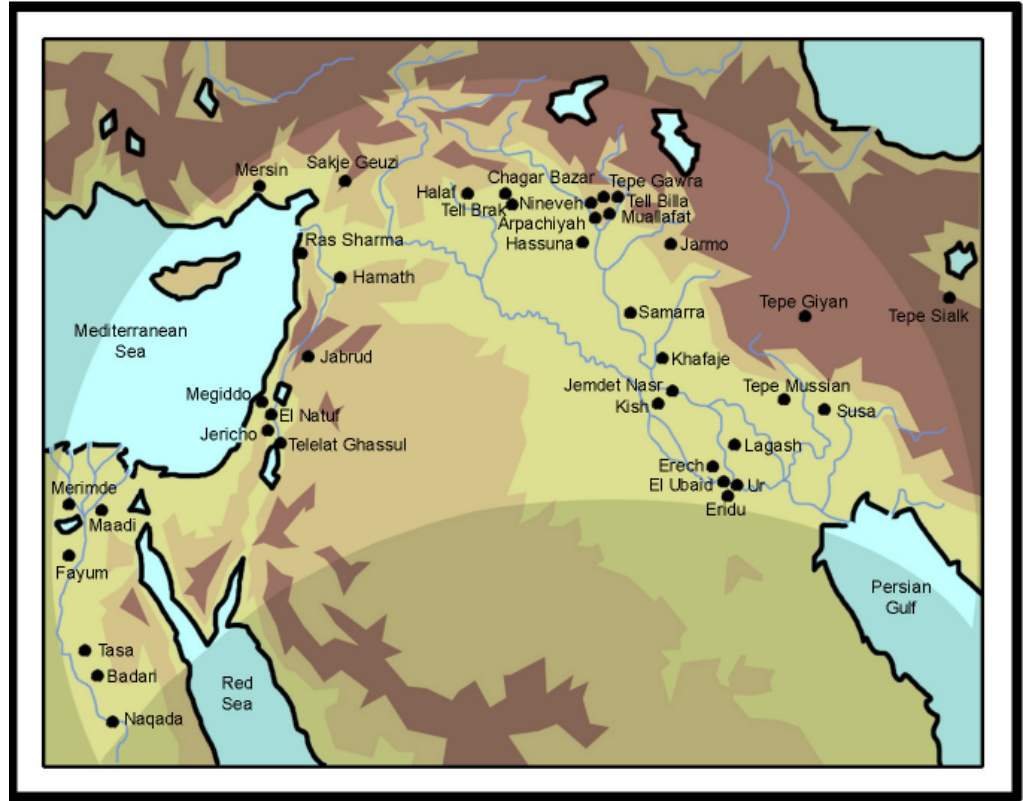
- 5.1 Introduction
- 5.2 Beginning of Food Production: Features
- 5.3 Why Did People Take Up Cultivation?
- 5.4 Earliest Farming Groups in the Indian Subcontinent
 - 5.4.1 Mehrgarh: the Earliest Farming Village in the Indian Subcontinent
 - 5.4.2 Expansion of the Agricultural Communities
 - 5.4.3 Agriculture Spreads to the Indus Plains
 - 5.4.4 Consequences of Agriculture
- 5.5 The Early Harappan Period
 - 5.5.1 The Indus Region
 - 5.5.2 The Lower Indus Plain
 - 5.5.3 Intensification of Agriculture and Use of Copper
 - 5.5.4 Planning of Settlements
- 5.6 Emergence of Cities
 - 5.6.1 Population Increase and Shift
 - 5.6.2 Warlike Conditions
 - 5.6.3 Increase in the Size of Settlements
- 5.7 The Harappan civilization
 - 5.7.1 Location of Settlements
 - 5.7.2 Hierarchy of Settlements
 - 5.7.3 Agriculture and Pastoralism in the Harappan Civilization
 - 5.7.4 Town Planning
 - 5.7.5 Craft Specialisation
 - 5.7.6 Long Distance Trade
 - 5.7.7 Decline of the Harappan Cities
- 5.8 Summary
- 5.9 Glossary
- 5.10 Exercises
- 5.11 Suggested Readings

5.1 INTRODUCTION

The transition from foraging to farming is one of the turning points in human history. The seasonally mobile life of hunter-gatherers, who obtained their food from wild plants and animals, was replaced by the settled life of farmers, who cultivated crops and raised domesticated livestock. This shift from nomadic to sedentary life led to the growth of population and village settlement, the development of crafts such as pottery and metallurgy, and eventually to centralised city states and urbanization.

Our knowledge about the beginning of food production is derived from excavation reports. At the time of the beginning of food production our ancestors did not know reading and writing. So, we have to draw conclusions on the basis of archaeological remains found in ancient sites. The earliest evidence for the beginning of food production comes from the western 'Fertile Crescent' (largely covering modern Iraq), principally from the 'core area' of the southern Levant and the middle Euphrates Valley. Here remains of

domesticated cereals (barley, einkorn wheat and emmer wheat), pulses (lentil, pea and chickpea) and flax have been recovered. These sites have been radiocarbon-dated between approximately 10,000 and 8500BC. By this period domesticated goats and sheep also appear.



Map 1 : Fertile Crescent (After: Hermann Kinder and Werner Hilgemann, *The Penguin Atlas of World History*, London, 1998, Volume I, p. 16

5.2 BEGINNING OF FOOD PRODUCTION: FEATURES

When archaeologists talk about the beginning of food production they refer to four associated features. Cooking and storing wheat and barley presents a new kind of problem. While meat can be roasted directly on fire, cereals will be lost in ash if they are not cooked in a utensil. Thus utensils which could withstand the high temperature of oven were required for cooking wheat and barley. Metal was unknown. *Earthen pots baked in fire* were the earliest utensils for cooking food. Wheat and barley were ground for making bread. Querns and pestles were used for grinding wheat and barley. Regular grinding created a smooth polished surface on the stone tools. Thus, the beginning of food production is associated with the *use of polished stone tools*. The beginning of food production coincided with the *domestication of goats and sheep* too. Although cultivation began earlier, in the Indian subcontinent most of the early agricultural communities used small quantities of copper tools. That is why they are referred to as *chalcolithic communities* meaning thereby that they used stone tools along with a few copper tools.

5.3 WHY DID PEOPLE TAKE UP CULTIVATION?

One of the great questions of prehistory is why, about 12,000 years ago, some people adopted an agricultural way of life. The most convincing explanation is that the environmental changes that followed the last ice age between *c* 9000 and *c* 8000 BC, caused hunter-gatherers in Iraq, Palestine and Turkey, to shift to foods derived from grasses and legumes (beans) that were the progenitors of the cereal and pulse crops.

Regular harvesting and sowing of these plants led to selection of the domesticated forms, which proved more productive. The beginning of food production coincided with an equally revolutionary change—*livestock raising*. The domestication of animals represented a radically new way of life. In the hunting gathering society animals were killed and consumed immediately. Now animals were reared to act as walking larders that could be used in times of scarcity. Food production and animal domestication represented a changed outlook for food quest. It represented a planning not for a day but for a season—for the long term. When food production and animal domestication combined as a mode of life it amounted to a revolution. This new agricultural economy expanded at the expense of the old foraging way of life. (for details see Blocks 1&2 of MHI-01)

5.4 EARLIEST FARMING GROUPS IN THE INDIAN SUBCONTINENT

The causes of the origin of agriculture in India are not clear to us. Mehrgarh near the Bolan Pass in Baluchistan is the earliest agricultural settlement in the Indian sub continent. Beginning around 7000 BC as a camping site, this settlement saw a gradual shift from dependence on wild game to domesticated food crops and animals. However, we have no evidence for gradual, local transitions to agriculture. Instead, the domesticated cereals and pulses appear suddenly. That is why scholars believe that the knowledge of agriculture spread to India from neighbouring Iran where it had been imported from Iraq. Plants and animals domesticated by the villagers in Mehrgarh are less at home in monsoon India with its summer rainfall than in the uplands of western Asia and Afghanistan with its wet winters. The knowledge of agriculture could spread to other areas through the actual migration of people, through trade and inter community marriages. From the north western India the idea of cultivation gradually spread to other parts of the subcontinent. Many communities took up agriculture and many did not. It depended on the needs and perceptions of the group. If some areas had abundant wild resources, foragers would not take up agriculture even if they knew about it.

The hunting gathering communities experimented with various kinds of locally available edible grasses. Some of these grasses became the staple diet of the succeeding agricultural communities. In the Indus region the primary cereal was wheat/ barley. They also domesticated sheep, goat, cattle and buffalo. The Ganga valley subsistence pattern centred around the cultivation of rice. Their domestic animals were the same. The farmers supplemented their food by fish, game, wild plants and honey. The modern day food habits of the people in the Ganga and the Indus plains reflect the decisions made by our ancestors in the prehistoric past.

The cities of Harappa emerged in the Indus region. Later on the Ganga valley witnessed the emergence of cities in the sixth century BC. We shall follow the developments in the Indus region because it is connected with the first urbanization in the Indian past.

5.4.1 Mehrgarh: the Earliest Farming Village in the Indian Subcontinent

The earliest evidence for agriculture in the Indian subcontinent comes not from the fertile river valleys of Indus or the Ganga. Rather it comes from the dry, windswept hilly regions of Baluchistan. The site of Mehrgarh is located in the Kachi plains on the bank of the Bolan river. The river water forms an inland delta in this area. The Bolan valley has been one of the important routes linking the Indus plains with the mountainous terrain of Baluchistan. Pastoral nomads, traders and invaders have used this route from prehistoric

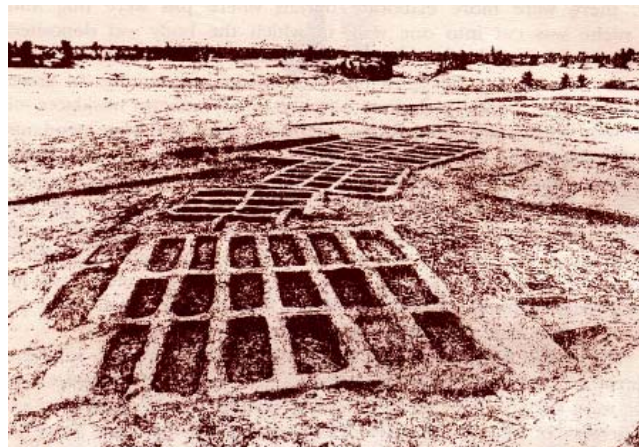
times. Even now, pastoral nomadic communities come down from the hills and use the pastures of this area in the winter season. No wonder the settlement of Mehrgarh began its history as a camping site around 7000 BC. Probably the community of pastoralists had learnt about farming from other mobile communities in the Afghanistan - Baluchistan area. The food of the people at Mehrgarh consisted primarily of wild game supplemented by small quantities of domesticated cereals and animals. Over a period of a thousand years the inhabitants shifted from a reliance on wild animals to barley, wheat, sheep, goats and cattle.

**Mehrgarh, the Beginnings of Agriculture
(Initial Agrarian Subsistence in Piedmont Zone)**

BC	Mehrgarh Period	
7000	???	
6500	IA	Pre-ceramic Neolithic
6000		
5500	IB, C	Period of silt and floods
5000	IIA, B	Period of construction, chaff-tempered ware, granaries
	IIC	
4500		
4000	III	Painted pottery, female terracotta, figurines, granaries
3500	IV-V	
3000	VI	
2200	VII	

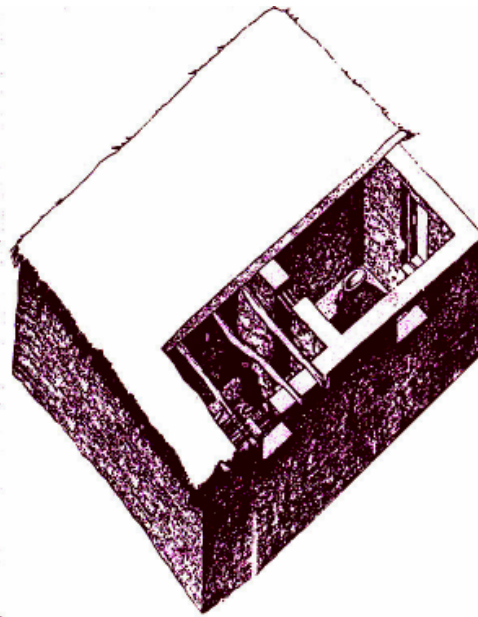
A chronological representation of Mehrgarh : Raymond & Bridget Allchin, *Origins of a Civilization*, Viking 1997, p. 126 [After Jarrige (1984), Lechevallier (1984), Lechevallier & Quivron (1985)]

The earliest inhabitants did not use pottery or copper tools. An irregular scatter of mud brick houses separated by refuse dumps made up the first village. However, even the earliest inhabitants were using azure blue lapis lazuli, blue-green turquoise and white marine shells. These objects had been obtained from distant places. Marine shells could be obtained from the Makran coast only. Lapis lazuli is found either in the steep mountainous region of Badakshan or the dry desert of Chagai. Similarly, Turquoise came from Kyzyl kum beyond the river Oxus. It shows that even the earliest agriculturists were connected with networks of exchange extending from the Arabian sea to Central Asia (see Map 3 for early points of contacts).



Mehrgarh site, showing the excavated area, period, IIA Raymond & Bridget Allchin, *Origins of a Civilization*, Viking 1997, p. 132

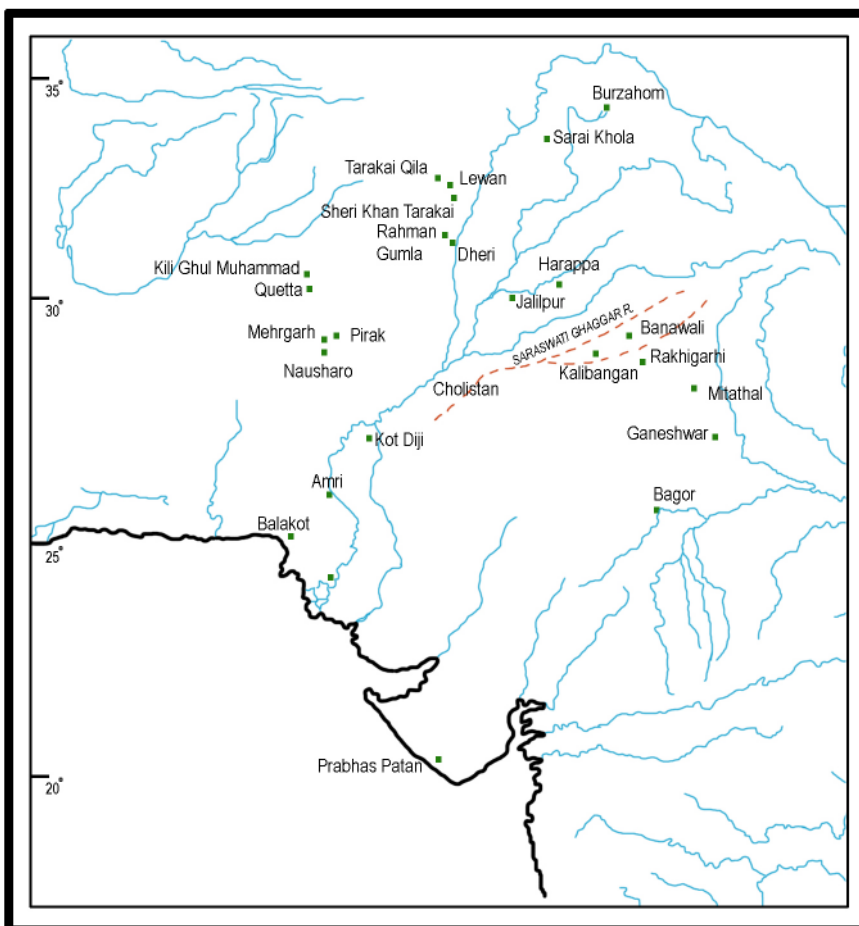
By about 5500 BC the settlement was transformed. People built mud brick houses having cubicles that could have been used for the storage of grains. They built retaining walls on terraces. They began to set roofs on rectangular section rafters. The first coarse pottery also appeared in this period. The already existing list of precious stones was augmented by the white and black steatite, red-orange carnelian and banded agate.



Isometric reconstruction of "House E" showing the use of rafters for support, Mehrgarh, Period I (After Irfan Habib, *Prehistory*, Delhi, p.51)

5.4.2 Expansion of the Agricultural Communities

By the fifth millennium BC many agricultural villages, large and small, had been founded in Baluchistan. Villages like Kile Gul Mohammed and Kalat in the Quetta valley and Mundigak near Kandahar in Afghanistan came into existence. Settlements like Sarai Khola near Taxila and Sheri Khan Tarakai south of Bannu also date to this period. By the fourth millennium BC the settlement of Balakot came into existence. Located on the Makran coast (near Karachi), this settlement might have been the source of sea shells found in contemporary agricultural settlements.



Map 2 : Early Harappan Sites (After : Raymond & Bridget Allchin, *Origins of a Civilization*, Viking, 1997, p. 124)

Around 4000 BC Mehrgarh had grown into a settlement of about 50 hectares. Apart from the continuance of the earlier tradition of building houses and granaries this period saw some developments. People in Mehrgarh began using copper on a significant scale.

To this period also date the finds of a large number of female terracotta figurines. There are evidences for mass production of pottery with the introduction of the potter's wheel. The painted decoration on this pottery has been regarded as the hallmark of the pottery of the agricultural communities of Baluchistan. It seems that agricultural communities were colonizing new areas.

5.4.3 Agriculture Spreads to the Indus Plains

It was in the second half of the fourth millennium BC that the agricultural system developed in the piedmont zone was successfully transplanted into the plains of the Indus river system. The site of Amri shows typical borrowings from Baluchistan. About forty sites have been reported on the plains of the now dry bed of the Hakra river (Map 3).

The colonization of the Indus plains by the agriculturists was a major step in the development of agricultural communities. The flood plains would have been more densely forested with swamps and wild animals posing challenges to human communities. Once these areas were colonized the food yields would dramatically improve. Also waterways were the most efficient modes of transport in the ancient world. So settlements along the river bank became efficient nodes of communication radiating and receiving influences on a more organized scale than had been possible earlier. Thus the shift to river valleys was an important stage in the expansion of agriculture.

5.4.4 Consequences of Agriculture

The origin of agriculture is related to the birth of village. Hunter-gatherers moved their homes according to the seasonal migration of animals and availability of fruits and roots. Unlike hunting gathering, agriculture requires that the farmer stay in one place for a long period. He has to sow seeds, he has to water the plants and he has to protect the saplings from birds and animals. Only after four to six months are the plants ready for harvesting. This means that unlike hunting-gathering, agriculture encourages settling down in one place. That is why the large scale emergence of villages dates to the coming of agriculture.

Coming of agriculture is also related to the emergence of long term patterns of cooperation. Hunting-gathering groups need cooperation for organizing hunt. Once the hunt is over and game has been shared the group ceases to exist. The basic unit of social organization of most hunting and gathering groups is the band, a small- scale nomadic group of fifteen to fifty people related by kinship. Rather than living in uniformly sized groups throughout the year, band societies tend to spend part of the year dispersed into small foraging units and another part of the year aggregated into much larger units. This pattern of dispersal and aggregation is related to the seasonal availability of food and game in different areas. Kinship ties are loose and people of one group easily move to another group. On the other hand agriculturists need cooperation from sowing to harvesting. Unlike a typical hunting expedition which might last a day or a week, agriculturists have to cooperate in the production process lasting at least four months. While agriculturists are waiting for the crops to grow, they survive on the food produced by farmers in the previous season. So, there is a need for cooperation among food producing groups across the year. No wonder agricultural societies are characterized by large kinship networks which is the institutional frame for long term cooperation among the farmers.

Settled agricultural populations tend to expand both numerically and territorially. Population growth is higher among sedentary communities. Crops provided farmers with more dependable supplies of grain based weaning foods such as gruel and porridge, as well as milk, once the goats and sheep began to be milked. The average interval between births would have been reduced, leading to increase in population. Also agricultural activities like harvesting and sowing can be done by children too, whereas hunting requires full grown adults. The possibility of early induction into the production process creates desire for more children.

The coming of agriculture meant that crops could be sown in areas where they did not grow naturally. Thus, there was an artificial extension of the production niche. While hunter-gatherers depended on nature to provide them food, agriculturists actively created new landscapes of cultivated crops. Thus, cultivators colonized many new areas uninhabited in the earlier period. They removed unwanted vegetation to plant food producing crops. This led to cutting down of forests. The domesticated plants required greater tending and care compared to the wild varieties. They needed water more regularly. So, the beginning of food production coincided with the development of irrigation. Agriculture also led to an increase in the carrying capacity of land. Various calculations suggest that a hunter-gather would need roughly four square kilometers of land to feed himself in a year's time. A very small chunk of land could support large number of agriculturists.

5.5 THE EARLY HARAPPAN PERIOD

The period beginning around 3200 BC saw some significant changes in the Indus region. The cumulative impact of the expansion of agriculture is visible in this period. Cultivators living in the same village for hundreds of years developed a better understanding of land, soil and cropping pattern of the area. Areas having similar weather and soil would produce similar crops. These villagers were in touch with each other through trade and intermarriage. There are evidences for regular interaction among the village communities. Shared pottery traditions in large areas have also been reported. That is why some scholars call it the period of the emergence of regional traditions.

A Chronological of Span of the Pre-Harappan and Harappan Settlements

Earliest Occupation (Ravi culture)	3300-2800 BC
Early Harappan (Kot Dijian culture)	2800-2600 BC
Mature Harappan (three phases)	2600-1900 BC
Transition between Mature and Late Harappan	1900-1800 BC
Late Harappan	1800 BC onwards

Shereen Ratnagar, *Understanding Harappa*, New Delhi, 2001, p. 5

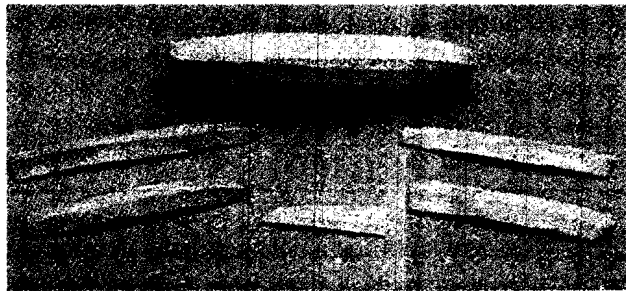
The village communities in southern Baluchistan and the Quetta valley show the use of similar kinds of painted pottery having naturalistic decorations showing humped bull and Pipal leaf motifs. Mundigak in Afghanistan, Damb Sadaat in the Quetta valley and Rana Ghundai show the use of similar types of terracotta figurines. Settlements like Anjira, Togau, Nindowari and Balakot have been reported from central and southern Baluchistan. They had trade links with towns in the Persian Gulf. In the Baluchistan area the number of settlements increased fourfold.

5.5.1 The Indus Region

Dramatic changes were taking place in the settlements of the Indus plains. Over a period of time the Indus area emerged as the focal point of future developments. We shall review some of these developments.

Developments in the Piedmont Zone

In the piedmont region Mehrgarh continued to show impressive developments in the early third millennium BC. The settlement of Rahman Dheri near the Gomal pass shows evidence of planned oblong settlement and presence of many kinds of semi-precious stones. In the Bannu area the settlement of Tarkai Qila too has yielded evidence of a large variety of grains. The finds of wheat, barley, lentil, peas, sesamum, linseed together with the bones of domesticated sheep, goat and cattle, indicate that the food production base of the Harappans had emerged by this period. In a settlement nearby called Lewan the inhabitants seem to have specialized in the production of stone tools. In a world where people had just been introduced to copper, most of the activities were carried out

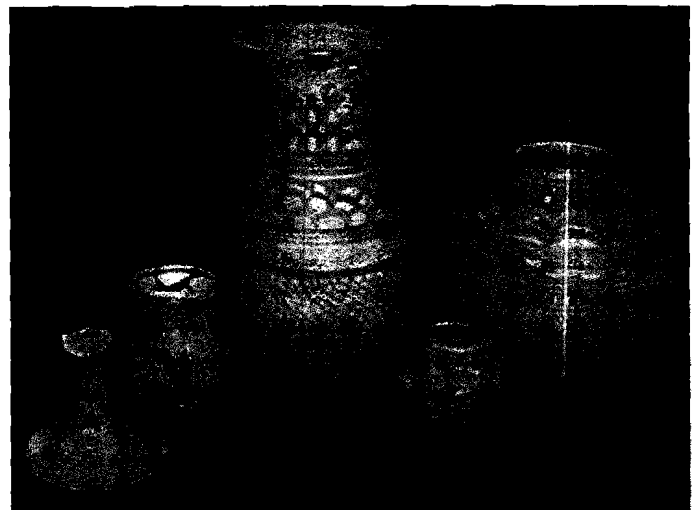


Chert Blades and Core : Shereen Ratnagar,
Understanding Harappa, New Delhi, 2001, p. 64

with stone tools. Some areas had good quality stone quarries. People in these areas were exploiting this resource not only for the use of the local community but also for exchanging it with the merchandise of areas far away.

5.5.2 The Lower Indus Plain

In the lower Indus plain Amri emerged with a distinct tradition. People built houses of stone and brick. They painted motifs like the humped Indian bull on their pots – a tradition which continued into the mature Harappan phase too. These people shared some characteristics with the roughly contemporary settlements like Dholavira and Surkotda in Gujarat. Opposite Mohenjodaro on the left bank of the Indus was located the settlement of Kot Diji. The most interesting find in this settlement is the wheel thrown pottery having decorations of plain bands of dark brownish paint. This kind of pottery has been reported from such far flung settlements as Kalibangan in north Rajasthan, Mehrgarh in Baluchistan, and along the entire stretch of the river Indus where pre- Harappan villages have been found. This sharing of the pottery tradition is related to greater communication among the agricultural communities.

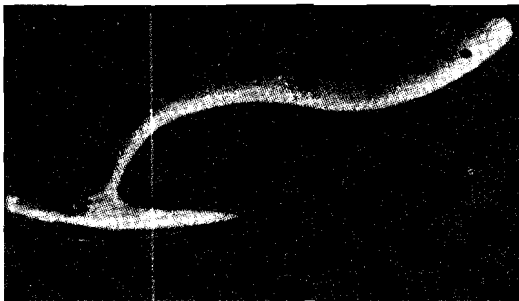


Painted Pottery, Harappa : Jonathan Mark Kenoyer,
Ancient Indus Tour : Around the Indus in 90 Slides

5.5.3 Intensification of Agriculture and Use of Copper

In the period 3300–2600 BC the subsistence base of an agricultural society had taken shape. This base drives the economic life of people of this area even in the modern times. Wheat, barley, linseed, peas, lentil, sesamum, dates and grapes were being cultivated. Sheep, goat, humped cattle and buffalo were the domesticated animals. It is in Kalibangan (Rajasthan) that we come across the dramatic evidence of a ploughed field. The cross furrows suggest that two kinds of crops were grown in the field. This proof of intensive cultivation was the reason why the Ghaggar-Hakra basin was the most densely populated area in this period.

The Kalibangan evidence and that of the contemporary Sothi-Siswal (in northern Rajasthan, Punjab and Haryana) culture indicates the use of copper on an appreciable scale. Settlements like Mehrgarh and Rehman Dheri attest to a modest use of copper–bronze. It was used for making bangles, awls and chisels. Unlike the subsequent urban phase the technique of their production was quite primitive. Metal objects were produced by cold hammering and open mould casting. Gold and silver were rarely used.



A plough from Banawali, Haryana (After R.S. Bisht, reproduced from Irfan Habib, *The Indus Civilization*, Delhi, 2002, p.24)



Ploughed field, Kalibangan (After *Indian Archaeology – A Review*, 1971, p.96)

5.5.4 Planning of Settlements

The most dramatic developments were visible in the sphere of planning of settlements. There are evidences for the building of fortification in settlements like Kalibangan, Rahman Dheri, Kot Diji and Banawali. Fortification serves two purposes. Citadels are meant to



Harappan Settlements: Mohanjodaro Shereen Ratnagar, *Understanding Harappa*, New Delhi, 2001 p. 19



Computer Graphic Reconstruction of Dholavira Settlements (After R. S. Bisht, *Indus Civilization*; Computer Graphics by: Osamu Ishizawa, Yasuyo Iwata and Nobuyuki Matsuda)

exclude outsiders and the underprivileged. They indicate that communities inside the citadel had something to protect. Thus citadels are clues to socio-political hierarchy. It helps the powerful to control activities inside the fortification. It also helps them keep an eye on the outsiders. If traders bring goods from places faraway they can collect their share for allowing them access to potential buyers inside the fortification. At Kalibangan there is evidence for standardized norm of brick production and brick laying.

The finds of toy carts indicates that bullock carts were part of the existing technology of transport. Seals were in use in sites like Mehrgarh and Rahman Dheri. Seals are used for sealing merchandise in interpersonal trade. However, many early people of West Asia are known to have used seals for securing doors of houses. So, we are not very sure about the use of these seals.

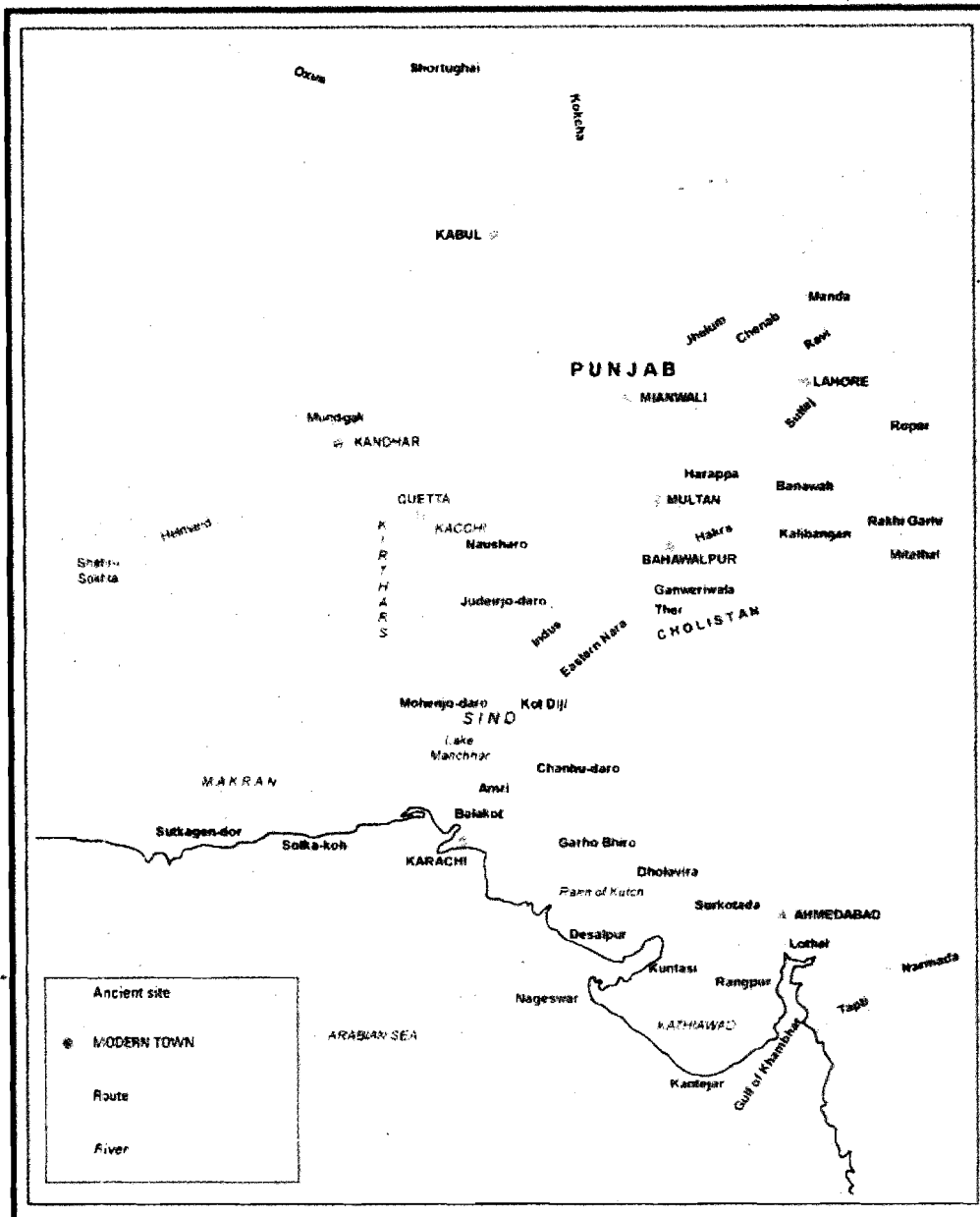
By the beginning of the third millennium BC the Indus region had made significant strides in the field of agriculture (cultivation of many crops), transportation (boats and bullock carts), metallurgy (use of metals on a modest scale), and town planning .

5.6 EMERGENCE OF CITIES

- The coming of the city represents a major transformation in the history of humankind. While the agricultural revolution changed the relationship between humans and nature, the urban revolution transformed the relationship among humans. We shall tentatively identify some of the processes involved in this transformation. In the subsequent section we shall describe the economic structures that emerged in the wake of this great transformation.

5.6.1 Population Increase and Shift

The urban phase is known as the 'Mature Harappan' among the archaeologists. The archaeological evidence suggests that emergence of the city was accompanied by considerable population shift as well as population increase. This is clear from the study of the settlement pattern in the Ghaggar-Hakra basin. Very few purely agricultural settlements of the pre-urban period survived into the urban phase. On the Hakra plains out of thirty seven sites only three continued to be inhabited in the urban phase. The emergence of city also coincided with an increase in the number of settlements. Apart from the three sites which survived from the early Harappan period, eighty new mature



Map 3 : Mature Harappan Sites (After Shereen Ratnagar, *Understanding Harappa*, New Delhi, 2001, p. 22)

Harappan settlements came into existence in this period. If we were to put together the occupied area of the early Harappan settlements in the Ghaggar-Hakra basin it will add up to 210 hectares. In the mature Harappan phase on the other hand the total occupied area was 450 hectares. This indicates a population increase.

5.6.2 Warlike Conditions

The coming of city also saw an increase in the number of violent conflicts among communities. In settlements located as far apart as Nausharo and Kot Diji we have evidence of the burning down of settlements towards the end of the early Harappan period. Buildings of the new urban phase lie right on top of the layer of ash. Kalibangan also shows evidence of burning. Not all the fires would have been caused by accident. Some of them are likely to have been the results of conflicts. This impression is buttressed by the fact that in settlements like Kalibangan the burning of the old settlement is followed by the building of a township where the mature Harappan pattern of town planning and fortification is in evidence. Those who destroyed the town followed different principles of planning.

5.6.3 Increase in the Size of Settlements

The size of some of the settlements of the Harappan civilization dwarfs the settlements of the pre-urban phase. While the largest settlements of the pre-urban phase would range between twenty to fifty hectares, an urban settlement like Mohenjodaro covered an area of 150 hectares. It is a well known fact that cultivators prefer to live near their fields. If the population of a village grows, a correspondingly larger area would be required for cultivation. The fields of some families would be located at a greater distance necessitating time consuming journeying to and from the field. In such a situation cultivators bud off from their villages and set up a village close to the field. Therefore, if a settlement is large, its size needs to be explained by factors other than food production.

5.7 THE HARAPPAN CIVILIZATION

When we refer to a settlement as a part of the Harappan civilization we are suggesting that it shares certain features with larger settlements like Harappa and Mohenjodaro. These shared features range from a thick red pottery and large bricks having the size ratio of 4:2:1, to a range of weights and measures. It also includes use of a script, seals, steatite disc beads, long barrel shaped carnelian beads, bronze razors with two curved blades and barbed fish hooks. There are also other common features.

5.7.1 Location of Settlements

Location of the Harappan settlements gives us clues about the Harappan economy. Although most of the Harappan settlements are located in the fertile plains of the Indus system, a large number of them are located in settlements skirting arid deserts (Sutkagendor on the Makran coast bordering Iran) and steppe terrain (Shortughai in Badakshan). These places were settled with the diverse needs of the Harappan elite in mind. For example Shortughai was settled with the intention of extracting lapis lazuli and panning gold from a river nearby. The settlement of Balakot on the Makran coast and Nageswar in Gujarat were centers for making bangles out of Shankh shells. These bangles have been found in most of the Harappan settlements and they were in demand in Mesopotamia too. Sutkagendor was meant to be a port for ships going to the Persian Gulf. The location of Harappan settlements indicates that they were performing a variety of functions. While most of the sites would be agricultural and pastoralist villages, there were other kinds of settlements meant for extracting semi-precious stones, factory sites at Rohri in Sind for making stone tools and coastal settlements for trading and extracting sea shells. There seems to have been regional and local specialization in crafts. This specialization required coordination by a power structure.

It has been shown by some scholars that the coming of the Harappan urbanism signified a distinct shift in trade routes. Communications down the Bolan route to Kandahar ceased. Pre Harappan settlements like Mehrgarh, Mundigak and Shahr-I-Sokhta were in contact with each other. In the urban phase the Harappans do not show any contact with these settlements. The Harappan elite obtained its supply of precious objects like lapis lazuli by founding its own settlements in places like Shortughai.

5.7.2 Hierarchy of Settlements

Harappan settlements ranged in size from 150 hectares to less than a hectare. The majority of sites were around six hectares or less. Each geographical region had its own hierarchy of settlements. For example in the Cholistan area in the Ghaggar-Hakra basin the site of Ganweriwala is the same size as Harappa (150 hectares) while 8 sites are 10 to 50

hectares, 20 sites are 5 to 10 hectares and 44 are between 1 to 5 hectares. Probably the mid sized settlements acted as nodes in the local economy. They supplied metals and precious stones needed in the villages. These middle level settlements in turn were dependent on the larger settlements for rare precious metals obtained from distant places.

It is believed that Mohenjodaro had a population of 35000. Villages do not house such large populations. If such a large number of people lived in one place it has to be explained by additional functions like administration, religious activities, trade and crafts production. The elite of the city appropriated and exploited the resources of areas near and far. These activities offset the disadvantages of congregating in a small space. In fact hierarchy in site size indicated domination and control of the smaller sites by the larger sites. This is substantiated by the finds of rare luxury items like gold, silver, turquoise and lapis lazuli in larger settlements like Mohenjodaro and Harappa. Also the evidence for the presence of a large number of craftsmen in these settlements indicates that they had clustered in a small area. These non-food producers depended on the agricultural produce of the villagers of the surrounding areas. The presence of granaries in cities like Harappa, Mohenjodaro and Lothal indicate that grains were procured from villages and stored in the city. Cities are units of settlement which dominate villages with their economic, political or religious power.

Finds at Harappan settlements indicate that it was a society controlled by a small elite. This is proved by the presence of large exclusive buildings, expensive imported items which were the preserve of a few and the well regulated planning of many of the settlements. These divisions between rich and poor, rulers and the ruled are possible in state societies only. This was a state which was actively involved in the economy. The uniformity in brick size, pottery and bronze tools can be attributed to the mobilization of skilled craftsmen across the entire area of the Harappan civilization. Besides it was the political unification achieved by the Harappan elite that made it possible for small communities in Nageshwar to produce shell bangles for faraway centres like Mohenjodaro. Similarly, stone weights manufactured at Chanhudaro were in use in Mohenjodaro. Evidences at Lothal suggest that goods brought from distant areas were stored possibly for shipment. All this shows that these urban centres had been assimilated in a larger trans-regional economic system. That state was actively involved in the economy is proved by the uniform system of weights, seals and writing. Precious objects available at great distance needed a rich and powerful elite to mobilize personnel to procure them. The Harappan state seems to have intervened in managing the distribution and procurement of such objects from distant areas.

5.7.3 Agriculture and Pastoralism in the Harappan Civilization

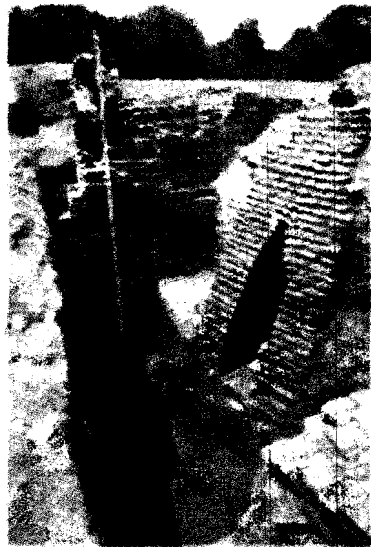
Villages in the Harappan civilization show the same diversity as the urban settlements. This is because they are located in divergent ecological zones. The technologies used in agricultural production seem to have been already in place in the 'early Harappan period'. As mentioned earlier, the use of plough would have increased agricultural production. They also made wells and practiced lift irrigation. In Shortughai has been reported the find of a canal. Possibly such canals were built in other settlements too. Probably, the real innovation of the Harappans was the use of a variety of food crops. They grew wheat, barley, grams, lentil, linseed and mustard as winter crop and Bajra,, Ragi, Jowar, sesamum and cotton as summer crop. Among the domesticated animals oxen drew plough and carts while cows provided milk, While sheep provided wool and meat, goats were used for their meat.

Pastoral nomadism must have been an important ingredient of the economy. They tended

herds of sheep, goat and cattle. The manure provided by these animals is critical to agricultural productivity even in modern times. In many cases in Harappan world where droughts and blight could wipe out agricultural production, pastoral nomadism was a useful form of adaptation. However, we have limited information about these communities. Harappans also consumed fish and wild game whose bones have been reported from some of the settlements.

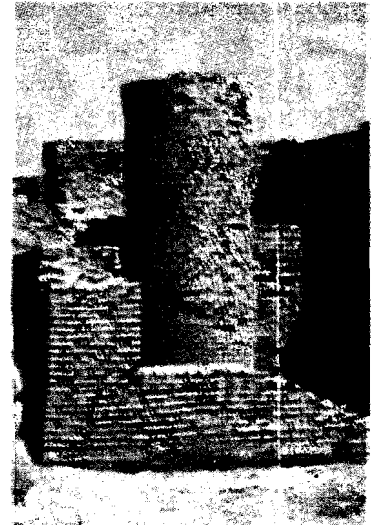
5.7.4 Town Planning

Planned streets and drains with planned housing complexes in places like Mohenjodaro, Harappa and many other settlements reveal an important fact. These towns did not grow organically from the pre-existing villages. Pre conceived housing pattern indicates that these cities were planned and built first and residents moved in later. This indicates that the economy had moved beyond the realm of individual households. Decisions about the location and



Corbelled Drain, Harappa
(After Kenoyer)

building of a household were not taken by the head of the family but by a superior authority ruling over the city. There were some innovations in building tradition. Large pillared halls, clerestory courtyards and thick walled two storied structures were innovations of the mature Harappan



Well, Mohenjodaro
(After Kenoyer)

period. At Dholavira in Gujarat we find innovations in the extensive use of stone as a building material.

The cities and buildings of Harappa indicate that there were people who lived in large houses. Some of them bathed in exclusive swimming pools (the Great Bath). There were others who lived in small barracks. One can say with certainty that those who lived in larger houses belonged to the richer groups whereas those living in the barracks might have been part of a servile class of labourers. In other words the Harappan urbanism shows the emergence of a class society hierarchically divided between rich and poor and dominant and dominated.

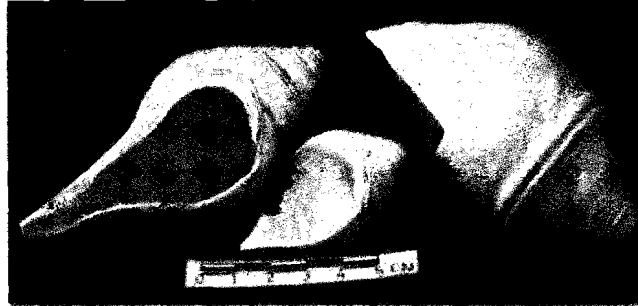
5.7.5 Craft Specialisation

One of the important features of urbanism is believed to be craft specialization. It is believed that in the pre urban societies every member of the group performed agricultural or hunting gathering activities. In the spare time individuals pursued their hobbies. They made beautiful stone tools or wove basket. Some times these crafts persons bartered their produce with other people in the village. In exceptional circumstances they could stop producing food altogether. Normally these were activities in addition to food production. The coming of city coincided with the emergence of a group of crafts persons who met a part of their needs by buying and selling things in the market. They were generally patronized by the rich and powerful of their society. These powerful people needed craft products like precious stones and jewelry to enhance their status. These

powerful people would procure precious stones from distant places which in turn would be worked by the crafts persons. As a result many of the crafts persons stopped producing food for themselves. Since crafts persons do not grow their own food, specialization means that specialists exchange their wares with others for obtaining raw material and food.

There are evidences for the presence of craft specialization in many Harappan cities. For example shell was frequently used as a material for making bangles, cups etc. Shell

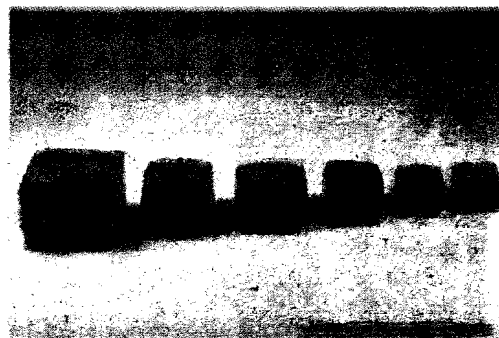
was obtained from the sea. It was procured from the sea and cut into various shapes. This can be inferred from the heaps of waste shell pieces with half finished ones at settlements like Nageswar and Balakot. Considering the small size of these settlements and the large output of shell objects, it is obvious that these objects were



Libation Vessels, Mohenjodaro (After Kenoyer)

not for the immediate consumption of the community. This fact is further buttressed by the fact that shell objects have been reported from Harappan settlements as far apart as Harappa and Shortughai. One can say that the producers of shell objects were craft specialists participating in an exchange network extending from Gujarat to Badakshan in Afghanistan. Shankh shells have been reported from Mesopotamian settlements too. This means that these crafts persons were participating in long distance trade beyond the boundaries of the Harappan civilization.

Harappan settlements have yielded evidence for various other kinds of craft activities. The widespread use of long chert blades produced in Rohri hills in Sind again is the pointer to a trans-regional economy which is producing objects of everyday utility in centralised locations. Chert blades produced in the Rohri hills have been found in settlements as far apart as Balakot and Shortughai. Copper- bronze tools have



Weights, Harappa (After Kenoyer)

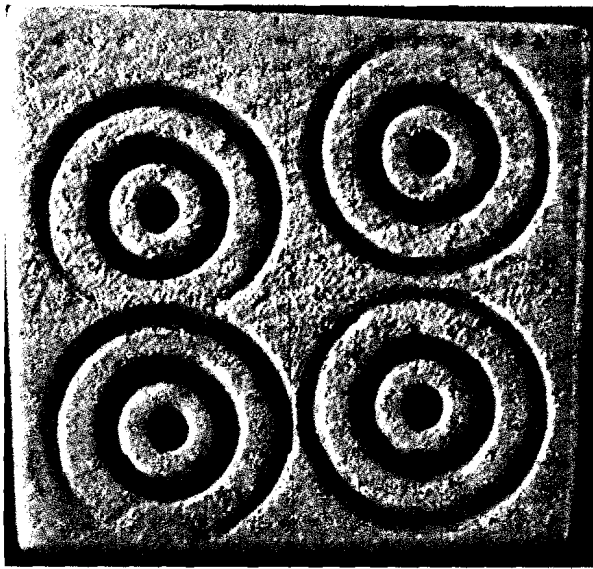


Seals, Mohenjodaro (After Kenoyer)

been reported from a large number of Harappan settlements. At Chanhudaro have been reported evidences for the manufacture of stone weights, seals, shell bangles, steatite and carnelian beads.

We can conclude that urban crafts persons were producing for exchange. It pre supposes a demand for such goods. In settlements like Mohenjodaro have been reported workshops for making beads of

carnelian and lapis lazuli. This means that an elite had emerged which funneled raw materials from distant Central Asia and peninsular India to urban workshops. The range of products seems to suggest that the craft persons were producing goods for the common people as well as the rich. Even very small Harappan settlements like Allahdino have

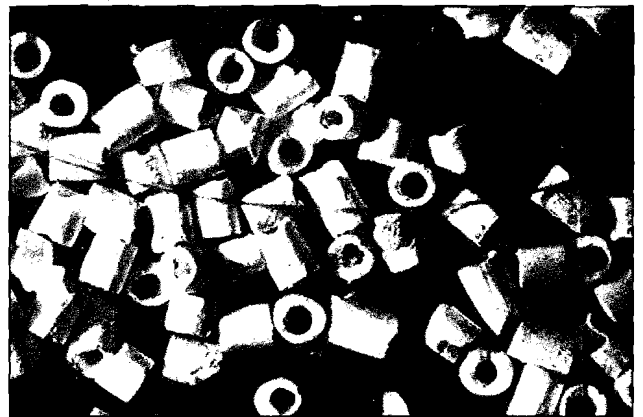


Steatite Button Seal, Harappa (After Kenoyer)

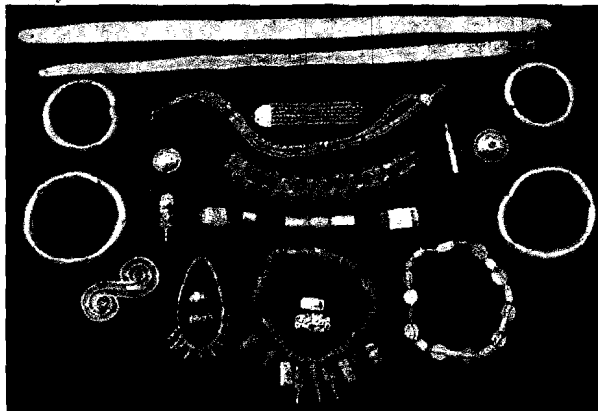
yielded high status objects like lapis lazuli or seals and sealings. This suggests a very high degree of integration of the local economies in the inter-regional economy.

The coming of Harappan urbanism showed an increase in the scale and skills of craft production. The earlier method of cold hammering or open mould casting for metals was replaced by two-piece moulds and or lost wax casting. In the pre urban phase settlements like Mehrgarh have yielded evidence for the use of copper. They used it for making

bangles, awls and chisels. However, it was a rare commodity. In the urban phase copper/bronze artifacts have been reported from most of the settlements. In addition to the items of the pre urban phase these include fish-hooks, axes, dagger, swords, mirrors, large vessels and adzes. Gold and silver too have been reported from many settlements. Silver



Steatite Beads, Harappa (After Kenoyer)



**Gold and Precious Stone Jewellery,
 Mohenjodaro (After Kenoyer)**

vases, bangles and seals have been reported from Harappa and Mohenjodaro. Gold beads, hair ornaments, gold wire and pendants have been reported from many sites.

The new developments in metallurgy helped the Harappans shape better stone tools, beads and ornaments. Long barrel shaped carnelian beads with holes drilled in them were perhaps possible with bronze drills only. Shankh shells were cut with

bronze saws to make bangles, ladles and cups. Ivory, lapis lazuli and numerous other stones were used for making beads, seals, bangles, combs and numerous other luxury objects



Beads, Harappa (After Kenoyer)

5.7.6 Long Distance Trade

The pre-historic settlement of Mehrgarh showed evidence for procuring precious stones from lands faraway. The emergence of Harappan urbanism witnessed a regulation and reorganization of the trade routes. For example a Harappan settlement was consciously planted in Shortughai in the vicinity of lapis lazuli producing area of northern Afghanistan. Similarly, settlements like Sutkagendor in the dry inhospitable Makran sea coast seems to have been founded to provide anchorage to ships sailing from the Harappan ports dotting the coastal areas of Gujarat and Sindh. Even the location of Harappa can be better understood as a place where trade routes from the upper Indus plains, the North West Frontier highlands and Rajasthan converged. So, the merchants and rulers of Harappa could control the supplies of precious stones like lapis lazuli or jade coming through the North West Frontier route. Similarly, the logs of Deodar wood used as ceilings beams of many houses in Harappa could float down the Ravi river from the upper reaches of the Himalayas.

Harappans had trade linkages with the contemporary Mesopotamian cities. Scholars believe that the Mesopotamians knew the Harappan civilization by the name of Meluhha. Mesopotamian kings proudly proclaim that ships from Meluhha brought ivory, gold, carnelian and lapis lazuli to their cities. Such references are supported by the finding of seals bearing Harappan script in Mesopotamia. Harappan shankh shells and carnelian beads have been found in royal graves of Mesopotamia. In the Harappan port city of Lothal in Gujarat the discovery of a dockyard is an important indicator of the long distance trade of the Harappans. Seals found in the Harappan settlements were definitely used for trade because many sealings have been discovered which were used over packed merchandise at Lothal. At Lothal have been found seals of Persian Gulf origin too.

The coming of city implied some radical changes. City was the setting for craft specialization because the urban elite generated the demand for these items. This elite also procured raw material needed by the crafts persons. Cities also created economies linking diverse areas spread over millions of square kilometers. Cities displayed the glories of urban art and architecture. They were also the scene of exploitation of masses – a vertical division of society between rich and poor. The concentration of the productive forces meant that the goods and services previously enjoyed by all in relatively egalitarian self subsistent communities could be greatly multiplied but not shared by all.

5.7.7 Decline of the Harappan Cities

Harappan cities enjoyed the greatest period of prosperity between 2200 BC to 2000 BC. Then decline set in. Cities like Mohenjodaro, Harappa and Kalibangan witnessed a gradual decline in urban planning and construction of the houses. Houses made of old dilapidated bricks encroached upon roads and streets. The 'Great bath' fell in disuse. By about 1850 BC settlements like Mohenjodaro and Harappa were abandoned. Important features of the Harappan civilization like script, weights, pottery and grand architectural style disappeared altogether. Scholars are not clear about the causes of the end of this civilization. The subsequent period saw the expansion of agricultural communities in various parts of the Indian subcontinent. It took another 1200 years for cities to emerge again.

5.8 SUMMARY

The transition of foraging cultures to sedentary life occurred initially in one part of the Indian subcontinent as early as the seventh millennium BC and in the subcontinent in general by the third-second millennium BC. The beginning of food production coincided with domestication of animals and the beginning of the use of pottery. The earliest farming group in Indian subcontinent was that in Mehrgarh. By the fifth millennium BC there emerged many agricultural villages in the Baluchistan region. By 3300 BC one sees the emergence of regional traditions. There occurred dramatic changes in the agricultural techniques. For the first time we find evidences of ploughed fields; settlements with fortifications; and the emergence of rudimentary form of cities. Mature Harappan period was truly an urban phase. Harappan settlements were characterized a hierarchy of site size as well as habitations. There were people who lived in large houses while others were housed in barracks. Urbanization brought noticeable specialization in craft production and long distance trade. This urbanism ended around 1800 BC. Scholars are not sure about the causes of the decline of the Harappan civilization.

5.9 GLOSSARY

Ice Age

Ice Ages refer to periods when large parts of the globe were covered with ice sheets (glaciers). During the last 2 million years over 20 glacial advances and retreats have occurred. The Pleistocene period corresponds with the last Great Ice age.

Levant

The term refers to an area roughly bound by the Mediterranean Sea in the west and the Zagros Mountains in the east. The area stretched from Suez to the Taurus Mountains, including present-day Israel, Lebanon, western Jordan, the Sinai in Egypt, and parts of Syria. It became the center of many important events, particularly the Crusades.

Lost Wax Casting

It is a method of producing metal sculptures. At first a mould is created from an original sculpture, wax is poured into the mould. The wax impression is encased inside and out with refined clay. Once the clay sets, the wax impression is fired in a kiln; the wax melts out of the clay mold, and is "lost." The void created by the melted wax in the clay mold is then filled with molten brass (or any other desired metal) which is identical to the wax impression it replaced. The clay mould surrounding and inside the sculpture is delicately removed, revealing the cast sculpture. gris (green-gray) or bronze

luster. This labour intensive method of lost wax casting has been widely practiced by the Harappans and the Egyptians to produce unique sculptures.

Piedmont Zone

The piedmont zone, built up by the coalescence of alluvial fan deposits. Owing to high permeability, this zone hardly retains any water and hence forms a high recharge zone with relatively deeper groundwater level. Typical landforms in this zone include gravel deposits (*bhabar*) and plains (*tarai*).

5.10 EXERCISES

- 1) Visit a nearby village and list the differences between city and villages.
- 2) Take a journey to some potters' village or house/s. Find out the techniques used by them.
- 3) List the chief characteristic features of Harappan cities. Compare them with the modern city structures and town planning.
- 4) Buy a map of Indian Subcontinent and try to map put the places related with pre-Harrappan, and Harrappan sites. Try to locate the movement of the early settlers.
- 5) Visit nearby museum. Locate the items available in the museum related to Neolithic, Mesolithic, and Chalcolithic cultures.
- 6) Find out how excavations are conducted. List items of interests there.
- 7) On a map locate the early agricultural settlements. Do you see any change in the settlement pattern when cities emerged?

5.11 SUGGESTED READINGS

Bridget and Raymond Allchin, *The Rise of Civilization in India and Pakistan*, Indian edn., New Delhi, 1983. (For the beginning of agriculture it is the most useful general reading.)

Bridget and Raymond Allchin, *Origins of a Civilization*, Penguin Viking, Delhi, 1997. (This book by the same authors is more up to date.)

Gregory L. Possehl, *Indus Age : The Beginnings*, New Delhi, 1999. (It is useful for the beginnings of urbanism. It covers such themes as the geographical setting, plant and animal history. For the urban period.)

Gregory L. Possehl (ed.), *Ancient Cities of the Indus*, Vikas, Delhi, 1979. (It is a useful collection of articles on the Harappan civilization. Apart from handling many other themes it attempts to put together papers on anthropological theory and long distance trade.)

Shereen Ratnagar, *Understanding Harappa Civilization in the Greater Indus Valley*, Tulika, Delhi, 2001. (It tries to understand the emergence and end of the Harappan civilization in the context of bronze age.)

J. Kenoyer, *Ancient Cities of the Indus Valley Civilization*, Oxford University Press, Delhi, 1998. (It is a well written description of the Harappan cities.)

UNIT 6 ARCHAEOLOGY AND GEOGRAPHY OF AGRICULTURAL AND PASTORAL COMMUNITIES OF THE SUBCONTINENT TO THE MIDDLE OF THE FIRST MILLENNIUM BC

Structure

- 6.1 Introduction
- 6.2 Neolithic and Chalcolithic Communities upto the Birth of the Harappan Civilization
 - 6.2.1 Early Agricultural-Pastoral Communities from Vindhya to Ladakh
 - 6.2.2 Neolithic Horizons of the Northwest and Chalcolithic Cultures in Rajasthan
 - 6.2.3 Southern Neolithic Ash Mound Tradition
- 6.3 Cultures contemporary with the Harappan Civilization
 - 6.3.1 Northwest and the Chalcolithic Roots of Iron Technology
 - 6.3.2 Fortified Ahar Culture Settlements of Rajasthan
 - 6.3.3 Pioneer Farmers of Malwa and Maharashtra
 - 6.3.4 First Farmers of Bihar and the *Doab*
 - 6.3.5 Nature of Contacts Between Harappan and Non-Harappan India
- 6.4 Neolithic-Chalcolithic and Iron Age Horizons of the Second and First Millennia BC
 - 6.4.1 Integration of 'Late Harappan' and Local Cultures in Maharashtra and Uttar Pradesh
 - 6.4.2 Summary of Cultural Horizons in the Subcontinent
 - 6.4.3 Chiefdoms
 - 6.4.4 Towards Socio-Economic Complexity in North India
 - 6.4.5 Issue of Iron technology
- 6.5 Vedic Literature – Problems and Issues
- 6.6 Summary
- 6.7 Glossary
- 6.8 Exercises
- 6.9 Suggested Readings

6.1 INTRODUCTION

The theme of this Unit which concerns the 'agricultural and pastoral communities' of the Indian subcontinent, in many ways, is both culturally and chronologically complex. So, one may begin by clarifying a number of issues.

First, a clarification about the terminology is in order. While there may be some cultures that are more dependent on domesticated animals than on cultivated crops and vice versa, generally speaking, in the time frame that we are considering here – from the beginning of food production in India till the time that cities came to be established, after the Harappan cities of about 2600-1800 BC, in northern and central India around c. 600 BC or so – there are hardly any archaeological examples of societies that can be described as either purely pastoral or as exclusive cultivators. This does not mean that there were no nomadic pastoral groups in protohistoric India but merely that there are no specifically delineated archaeological sites that can be categorized as the occupation or camp sites of such societies. This also means that the cultures that we will discuss here are better described as cultures that depend on the food that they grow and on the animals that they keep. The characteristic feature of such societies is the settled hamlet

or village which can and has been recognized in the archaeological record of most regions during this timespan.

Secondly, we are looking at such societies in diverse geographical and chronological horizons. Since the Indus civilization has already been discussed, it is the areas that fall outside its geographical ambit that are considered here. These range from the North-West Frontier and Kashmir, across the Gangetic plains to the regions in northeast India. From the Vindhyas, such horizons stretch across Malwa and Maharashtra into peninsular India. The societies that will be discussed here appear in the archaeological record as distinct cultures, marked by various traits ranging from their technological equipment to the remains of what they ate. This includes the cereals they grew, the animals they kept as also those that they hunted. The most common artefact at sites, though, is pottery which generally occurs in very large quantities. Having a knowledge of the kinds of potteries that are associated with the various cultures is important for a number of reasons but, above all, because it allows us to analytically distinguish one culture from another. However, the ceramic or pottery types and their distinctive traits are not discussed here because a good description of them is available in EHI-O2 (Block 3) which you are expected to read.

The archaeological cultures themselves have been named in a number of ways; on the basis of the sites where they were first discovered (Ahar, Narhan, Jorwe, Kayatha cultures are some examples) or the region where they are widely distributed (Malwa culture, named after the region of Malwa) or the pottery that is typical of the said culture (Painted Grey Ware and Ochre Coloured Pottery are some such cultures). In the case of regional designations, this must not be understood to mean that the culture's distribution is confined to that region alone. The Malwa culture is found in both Malwa and Maharashtra. In the case of cultures that are named after a pottery type, it is relevant to remember that this does not mean that this was the *only* type of pottery that was used and manufactured by such a society. For example, Painted Grey Ware that gives its name to first millennium BC Iron Age culture of the upper Gangetic plains, in most cases, constituted less than 15% of the total pottery assemblage and coexisted with plain Grey, Black-and-red, Black Slipped, fine red slipped and unslipped and coarse red wares. But the reason why it has been used to designate this cultural phase is because it is its archetypal pottery. On the question of pottery cultures, a clarification about one of them – the Black and Red Ware culture – is necessary. On the one hand, Black-and-Red Ware gives its name to specific cultures of the Ganga-Yamuna *doab* and the Upper Gangetic plains, as also Bengal/Bihar. On the other hand, pottery of this genre is a ubiquitous ceramic, one that is found as a dominant ceramic type in many other regions during this period or later – Rajasthan, Malwa, Maharashtra, peninsular India to name a few. This does not mean that all protohistoric farming cultures who used this pottery were part of the same culture. For one thing, the shapes and painted designs that are found in the Black-and-Red Ware in West Bengal are qualitatively different from those of the Black-and-Red Ware of the Malwa culture. For another thing, there can be wide difference in the time range of the various Black-and-Red Ware cultures – the Ahar culture of Rajasthan, with its white painted Black-and-Red Ware, is a third-second millennia BC culture while the Black-and-Red Ware culture of Bengal is a second-first millennia BC phenomenon. So, Black-and-Red Ware should not be understood as constituting a homogeneous cultural entity, nor are the societies that used this pottery part of any common community.

The long chronology of the protohistoric societies that form the cultural fabric of non-Harappan India is the other element which is necessary to understand clearly. The radiocarbon dates that are available to us make this reasonably clear and will be discussed

later, but, for the moment, it may be pointed out that we are looking at a time period that stretches from the fourth millennium BC and even earlier in some cases, till about c. 600 BC or so. This means that there are some cultures that are prior to the birth of the Harappan civilization, others that are contemporaries of it, still others which continued to flourish in the centuries that follow the collapse of India's first urban culture. By 1000 BC, a familiarity with iron and tools made of iron is common to farming cultures in many regions of India.



Map 1 : Neolithic and Chalcolithic Sites

This brings up the third aspect about such communities which concerns their technology. Agricultural-pastoral subsistence systems in these millennia are dependent on varied technologies. On one end of the spectrum, there are communities that are generally described as ‘neolithic-chalcolithic’ cultures. This is not a particularly logical classificatory label but has been extensively used in Indian archaeological literature to describe early village cultures in non-Harappan India. It includes both pure neolithic communities with a predominantly stone technological component and those groups that are ‘chalcolithic’, in the sense that they use both stone and copper. At the other end of the spectrum, agricultural groups that, over time, began to smelt and use iron in various ways are encountered. In many instances, the inclusion of iron technology does not automatically lead to any striking material changes. One of the issues, therefore, that needs to be explored concerns whether the adoption of a new technology led to major changes in the economy and society.

Fourthly, even while there are no archaeological indicators of states or empires in this period, there are levels of cultural complexity. While many of the cultures, in terms of their archaeology, seem to be made up of small, relatively undifferentiated sites, there are others where there are several kinds of settlements, some of which are fairly complex and would seem to be the centres of regional 'chiefdoms'. In other words, the scale of social organization in this period would range from small-scale village cultures to more hierarchically organized societies. Complex cultures become more common in the latter part of the second and the first half of the first millennia BC.

Finally, there is a large corpus of Vedic literature which has been accepted by several scholars as falling within this time bracket and this itself raises a number of questions. Some of the problems concern the time period within which the texts should be placed while another set of issues revolves around how one can fit in the images that they contain with what is known about the archaeology of the geographical segments that are described there. Within this theme, one can only briefly discuss some of these problems and issues.

6.2 NEOLITHIC AND CHALCOLITHIC COMMUNITIES (UPTO THE BIRTH OF THE HARAPPAN CIVILIZATION)

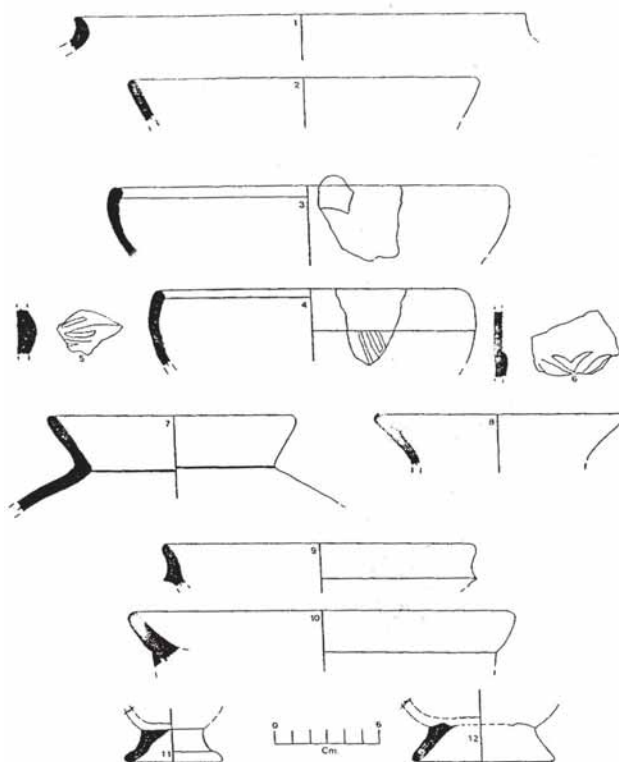
The first food producing society, based on wheat-barley cultivation and domesticated sheep-goat-cattle, at Mehrgarh in Baluchistan has already been discussed in the previous Unit. Here, we turn to India beyond the arc of Baluchistan-Indus-Hakra-Gujarat and to the archaeology and geography of the various agricultural-pastoral communities in the subcontinent's other segments.

6.2.1 Early Agricultural-Pastoral Communities from Vindhya to Ladakh

One of the earliest such cultures is located in the Vindhyan range of southern Uttar Pradesh and adjacent segments of Madhya Pradesh, at places like Koldihawa and Kunjhun. The archaeology of these sites shows a neolithic stratum. Their inhabitants used polished stone axes and microliths as also handmade pottery and lived in wattle and daub houses. Most importantly, this is an early rice cultivating community which, among other things, is evident from the husks of this cereal that are embedded in the clay of the pottery. Even if there are uncertainties about whether this cereal was independently domesticated here or about the chronology of its first cultivation – of the nine radiocarbon dates of Koldihawa, only three go back to the 7th and 6th millennia BC – there is little doubt that we are looking at the earliest rice growing culture of the Indian subcontinent. The dates from Kunjhun II clearly attest that such a society had been established in the Vindhya by the 4th millennium BC. More recent excavations at Lahuradeva (Sant Nagar district) in Uttar Pradesh suggest that such early rice cultivation was not just confined to the Vindhyan hills but extended into the Gangetic alluvium. The earliest cultural occupation there (marked by coarse red ware and black and red ware, with cord impressions on its exterior) has yielded grains of cultivated rice and its calibrated dates are found the late sixth and early fifth millennium BC.

The possibility of an early transition from hunting-gathering cultures to agriculture and pastoralism in certain other areas may also be considered, although the evidence is not unambiguously clear. For instance, in the Ladakh region, the neolithic site of Giak is as early as the sixth millennium BC (calibrated radiocarbon date), although another site of

the same cultural complex has yielded a *c.* 1000 BC date. Another such case is that of Rajasthan, where the salt lakes of Didwana, Lunkaransar and Sambhar have yielded *cerealia* type of pollen in a *c.* 7000 BC context, along with comminuted/charcoal pieces. This is apparently indicative of forest clearance and the beginning of some sort of agriculture. However, to archaeologically confirm the lake evidence, food producing cultures of similar antiquity will have to be discovered in Rajasthan. Taken together, the evidence from Ladakh to the Vindhyas does seem to indicate that the advent of food production in India was not a single event but was made up of multiple strands.



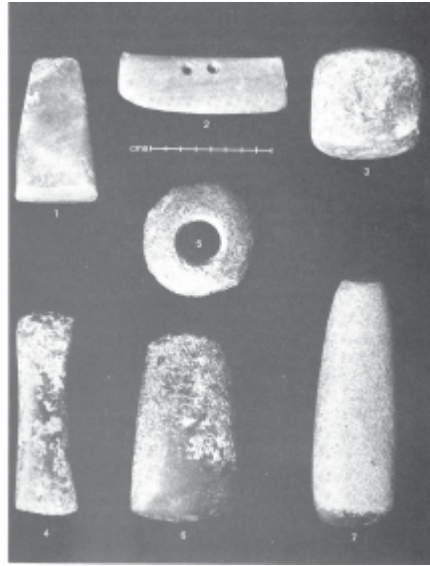
Shapes of Representative Potsherds of
IA at Lahuradeva (Uttar Pradesh)

6.2.2 Neolithic Horizons of the Northwest and Chalcolithic Cultures in Rajasthan

Such strands become much clearer a little later, and from 3000 BC onwards, for over a millennia, various early farming cultures can be encountered in the North-western highlands and lowlands of Pakistan, in the valley of Kashmir, in the Rajasthan plains as also in peninsular India. While the archaeological character of such cultures cannot be discussed in depth here (you can read about them in the books that are mentioned at the end of this Unit), a few salient features are certainly worth highlighting.

Beginning with the north-west, the geographical distribution of sites in mountainous north Pakistan is roughly in the area between Peshawar and Chitral. In the case of Kashmir, the sites are widely distributed in the valley area between Baramulla and Anantnag on the one hand, and towards Srinagar, on the other hand. Although these are separate cultural horizons, what is common to them is that the early phases of cultures (at sites like the Ghalighai cave in the Swat valley of Pakistan [Phases I-III] and Gufkral [IA-B] as also Burzahom [I] in Kashmir) in both areas seem to be metal-free neolithic horizons marked by stone tools and bone implements of various kinds. However, whereas in the case of Kashmir, to begin with, there is no pottery, the sequence at the Ghalighai cave begins with handmade pottery.

The character of settlements in the Kashmir valley is especially clear where we seem to be in the presence of people trying to cope with long, cold winters. The climatic rigors were sought to be mitigated by living below the ground level which is always warmer than the top surface. The pit dwellings that they used as residences, along with the hearths that they lit to keep warm have been encountered at Gufkral and Burzahom.

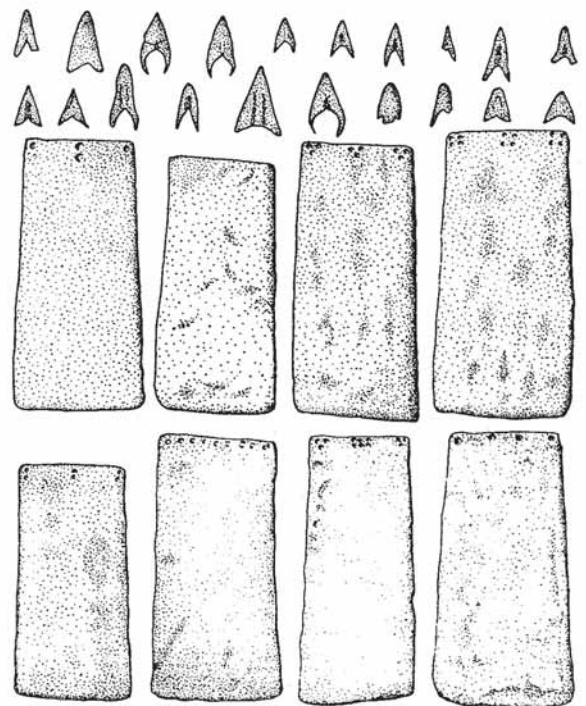


**Neolithic Tools from
Burzahom (Kashmir)**

While the pit dwellings were accessed by steps as also by ladders, wooden pillars apparently supported the roofs that covered them. Pits were also dug for storage purposes and frequently contained animal bones, stone and bone tools. Wheat, barley and lentil were cultivated while sheep, goat and cattle as also domestic fowl were kept. The bones of wild animals like ibex, deer, wolf, and bear have also been found, attesting to the fact that hunting continued to augment farming activities.

As we move towards Rajasthan, two distinctive cultures are encountered – the Ganeshwar-Jodhpura culture in the northeastern part of the state (with the largest concentration in Sikar district, along with sites in Jaipur and Churu districts) and the Ahar culture towards the

southeast (in the districts of Udaipur, Chitorgarh and Bhilwara). Unlike the situation in the northwest, here, the first sedentary communities are chalcolithic. The early exploitation of copper is not surprising since both these cultural zones are located in areas that are rich in copper mineralization. The Ganeshwar-Jodhpura culture is largely distributed across the Baleshwar and Khetri copper desposit areas where extensive traces of old copper workings exist. That the demand for copper of ‘early Harappan’ cultures from the Indus plains to Haryana may have been one of the reasons for the large scale presence of copper-using sedentary, food producing societies in these segments of Rajasthan needs to be considered. At least, at Ganeshwar, the cultural sequence seems to suggest this. To begin with (Period I), the picture that we get there is of a microlithic-using hunter-gatherer group (the charred bones are presumably of wild animals) which subsequently (Period II) becomes a hut inhabiting, pottery using society whose technology expands to include both microliths and copper objects including arrowheads and fish-hooks. Subsequently (Period III), copper objects (arrowheads, rings, bangles, spearheads, chisels, celts, etc.) were found in large quantities, going into several hundreds, and these could not have been manufactured for the inhabitants of Ganeshwar alone which is a small 3 to 4 acre settlement. In the case of the Ahar culture, the recent excavations at Balathal, a roughly five acres site in the Udaipur area, are worth mentioning. While its later phase will be discussed in the next section, in the first phase, there is evidence of structural activity in the form of small circular wattle-daub houses with mud-plastered floors and two plastered storage pits.



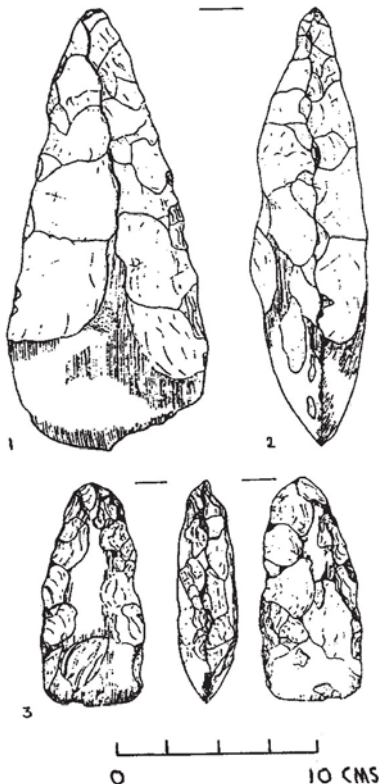
**Copper Objects from
Ganeshwar (Rajasthan)**

What is most striking about the chalcolithic cultures of Rajasthan and the neolithic horizons of the northwest, though, is neither the character of their structures nor the nature of their economy. Instead, it is time period that they occupied which, as their dates show, was prior to the birth of the Harappan civilization. In the case of the Kashmir neolithic, the calibrated radiocarbon date of Period I at Burzahom is c. 2800 BC. The dramatic revision in the chronology of the Ahar culture is another instance in point. Its beginnings at Balathal (Udaipur, Rajasthan) go back to c. 2800 BC, if not earlier. Prior to these discoveries, many scholars visualized the Harappan civilization as the supreme urban, literate phenomenon that illuminated other contemporaneous cultures, as it were, with the 'radiance' of its character, as a phase when the scale and importance of the civilization's subcontinental trade facilitated the creation of regional cultures with which the Harappans had intimate interactions in various regions to its north, east and southeast. What has now become evident, is that some such cultures that had earlier been bracketed as contemporaries of the Indus civilization have turned out to be older and were, in fact, interacting with the early Harappans. Burzahom, for instance, is known to have yielded a wheel made red pot with 950 agate and carnelian beads (whose provenance seems to be somewhere in the Indus plains) and another pot of the same type on which is painted the 'horned deity' motif (also of Indus inspiration which occurs in early Harappan contexts as at the Indus plains site of Kot Diji). Again, at Ganeshwar, the wheelmade pottery of Period II is of early or 'pre-Harappan' affinity. When one considers the large scale presence of copper



'Horned deity' Pot
from Burzahom

artefacts in a similar context at sites like Kalibangan, the likelihood of contemporaneous copper rich farming cultures in the Rajasthan belt being the primary suppliers of such objects seems most likely. Undoubtedly these interactions come to be more strongly articulated with the birth of the Harappan civilization. But, what seems to be worth underlining is that even before the creation of Harappan cities, the neolithic-chalcolithic cultures of the Northwest and Rajasthan were not closed or isolated cultural worlds.

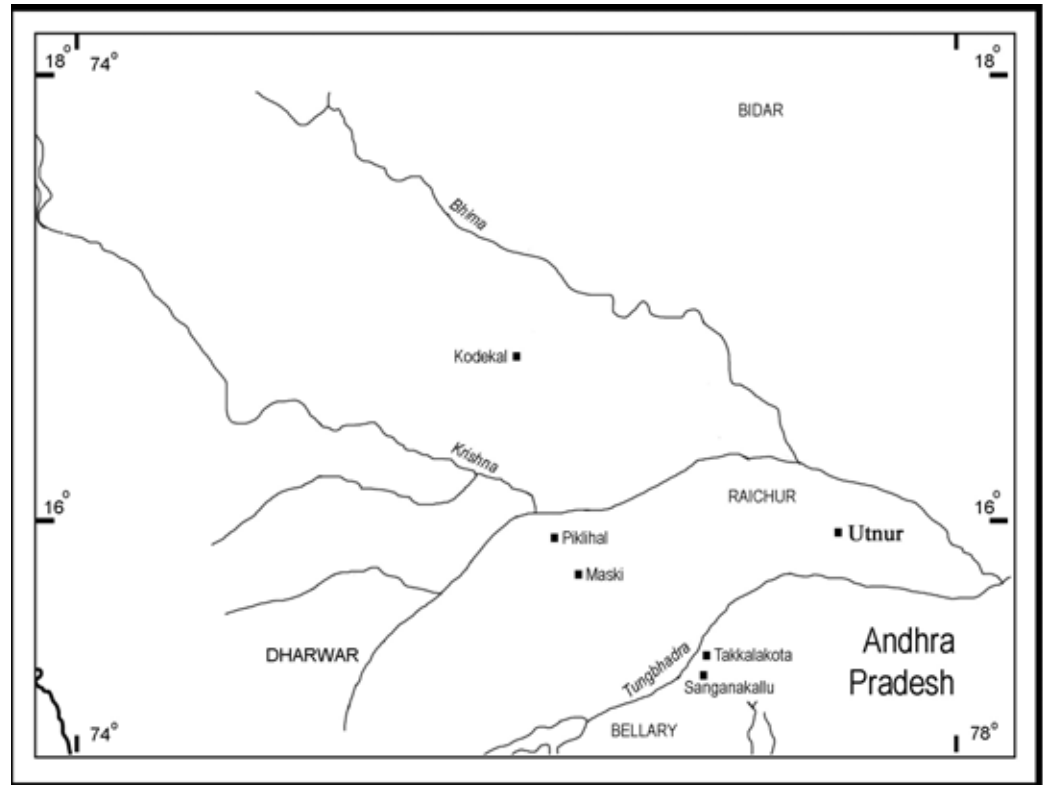


Southern Stone Neolithic Axes

6.2.3 Southern Neolithic Ash Mound Tradition

Another equally early third millennium BC horizon is the Southern Neolithic or ash mound tradition. Geographically speaking, a large number of the settlements are located on the southern Deccan plateau (northern Karnataka and western Andhra Pradesh), and are more often associated with minor streams than major rivers. The ash mounds are derived from the burnt accumulations of cattle dung at sites of ancient cattle pens and, not

surprisingly, the presence of animal herding in the economy has long been recognized. The importance of cattle keeping is also suggested by the presence of cattle bones, terracotta figurines of humped cattle as also rock paintings depicting cattle.



Map 2 : Karnataka and Andhra Pradesh

More recent work has suggested that, along with cattle keeping, agriculture also formed a major part of the neolithic diet there. A variety of plant remains have been recovered from several sites, including Hallur in the west, Sanganakallu and Tekkalakota in the Bellary district and sites in the Cuddapah district which show the presence of small millets and tropical pulses. The crop regime is qualitatively different from any other subcontinental culture of this time and is one that was logically the best adaptation in the lower rainfall area of south India. The consistently recovered pulses from the earliest levels are mungbean and horsegram, two species whose wild progenitors are known to occur in the region. It is entirely possible that these were locally and independently domesticated there. Several non-native cereals are also present, always occurring together and include emmer wheat, free threshing wheat and barley. Although they are found in early levels at Sanganakallu and Hallur (where rice is also found) and could, therefore, have been present from the beginning of the neolithic, their frequency increases over time, thus suggesting that they may have been adopted on a small scale and increased in importance later on. The earliest dates obtained so far, though, are not from the abovementioned sites but from the ash mounds where the pastoral element is much stronger than the agricultural element. These are the excavated sites of Kodekal (Gulbarga district, Karnataka), Utnur (Mahbubnagar district, Andhra Pradesh) and Palvoy (Anantapur district, Andhra Pradesh) which range from between 2900 and 2400 BC.

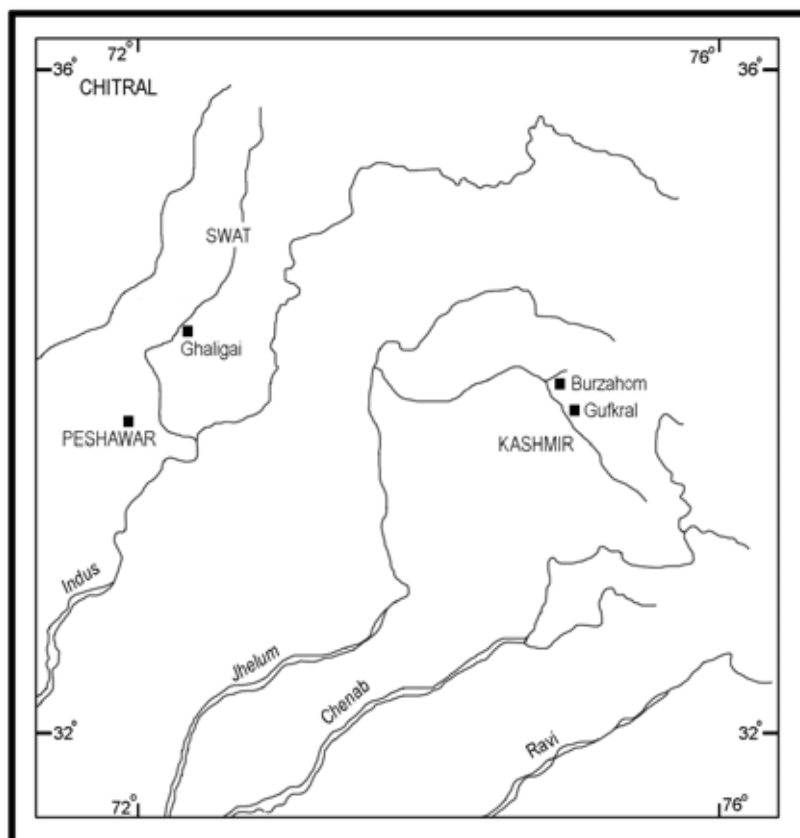
6.3 CULTURES CONTEMPORARY WITH THE HARAPPAN CIVILIZATION

The archaeology of India in the third millennium-early second millennium BC is dominated by the presence of the Harappan civilization, the only literate subcontinental segment of its time with a transregional spatial spread from Baluchistan to the upper Ganga-Yamuna

doab and from Jammu to Gujarat. Its various features have been delineated for you in the previous Unit. What the present section will try and demonstrate is that this civilization did not exist in a cultural vacuum. On the contrary, on the peripheries of the Harappan distribution area as also much beyond the Harappan world, important cultural changes were taking place. These basically cohered around the emergence of village societies in those regions where only hunter-gatherers were earlier present and the consolidation of such societies in areas where agricultural-pastoral groups were already in place. In more ways than one, it is from this period onwards that there is practically an unbroken succession of cultures which make most segments of inner India visible. That there are few gaps in the sequence of such cultures also means that we are looking at fairly continuous occupations. This does not mean that the successors of the people who first inhabited these areas continued to live there for centuries on end. There must have been, as there is today, demographic mobility and constant readjustments of population groups. All that it means is that new groups of people came and settled in the very areas, and frequently at the same sites where the pioneer farmers had first established their villages in the third and second millennia BC.

6.3.1 Northwest and the Chalcolithic Roots of Iron Technology

One may begin with the cultural configurations in those areas already discussed in the previous section. In northwest Pakistan, by c. 2000-1800 BC, the neolithic situation gave way to a copper/bronze using cultural complex which is known as the Gandhara Grave culture (its first phase is dated to this period which in terms of the general sequence of the Ghalighai caves is Phase V). So called because it is marked by large grave complexes on hill sides (in which cremation prevails over inhumation), it also had associated settlements marked by rectangular stone constructions. The geographical distribution of settlements was in the hills in the area between Swat and Chitral-at places like Timargarha, Balambat and Thana- and in the vicinity of the Peshawar valley, where Zarif Karuna is located.



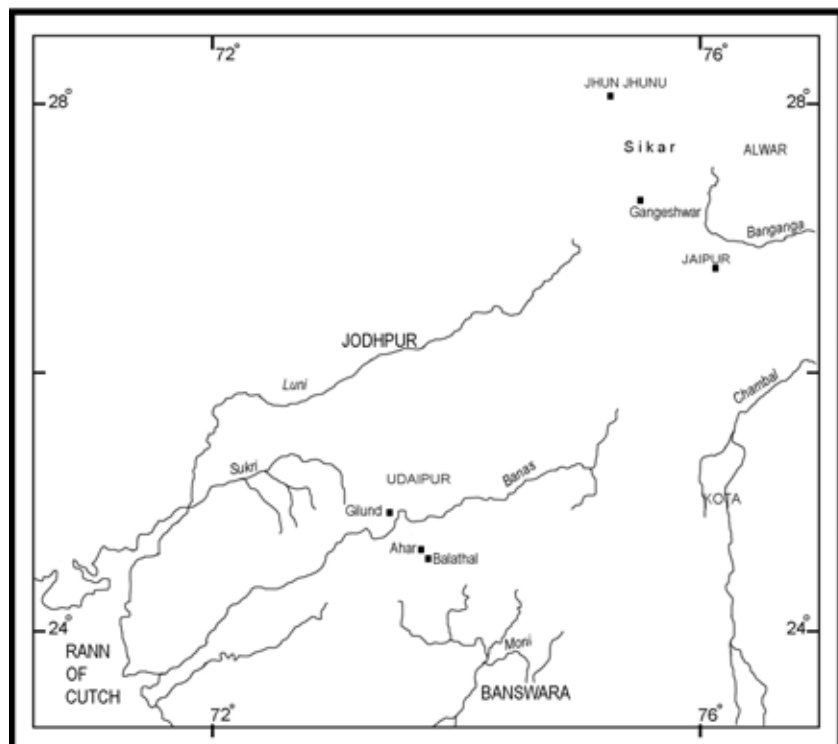
Map 3 : North of the Indus and Kashmir

In the case of Kashmir, while neolithic-chalcolithic sites continued to flourish, a new element is the presence of an iron-bearing megalithic level at Gufkral (Period II). Calibrated versions of four dates from there hover around c. 2000 BC. While the iron objects are not many, two points or needles and an indeterminate fragment, there is little doubt that this marks the beginning of iron technology in this region. In the larger perspective, this should not surprise us because iron objects in equally early contexts come not only from other contemporaneous agricultural communities in Rajasthan and Uttar Pradesh but also from Harappan sites like Lothal and Allahadino. Within the larger perspective of Old World cultures, such a situation is frequently encountered. For instance, knowledge of iron smelting was part of the Bronze Age Sumerian tradition.

In all such cases, one has to make a distinction between the beginning of iron technology which, in the Indian context, can be dated to the end of the third-beginning of the second millennia BC and the advent of the Iron Age. If the Iron Age can be defined as the period between the significant presence of iron in the archaeological sequence of a given area and the beginning of the early historical period in that area, it is reasonably clear that by around c. 1000 BC large parts of the Indian subcontinent had passed into the 'Iron Age', while in certain areas the process may have begun earlier. In the case of Kashmir, it is likely that we are still largely in the presence of a neolithic-chalcolithic phenomenon because the primary dependence of protohistoric people was on a stone technology and copper based artefacts.

6.3.2 Fortified Ahar Culture Settlements of Rajasthan

In Rajasthan, the later phases of the Ganeshwar-Jodhpura and Ahar chalcolithic cultures are encountered. As before, there is abundant evidence of copper objects and local metalcrafting. The subsistence pattern seems to have been a combination of agriculture and stock raising. Wheat, barley, two varieties of millet, gram, linseed, etc. are found along with bones of various domesticated animals (cattle, buffalo, sheep, goat and pig) in which cattle are predominant. The wild animals include several types of deer, turtle, fish, pea fowl and fowl. At Balathal and Gilund, large silo bases, storage bins and structures identified as possible granaries give us a clear indication of the strong agricultural base of

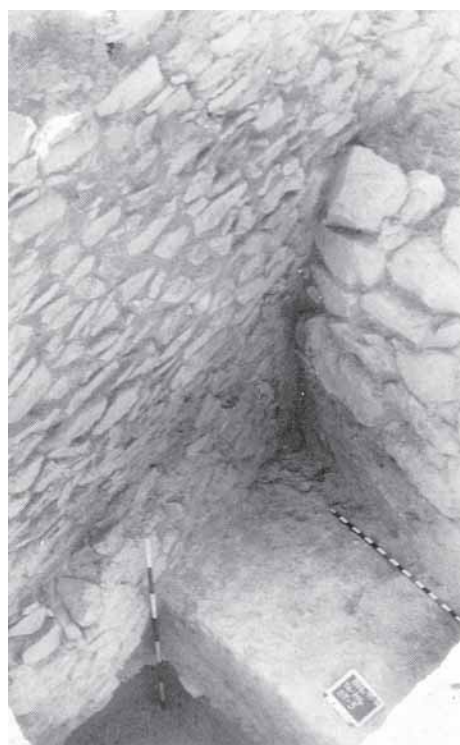


Map 4 : Rajasthan

the economy. But of the various archaeological features of the Rajasthan cultures, two are specially noteworthy. First, an early presence of iron can be seen there. For example, at Ahar, as many as 12 iron objects in the second and third phases of the three phase Ahar culture, are present. These have been found in the same contexts which have yielded etched carnelian beads and one of lapis lazuli, both of which are clearly of Harappan provenance. The earliest calibrated points for these phases which are 2100 and 1900 BC, also underline that we are in the presence of a culture that is contemporaneous with the Harappan civilization.

The second aspect worth highlighting is the complexity that can now be discerned in the character of Ahar culture settlements. There are more than eighty sites, many of which are as small as a couple of acres while there are some that occupy more than 10 acres (Ahar and Gilund would fall in this category).

That this was a society where some settlements were structurally and functionally complex is also evident from the excavated evidence of Balathal and Gilund. At Balathal, by the beginning of the second millennium BC, the earlier village-like settlement gives way to a more complex one in Phase 2, marked by multi-roomed structural complexes in which kitchen and storage spaces can be identified. Most interestingly, several features that we generally associate with Harappan settlements are found at Balathal. For one thing, this is a fortified settlement with an area of about 500 sq m. The fortifications are fairly wide, between 4.8 to 5 m, with a mud core revetted with stones on the inside and outside. On the south-western corner, a bastion has been exposed. That mud bricks, along with stone is used for making rectangular houses is also significant. Finally, a street of irregular width (2.7 m in the north and 4.8 m in the south) runs across the settlement and associated with this street, is also a small lane.



**Stone Revetting on the Northern Face of
Rampart at Balathal, Rajasthan
(After V.N. Misra, *South Asian
Studies* 13, 1997, p.261**

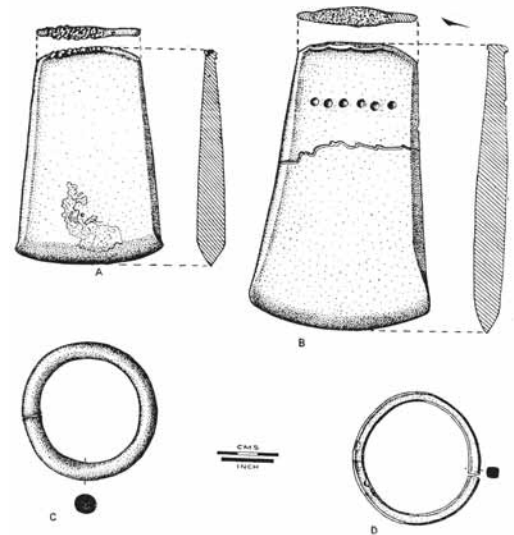
In the case of Gilund, the recent excavations there have shown that both the mounds were surrounded by mud/mud-brick fortifications with a road between them. Apparently the smaller, higher eastern mound recalls the elevated areas of some Harappan sites while the western mound resembles the 'lower town' of these sites. Considering the nature of these settlements in relation to the average Ahar culture site, the possibility that Gilund and Balathal were regional centre of a chiefdom organization needs to be considered. That the architectural features of such centres imitated the forms of contemporaneous Harappan towns also seems likely.

Rajasthan and the northwestern areas of the Indian subcontinent, of course, are regional segments where by this time agricultural and pastoral groups already had a presence that was several hundred years old. But, if we move to inner India, for the first time such societies make their presence felt, in areas like the Malwa plateau, in Maharashtra and in the upper and middle Gangetic plains.

6.3.3 Pioneer Farmers of Malwa and Maharashtra

Malwa is dominated by a large fertile plateau drained by the Chambal, Kali Sindh,

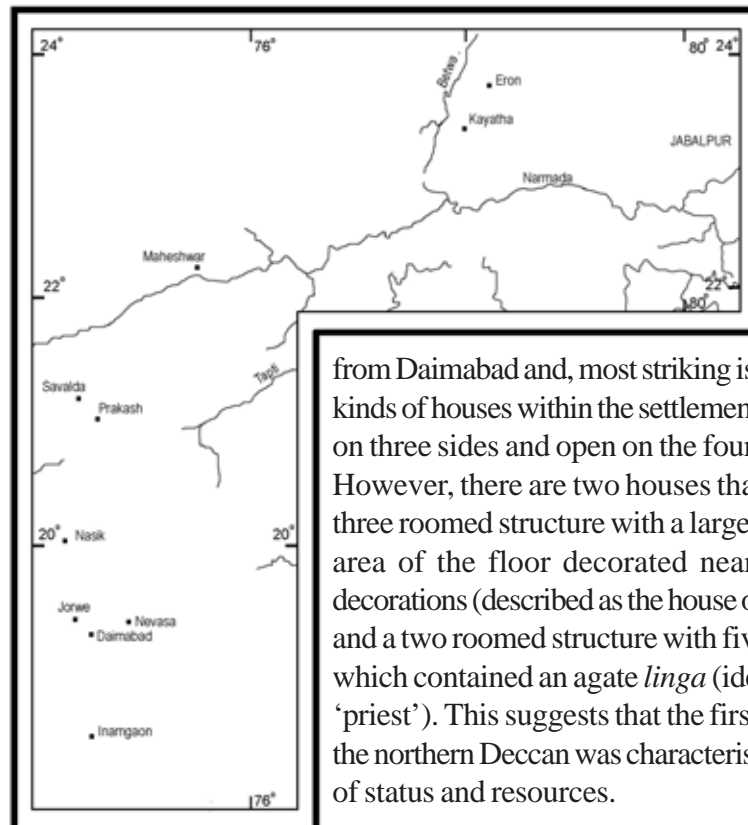
Narmada, Sipra, Betwa and other rivers, It is on the banks of the Choti Kali Sindh, a tributary of the Kali Sindh, that the type site of Kayatha (Ujjain district) is located. It is this site which has given its name to the first chalcolithic horizon of Malwa – the Kayatha culture of which there are over 40 sites, mainly in the Chambal valley. The settlement at Kayatha was marked by houses of mud and reed with mud plastered floors while the technology was a combination of copper and an extensive microlithic blade industry, dominated by chalcedony. The Kayatha horizon at Kayatha is dated to the second half of the third millennium BC which makes it a contemporary of the Harappan civilization.



Copper Axes and Bangles from Kayatha (Malwa)

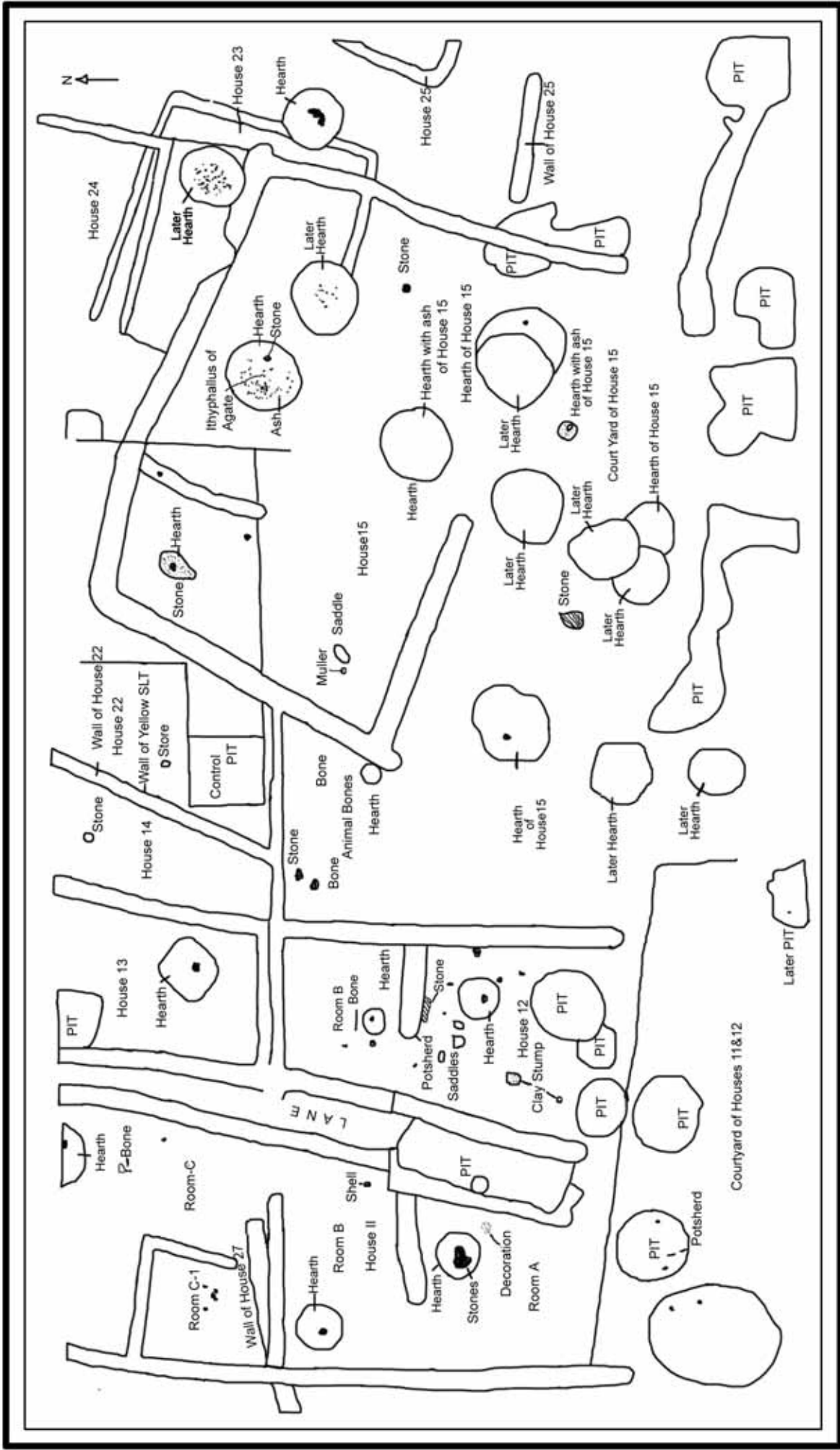
Its interaction with the Harappans is evident from a number of things ranging from the pottery called ‘Kayatha ware’ which has an early Harappan affinity and the 40,000 microbeads of steatite found there which are apparently identical to Harappan specimens. Its interaction with the Rajasthan area is evident from the similarity in the shapes of its copper axes with those from Ganeshwar (see below and compare with the Ganeshwar culture specimens). What succeeds the Kayatha culture is a culture that is similar to what we have already encountered in Rajasthan. This has also been described as the Ahar culture in central India since its pottery is similar to what can be seen in places like Ahar and Gilund. In all probability, that is an early second millennium BC phenomenon.

In the case of Maharashtra, the village society that was a contemporary of the Harappans is represented by the chalcolithic Savalda culture. This culture is concentrated in the Tapi basin where twenty seven sites are found (twenty are located on the Tapi itself) and



perhaps, the only known site outside this zone is Daimabad, located in the Godavari-Pravara basin. Much of our knowledge about the archaeological features of this culture comes

from Daimabad and, most striking is the presence of different kinds of houses within the settlement. Most houses are closed on three sides and open on the fourth, with low mud walls. However, there are two houses that are visibly different: a three roomed structure with a large courtyard and a 25 sq m area of the floor decorated near the hearth with shell decorations (described as the house of the village ‘nobleman’) and a two roomed structure with five circular hearths one of which contained an agate *linga* (identified as the house of a ‘priest’). This suggests that the first farming community of the northern Deccan was characterised by inequality in terms of status and resources.

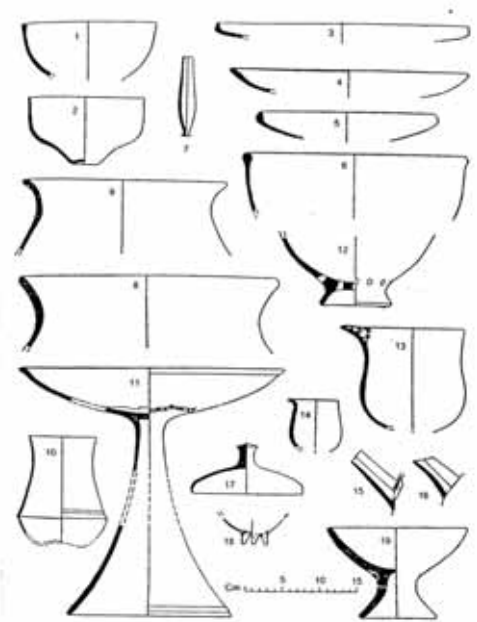


Plan of Houses : Savalda Culture
 (After S.A. Sali, *Daimabad 1975-79*, ASI, 1986, p.82)

6.3.4 First Farmers of Bihar and the Doab

Finally, one can move north and observe the emergence and expansion of village farming communities in the Gangetic plains of Bihar and in the *doab* region of Uttar Pradesh. In the case of Bihar, although its southern segment is known to have a long prehistoric segment, no early neolithic or farming community is known from there. On the other hand, in the alluvial plains of northern Bihar there are several such sites – Chirand, Chechar-Kutubpur, Senuar, Maner and Taradih are some of the important ones that have been excavated. These are all river bank sites with Chirand, Maner and Chechar-Kutubpur on the Ganga itself.

There is nothing tentative about such neolithic sites and the cultural deposits indicate a secure, long presence. Chirand is an example of this where the neolithic stratum (Period I) is 3.5 m thick. It is marked by neolithic axes, bone and antler implements, along with a rich microlithic industry. The ornaments are equally diverse – in bone, ivory, agate, carnelian, jasper, steatite and faience. The farming pattern is a broad based one with the remains of crops like rice, wheat, barley, moong and lentil while the animal remains include domesticated cattle as also wild animals like elephant and rhinoceros. Most importantly, this represents premetallic agricultural villages that largely thrived in the third millennium BC, possibly continuing into the first century of the second millennium BC. Subsequently, they were to become metal using cultures.

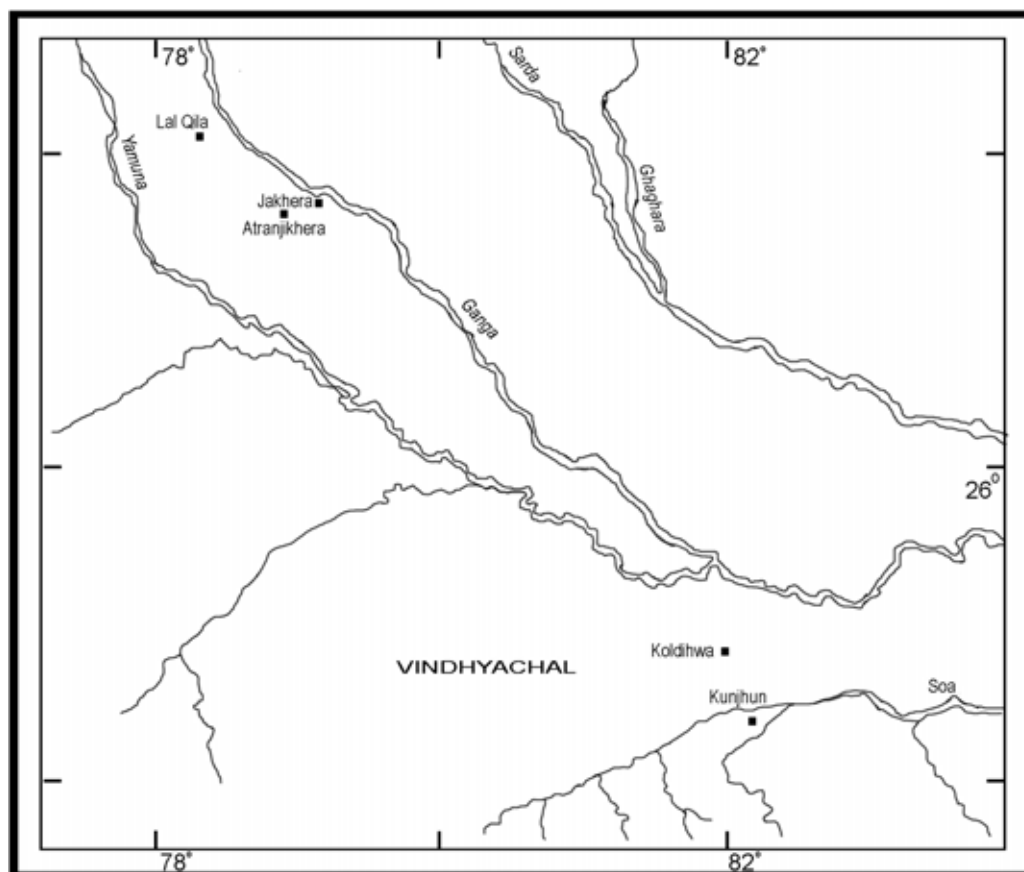


Pottery from Chirand, (Bihar)



OCP Pottery Types from Lal Qila (Uttar Pradesh)

The picture that we have of early farming communities in the *doab*, however, is a substantially different one. For one thing, the Ochre Coloured Pottery culture (OCP hereafter) is chalcolithic not neolithic. An important aspect of it is the association of OCP with ‘copper hoards’. Such hoards contain various artefact types – harpoons, swords, axes of various kinds, etc. One of these, an anthropomorph/lugged axe is also found in the mature Harappan context at Lothal which takes back its antiquity to the second half of the third millennium BC. For another thing, the farming groups represented by this culture coexisted with the Harappans in some pockets of the *doab*. This means that in this region, the OCP culture must share its status as representing the first farming communities of the *doab* with the Harappans.



Map 6 : Upper Gangetic Plains and
the Vindhyachal Plateau

6.3.5 Nature of Contacts Between Harappan and Non-Harappan India

In concluding this section, it is relevant to underline the aspect of trade and interaction between the Harappan civilization and the contemporaneous neolithic-chalcolithic horizons that have been briefly discussed here. On balance, it would be fair to say that none of these horizons are isolated village societies. The kinds of raw materials that are used at neolithic Chirand on the one hand and chalcolithic Ahar on the other hand, underline this quite forcefully. Some of these cultures are also located in resource rich areas and it is likely that they were supplying copper, alloying metals, semi-precious stones, etc. to the Harappans. These links are evident from the presence of Harappan and Harappan inspired objects in various such contexts as well – the etched carnelian beads at Ahar, the microbeads of steatite at Kayatha in Malwa and at Chechar-Kutubpur in Bihar are a few such examples. Additionally, that certain cultural traits may have been borrowed by the Harappans from contemporaneous neolithic-chalcolithic horizons needs to be considered. For instance, one fact that is noticeable about the crop patterns of protohistoric India is that prior to the third millennium BC, the rice growing sites seem to be concentrated in the Gangetic plains. It is entirely possible that the adoption of rice in the Harappan subsistence pattern (found at Harappa, Mitathal and in the Gujarat sites) may have been a consequence of its links with areas to the east of the Indus system. These links may also explain why, following the collapse and abandonment of cities and settlements, there were significant migrations from Sind and Cholistan towards areas that lay east of the Harappan distribution zone.

6.4 NEOLITHIC-CHALCOLITHIC AND IRON AGE HORIZONS OF THE SECOND AND FIRST MILLENNIA BC

The various archaeological features of the abovementioned cultural horizons are not being discussed because the data are vast and also because competent summaries are available in several textbooks on the archaeology of India. Here, only a few aspects concerning the existence of chiefdoms, the manner in which complex societies were developing in north India and the role of iron technology in this process will be taken up.

6.4.1 Integration of 'Late Harappan' and Local Cultures in Maharashtra and Uttar Pradesh

In the area that lies geographically west of the Aravalli-Cambay divide, the early centuries of the second millennium BC were dominated by the decline and end of Harappan urban culture. The process in some areas, though, began earlier than in others. Urban decline at Mohenjodaro had set in by 2200 BC and by 2000 BC, its death knell had been sounded. However, the civilization continued after 2000 BC in other areas and, at some sites, it survived well into 1800 BC or even later. In cultural terms, the devolution and transformation of the Harappan civilization is important for a number of reasons, but from the perspective of some non-Harappan agricultural societies in north and western India, the aspect that is worth noting is that several of the migrating Harappan groups directly impinged into their cultural orbits and became part of the cultural sequences there.

Such successor groups are generally designated as 'late Harappan' cultures (so called because they that devolved from the Harappan tradition) and, in Maharashtra as also in the upper *doab* of Uttar Pradesh, this process of integration with the local cultures can be seen quite clearly. The Savalda culture of Maharashtra, for instance, is followed by a late Harappan phase. Apparently, the general material equipment of these sites in the Tapi basin, of which there are more than twenty, was not very different from the local chalcolithic cultures. The new element was the presence of late Harappan Sturdy Red ware. In the case of Daimabad (in the Godavari-Pravara basin), however, there were other 'Harappan' features such as the presence of mud bricks in the Harappan ratio of 4:2:1, Indus script signs on pottery and terracotta seals. In the *doab*, there is a massive jump in the number of settlements. A 1984 list mentions thirty one mature Harappan sites but one hundred and thirty late Harappan sites. Here also, as in the case of Maharashtra, there was an intermixture of the late Harappan tradition with the OCP cultural horizon that continued to flourish in the *doab* during the first half of the second millennium BC.

6.4.2 Summary of Cultural Horizons in the Subcontinent

The other aspect of the archaeology of the second millennium and first half of the first millennia BC is the continuous sequences of cultures in various regions. The sequence of cultures may be briefly summarized: *Northwest Pakistan*: Phases VI and VII of the Gandhara Grave culture; *Kashmir and Almorah*: Megalithic cultures; *Madhya Pradesh*: Malwa culture; *Maharashtra*: Malwa culture, two phases of Jorwe culture, megalithic burial and habitation sites; *Karnataka and Andhra Pradesh*: chalcolithic horizons containing Black and Red and Black on Red Ware, megaliths; *Orissa*: neolithic sites, chalcolithic culture with unpainted black-and red ware, dull red ware and burnished black, chocolate and red wares (this becomes iron bearing later); *Northeast*: neolithic

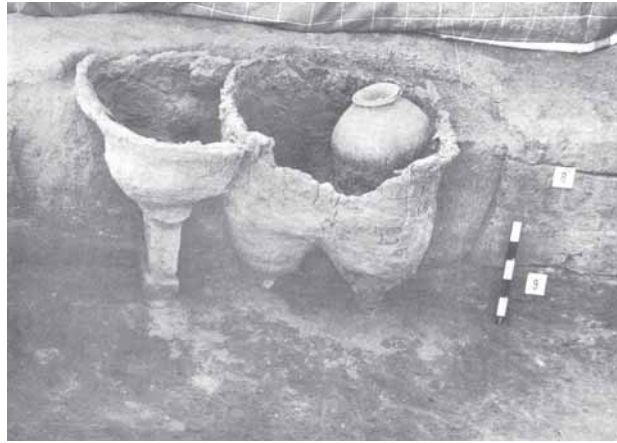
cultures in Assam, Meghalaya and Manipur; *West Bengal*: black-and red ware sites ; *Bihar*: black and red ware horizons; *Eastern Uttar Pradesh*: Pre-Narhan handmade cord impressed red ware horizons, Narhan culture, Black slipped ware culture; *Western Uttar Pradesh*: OCP culture, Black and Red Ware culture, Painted Grey Ware culture. The picture is one of great diversity made up of neolithic, chalcolithic and iron bearing farming cultures. Moreover, within the same technological horizon as well the cultural character of sites even in geographically contiguous zones can be qualitatively different. In Kashmir, the advent of iron coincides with a phase marked by megaliths while in the Swat-Chitral zone of northwest Pakistan, iron becomes part of what is called the cultural column of the Gandhara Grave culture in Phase VII. In the case of north India, this diversity has one very important implication. It reveals that no one culture or one society can claim to be the harbinger or pioneer in the creation of a strong agricultural base there. The situation in the *doab* is qualitatively different from that in eastern Uttar Pradesh. Again, the communities in the latter region, in their trajectory of cultural development are qualitatively different from the manner in which village cultures in Bihar evolved. Multiple lines of development, rather than a unilineal pattern, is the dominant feature of the archaeology of north India in this phase.

6.4.3 Chiefdoms

In the previous section, the possibility of a chiefdom society being present in the Ahar culture of Rajasthan had been considered. In this period, there are many other areas where such indicators of social complexity can be discerned. Take the case of the Jorwe culture in Maharashtra (c.1400-1000 BC with the 'Late Jorwe' continuing till c. 700 BC). Generally speaking, the vast majority of Jorwe settlements are small and the data on the central Tapi basin indicate this. Of the 49 settlements, 40 are below 1 hectare, 6 measure between 1 to 2 hectares, 2 are between 2 to 3 hectares while one settlement approaches 9 to 10 hectares. At the same time, in each of the three geographical units which are within the Jorwe distribution zone there is one large center-Prakash on the Gomai in the Tapi basin, Daimabad on the Pravara in the Godavari valley and Inamgaon on the Bhima river in the Bhima valley. These have been described as the regional centres of chalcolithic chiefdoms.

If we can take up Inamgaon in some detail, the excavations reveal that this status can be accorded to it not merely on the basis of the fact that it is much larger than any other site in the Bhima valley. Unlike the average site, there is public architecture in Inamgaon, in the form of a fortification wall and a ditch around the site as also an irrigation channel and a massive embankment. This embankment was constructed for protecting the settlement from river floods. There is also a granary in the form of a mud walled structure divided into two parts by a low mud wall. It yielded no evidence of human habitation but contained many pit silos and round mud platforms for storage bins. What is significant is its location-in the central part of the principal habitation area, by the side of the largest house discovered at Inamgaon. This house was a five roomed structure and stands out in relation to the usual single room houses. It seems to have been the only multi roomed structure of the Early Jorwe culture here. Whether the persons or families who occupied this house were collecting taxes in the form of grain which was kept in the granary by the side of the house is something that can only broadly be speculated.

But perhaps, the most important evidence for a ranked society comes from the burials of Inamgaon. A unique burial was found in the courtyard of the house described above where in a deep pit was placed a four legged clay jar which contained the skeleton of an adult male, in sitting, cross-legged posture with the feet intact. The differential treatment is striking because the general pattern of burial, of which there is abundant evidence in



Symbolic Burial at Inamgaon, Maharashtra (After MK Dhawalikar et. al., *Excavations at Inamgaon*, Vol. I, p. 294)

the Jorwe phase, required that the feet of the dead be chopped off. Moreover, in the same place, but at an earlier point in time, another such burial was found. Here there were two four legged jars, placed side by side. But they did not contain any skeletal remains. There was only a painted globular jar containing an animal bone covered with a lid. Obviously, this constitutes a symbolic burial probably because the dead body could not be recovered, but the status of the person was such that

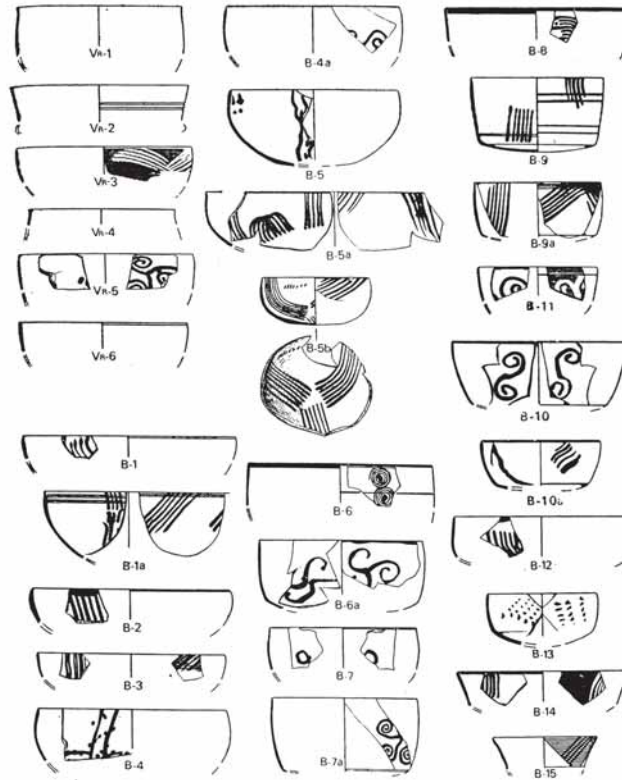
a ceremonial burial was thought to be necessary. On the basis of this evidence, it has been suggested that chiefdom in the early Jorwe phase was hereditary since there are two identical burials occurring in the same place, one in an earlier level and the other in the later.

In many other parts of India as well, there are similar indicators of social complexity. For instance, in West Bengal, the settlement sizes in the Black-and-Red Ware horizon resemble those of Maharashtra. While most of the sites are below one acre, there are a few that are as large as 8 or 9 acres. The presence of this kind of hierarchy suggests that some large sites may have been providing services to a number of small sites in their hinterlands. In Madhya Pradesh as well, during the Malwa culture phase, although most sites could be classified as villages and hamlets, Nagda and Eran appear to be structurally more complex. For instance, at Eran, an effort was made to defend the settlement on one side where it was unprotected by the Bina river in whose vicinity it was located. This was done by the construction of a massive rampart, combined with a ditch. What does this kind of structural construction tell us about the nature of settlement at Eran in relation to its immediate hinterland is a question that cannot be presently answered with any certainty but requires consideration.

6.4.4 Towards Socio-Economic Complexity in North India

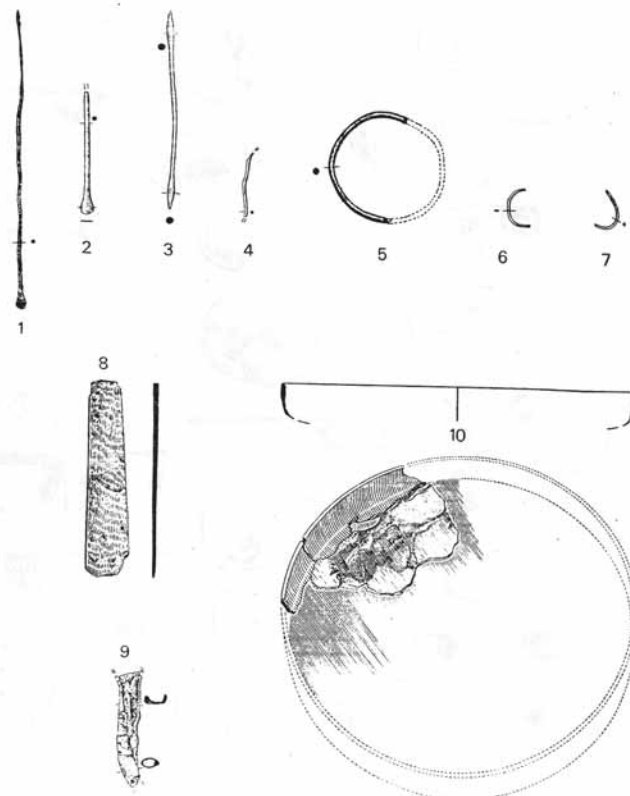
These cultural developments, in some parts of India, would eventually culminate in the creation of cities in what is called the 'second urbanization'. There were several phases of urban growth that made up this process which, starting around c. 600 BC or a little earlier, continued well into the early centuries AD. However, since early historical urban growth began along a belt that stretches from Uttar Pradesh and Bihar to Malwa, the manner in which the centuries prior to 600 BC contributed to this process, especially in north India needs to be briefly considered. One aspect that emerges clearly from the archaeology and geography of the chalcolithic and Iron Age farming communities of this antecedent phase is the growth in population and the evolution of a complex settlement pattern. In the Kanpur district, for instance, whereas there were only 9 Black and Red Ware sites, the number of sites of the succeeding Painted Grey Ware culture is 46. Moreover, there is a clear hierarchy in the settlement sizes. While as many as 38 of them can be considered as small villages, 4 seem to be large villages while four of them would be considered as regional centres. Generally speaking, this kind of multi-tiered settlement hierarchy with settlements that range below one hectare to a few that are around 5 hectares or so is considered as a reliable index of the evolution of a complex society.

Another key variable that one sees emerging in this period concerns the articulation of trade networks which brought various kinds of resources to the minerally poor Gangetic plains. This can be clearly seen in the Painted Grey Ware phase at several sites. The Painted Grey Ware phase, incidentally, is the phase of culture which provided the base for the emergence of urban centres in the upper Gangetic plains. An important site which reveals the kinds of raw materials that were used in this period is Atranjikhhera. Here, there are agate, carnelian, quartz and marble beads, also objects of ordinary stone like pestles and whetstones of red sandstone and limestone, a shell fragment, almost two dozen copper objects, as many as 135 iron objects including iron slag (which shows local metalcrafting/smelting) and *chir* pine (*Pinus Roxburghii*). None of these – stone, metals, pine wood – are locally available. It is likely that there was already a class of traders that was procuring such raw materials so that local manufacture could be sustained.

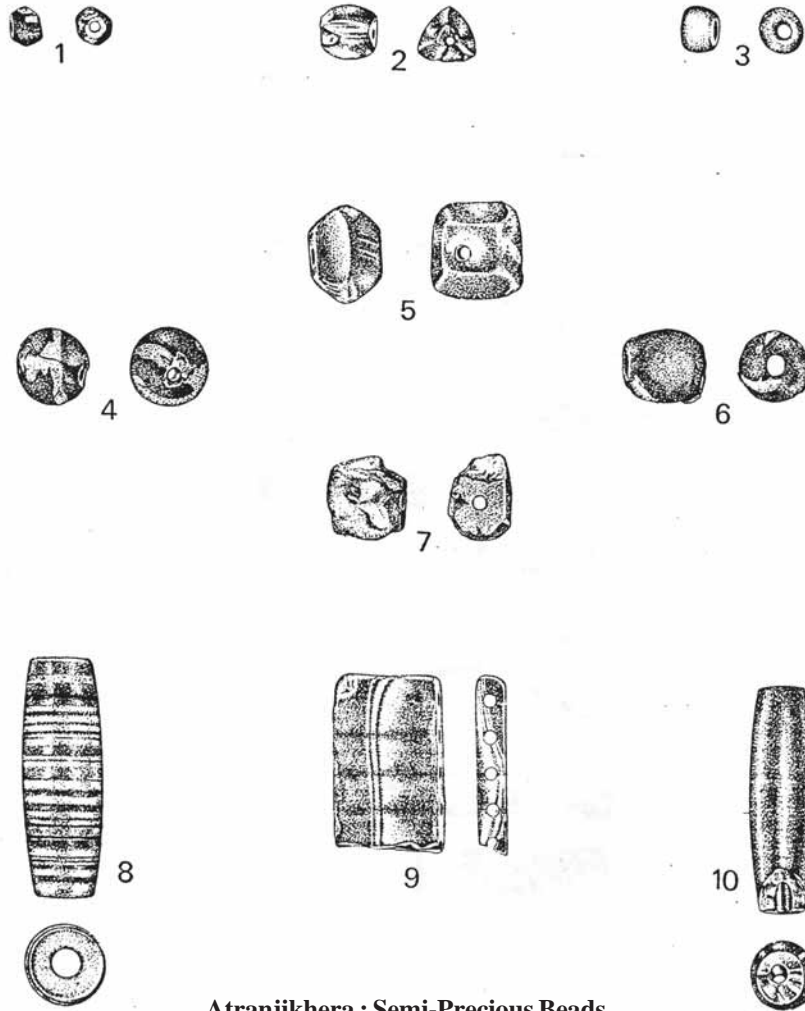


Atranjikhhera : Painted Grey Ware

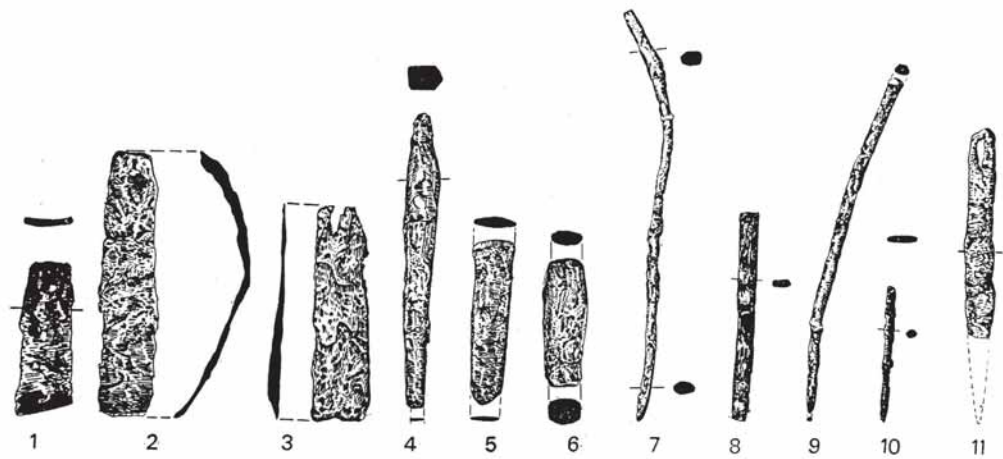
As mentioned in the text, Atranjikhhera is a site that reveals the kinds of raw materials used in this period. The site has yielded agate, carnelian, quartz, and marble beads, as well as ordinary stone objects like pestles and whetstones made of red sandstone and limestone. Additionally, there were almost two dozen copper objects and over 135 iron objects, including iron slag, which indicates local metalcrafting or smelting. The presence of *chir* pine (*Pinus Roxburghii*) is also noted. None of these materials are locally available, suggesting a class of traders who procured these raw materials to sustain local manufacture.



Atranjikhhera : Copper and Copper Alloy Objects



Atranjikhhera : Semi-Precious Beads



Atranjikhhera: Iron Objects

6.4.5 Issue of Iron Technology

Uptil now, we have identified population expansion, the presence of complex settlement patterns and the articulation of non-local raw material procurement as some of the variables that can be recovered from the archaeological record of north India. In this regard, it is also perhaps necessary to discuss the question of technology. Some scholars have considered iron technology as the key factor in the creation of a strong agricultural base which, in turn, was crucial to the birth of cities in c. 600 BC. The evidence that we have already cited from Harappan contexts as also from Ahar clearly shows that the first distinct phase in the development of a technology capable of producing metallic iron in

the Indian subcontinent coincides with the early chalcolithic cultures. There is no evidence that this knowledge led to any major changes in those early contexts. The cultural situation in the subsequent centuries in many areas is broadly similar. In eastern India, for example, the chalcolithic Black-and-Red Ware culture becomes iron using towards the end of the second millennium BC. Bahiri, Mangalkot and Pandu Rajar Dhibi in Bengal are examples of this and, as we know, the birth of cities in that zone is several centuries later.

Important new evidence of an early use of iron in Uttar Pradesh has also emerged. There is iron in the Black-and-Red Ware level at Jakhera (Etah district) and also in a similar context at Dadupur near Lucknow. The three calibrated radiocarbon dates from Dadupur hover around c. 1700 BC. Iron bearing levels at Malhar and Raja Nal Ka Tila are also fairly early. Malhar II which is iron bearing has early second millennium BC dates while Period II of Raja Nala-Ka-Tila in the upper part of the Belan valley has been dated to c. 1300 BC (C14-calibrated). Both these sites show extensive evidence of iron smelting and manufacture. Finally, the antiquity of iron at Jhusi near Allahabad has also been put to around 1100 BC (calibrated). The plethora of dates may seem to be confusing but the reason why they have been mentioned here is to show that the use of iron, at least in this part of the Ganga plain, seems to have been secure and widespread from the middle of the second millennium BC onwards. The abundant data on iron smelting which has been reported at Malhar and its surrounding area in the Karmanasa valley shows that these sites came up in the rich iron ore-bearing area at the fringe of Banaras mainly to supply smelted bloomery iron to this section of the Ganga plain. This also implies that by this time a distributive network was already in place for processed iron in the central Ganga plain.

Without some demands for the metal in the productive systems including agriculture, it is unlikely that iron would have made its appearance as early as this period at such widely separate sites as Dadupur and Jakhera, both located deep in the plains. Most importantly, this shows that the impact of iron technology was not revolutionary. There is a difference of roughly a thousand years between the first appearance of iron in the Ganga plains and the beginning of the early historic cities of the area. The consequences of the use of iron on the Gangetic valley was evidently a long drawn and slow process. Also, as in the case of eastern India, there is cultural continuity at places like Malhar between the chalcolithic and Iron Age phases. The main ceramic industries of its chalcolithic period were red ware, black-and-red ware and black ware. All these continued in the iron bearing phase with the addition of black-slipped and grey wares. Among the food crops, the most important cereal in the chalcolithic phase was rice but there were other grains and seeds as well such as barley, mung, field peas, lentils, khesari, etc. All these crops are found in Iron bearing Period II, along with the domination of rice. The new crops in this phase were wheat, varieties of millet, horse gram and sesamum.

In the light of such data, the notion of the Iron Age representing a major social and economic transformation, as much as it may appeal to our love of a neatly ordered succession of events working in tandem with technological change, does not stand to historical scrutiny. Iron technology certainly sustained the 'second urbanization' but the urban process itself was a consequence of multiple factors – a burgeoning population; a secure agricultural base which allowed the creation of centres of population where consumers rather than producers of agricultural surplus lived; trade networks, and; the formation of states of various kinds where the nucleus of political and institutional power came to reside in the urban form. Some of these elements will be discussed in greater depth in the subsequent Unit.

6.5 VEDIC LITERATURE – PROBLEMS AND ISSUES

The picture that has emerged in this module about the agricultural-pastoral settlements in non-Harappan India does not appear as a straightforward, unified picture but rather one in which there are multiple, dynamic cultures and multilinear lines of development. This is a framework that emerges from the material traces that have been left behind by the very communities whose past we seek to reconstruct. To put it another way, if we have described the ancient diet of chalcolithic Balathal or the iron using people of Malhar, it is based on the discarded refuse, the garbage that has been left behind by them: charred cereal, cut or burnt bone remains, ancient *chullahs* and storage pits, the straw of different cereals which, after the crops were threshed, was mixed with mud to make walls or even bricks.

However, apart from such archaeological data, there is a corpus of literature that has been frequently used for writing the history of India between c. 1500 and c. 600 BC. These are the *Vedic* texts which are ritual, religious compositions. The earliest of them is the *Rig-Veda* while the later *Vedas* are the *Sama*, *Yajur* and *Atharva Vedas*. There are four categories of texts which make up the corpus: the *mantra* or *Samhita* collections mentioned above; commentaries on sacrificial rituals or *brahmanas*; philosophical treatises or *Upanishads*, and; the instructions for rituals, etc. or *sutras*. Unlike archaeological data, these were put in their present form much later than the times when they were composed. They formed part of an oral tradition which was composed and elaborated over a very long time span and committed to writing many centuries later. Because of this, there are various and contradictory ‘facts’ that are contained in these texts and, depending on what one wants to prove, all kinds of histories can and have been constructed out of them. This variety is interesting in itself but hardly makes for a narrative that has won universal acceptance. This does not mean that all literary texts that are used for reconstructing the history of early India are of this kind. For instance, the *Rajatarangini* written by the Kashmir chronicler, Kalhana, is a more conventional historical text with details about dynasties, events, etc. which, incidentally have been corroborated by other historical sources. The *Vedas* do not fall within this category.

Apart from the peculiarities of their genre and composition, there is also the problem about when these texts were composed and compiled. The antiquity of the hymns of the *Rig Veda* has been traced variously to periods ranging from c. 6000 BC to 1200 BC. While the earlier dates are unacceptable, the later ones are also not based on strong evidence. Even if we were to accept a mid-second millennium BC date for the *Rig Veda* and fit in the later *Vedas* into the first half of the first millennium BC, the problems in using these as either a primary or a corroborative source for the economic history of the period under study requires to be tackled.

For instance, let us follow those interpretations of the Vedic evidence that have put forward an evolutionary framework of a largely pastoral economy, followed by large scale agriculture. The details of this two stage scheme of socio-cultural development are as follows. In the first stage, on the basis of the core books of the *Rig Veda*, the existence of a pastoral, cattle-based economy between 1500 and 1000 BC, is postulated. There is little doubt that there are numerous references to cattle in this text – *gau* occurs in different declensions about 176 times and there are different terms for various events that are derived from cattle. An example is the plethora of terms for ‘battle’ which include *gavisti*, *gosu*, and *gavesana*. The evidence, we are told, for agriculture is less strong and barley (*yava*) is the only cereal that is specified. The geography of the *Rig Veda* is

largely the lands east of the Indus – areas in Pakistan Punjab and Bahawalpur and in Indian Punjab and Haryana. In the second stage, from 1000 BC onwards, the geographical area of reference expands much further and includes the Gangetic plains within its ambit. In this period, a full fledged agrarian society is reflected in the Vedic texts where apart from barley, rice, bean-pulse, sesamum and millet are frequently mentioned.

The problems with this reading of Vedic texts are several and can only be briefly mentioned here. To begin with, as far as the *Rig Veda* is concerned, while there is no denying the numerically large references to cattle, there are also references to agriculture there. These may not be many but they strongly underline the existence of a plough based agriculture. An instance that can immediately come to mind is a hymn from a family book (Book 4, Hymn LVII) which is dedicated to *Kshetrapati* ('master of the field) and is devoted to ploughing. Two of its verses (numbers 7 and 8) read: "May Indra press the furrow (Sita) down, may Pusan gude its course aright. May she, as rich in milk, be drained for us through each succeeding year/ Happily let the shares (*phala*) turn up the ploughland, happily go the ploughers (*kinasa*) with the oxen." The other aspect that one needs to keep in mind is that of trying to dovetail the literary evidence with the archaeological picture. If we accept the picture of pastoral groups dominating the geography of Punjab, Bahawalpur and Haryana in the time of the *Rig Veda*, juxtaposing it with the archaeology of those regions remains a serious problem. In the archaeological landscape, it is not pastoral groups but agricultural communities that command attention and, among other things, this is amply highlighted by the crop patterns of the late Harappan cultures of this zone.

On the question of agriculture, it may also be pointed out that north India did not have to wait for a 'late Vedic period', if at all there was one, for the consolidation of a secure agricultural base. Thriving agricultural societies existed in the Gangetic plains much before the first millennium BC. For all the allusions in the *Satapatha Brahmana* about agriculture being carried to the banks of the Gandak river in Bihar by the putative Aryans in the first half of the first millennium BC, archaeology tells us that in that area, in the third millennium BC itself, they were rice cultivating agricultural communities.

This does not mean that in writing the history of early India, texts like the *Vedas* must be jettisoned altogether. In matters of ancient Indian philosophical and religious thought, they must be considered as an important source of information. But when we are dealing with more mundane aspects of the past such as the settlement patterns and subsistence strategies, if the *Vedic* corpus is treated as a primary source of information, this will lead to conclusions that fly in the face of well-documented archaeological data. Till the time that a greater precision is imparted to the chronology and character of *Vedas* as a historical source, if we are to meaningfully understand the geography and character agricultural-pastoral communities in north India, it is wise to follow archaeology rather than seek 'confirmation' for religious texts.

This is also necessary because unlike the Vedic texts which remain focused on north India, archaeology provides us a tool for understanding the subcontinent beyond the pale of 'Aryan' texts. 'Vedic India' may reflect a two stage-cultural development, but the Indian subcontinent as a whole witnessed a rich variety and depth in the evolution of farming cultures in this time period and our understanding of its economic history must reflect this diversity.

6.6 SUMMARY

The foregoing analysis of various food producing communities upto c. 600 BC reveal multiple lines of development. Economically, they represent a combination of agriculture and pastoralism, although in some instances, one aspect may be more defined than the other. These village cultures can be differentiated on the basis of the pottery they used, the technology they employed and, in some cases, over time, they developed culturally complex features that are observed in chiefdom societies.

India saw the emergence of the first rice producing cultures as early as the late sixth and early fifth millennium BC. From 3000 BC onwards, farming cultures can be encountered across a wide swathe of territory in regions like the Northwestern highlands and lowlands of Pakistan, Kashmir and Rajasthan. Many of the early farming cultures were marked by their own regional characteristics, depending upon the area where they were located. For example, in Kashmir, pit dwellings became an integral part of the residential pattern in response to the severe cold. Then, there is Rajasthan, with sprawling chalcolithic cultures that exploited the rich copper resources of the region. Another peculiarly peninsular phenomenon is the emergence in the third millennium BC of ash mounds in the Deccan, formed by the firing of accumulated cow-dung. Animal herding was an integral component of this farming culture.

As we move into the third millennium BC, a striking feature is simultaneous presence of village societies in large parts from India that were contemporaries of the Harappan civilization and their interactions with the Indus people. Another element is the beginning of iron technology in chalcolithic contexts. This can be seen at Harappan sites as also in Kashmir, Rajasthan and Uttar Pradesh. However, it is only from the latter part of the second millennium BC that iron usage becomes more common. This, though, did not trigger any dramatic social or economic transformation. The urban efflorescence which is described as the 'second urbanization' postdates the usage of iron by several centuries and is a c. sixth century BC phenomenon.

6.7 GLOSSARY

Culture and Civilisation

'Culture' in archaeology is used a kind of umbrella term to describe the cumulative character of a past human society. This is done on the basis of the evidence that has physically survived. Used in this sense, it can accommodate palaeolithic hunter gatherers, mesolithic fishers and foragers as also neolithic farmers and chalcolithic village and city dwellers. On the other hand 'civilization' is a specific type of a 'culture'. which is marked by literacy, cities and towns, monumental architecture, craft specialization and regional settlement hierarchies. it is accurate to describe the Harappan phenomenon as a 'civilization rather than a 'culture' because it directs attention to such elements which are concurrently present at its different sites.

Ochre Colour Pottery (OCP)

This pottery is made of medium grained clay, underfired and has a wash of ochre (which has a tendency to rub off) ranging from orange to red. Those sites associated with this ware are ascribed

to Ochre Colour Pottery Culture. OCP pottery sites are generally located along the river banks. This pottery type is largely concentrated in Upper Gangetic Valley.

Painted Grey Ware (PGW)

The pottery made out of well levigated clay and has a thin core. It has a smooth surface, grey to ash-grey in colour. It is painted in black and sometimes in a deep chocolate colour on the outer as well as inner surface.

Radio Carbon Dating (C14)

This is a method of archaeological dating which is based on the principles of radioactive decay. One of the forms of carbon - ^{14}C or radiocarbon is an unstable one. This leads to radioactive decay of ^{14}C at a regular date. The American chemist, Willard Libby, who first used this to calculate radiocarbon dates, estimated that it took 5568 years for half the ^{14}C in a sample to decay – its half-life – although modern research indicates that the more accurate figure is 5730 years.

Radiocarbon is passed on uniformly to all living beings through carbon dioxide. Only when a plant or animal dies does the uptake of ^{14}C begin to decline through radioactive decay. Thus, knowing the decay rate or half-life of ^{14}C , Libby recognized that the age of dead plant or animal tissue could be calculated by measuring the amount of radiocarbon left in a sample.

Libby's great practical achievement was to devise an accurate means of measurement. The traces of ^{14}C are minute to start with and are reduced by half after 5730 years. After 23,000 years, therefore, only one sixteenth of the original tiny concentration of ^{14}C is available to be measured in the sample. He discovered that each atom of ^{14}C decays releasing beta particles and he succeeded in counting these emissions using a Geiger counter. This is the basis of the conventional method still employed by many radiocarbon laboratories today.

Samples usually consist of organic materials found on archaeological sites, such as charcoal, wood, seeds, and other plant remains, and human or animal bones. The accurate measurement of the ^{14}C activity of a sample is affected by counting errors, background cosmic radiation, poor sampling techniques, etc. In spite of these limitations, it is still the main dating tool for organic materials that go back to about 50,000 to 80,000 years ago.

The civilization flourished between BC 4000-3000 on the rivers Tigris and Euphrates. It is also known as Mesopotamian civilization. Ancient Sumerians invented wheel and created mathematical symbols. Sumerian civilization was the first to bring writing to the world called 'cuneiform'.

6.8 EXERCISES

- 1) On a map locate cultures contemporary with the Harappan civilization. Do you find differences in the existing cultures vis-a-vis Harappan civilization?
- 2) Discuss the characteristic features of neolithic-chalcolithic sites of the northwest and Rajasthan. In what ways they differ from Ash Mound traditions of the southern Deccan plateau.
- 3) Analyse the growth pattern of early agricultural and pastoral communities in the subcontinent.
- 4) Examine the integration pattern of the late Harappan and local cultures in the subcontinent.
- 5) Discuss the possibilities in the neolithic-chalcolithic cultures of the existence of chiefdoms in the subcontinent.

6.9 SUGGESTED READINGS

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UNIT 7 COMPARATIVE STRUCTURES OF ECONOMIES IN SOME EARLY STATES (MAURYA, KUSHANA, SATAVAHANA, GUPTA)

Structure

- 7.1 Introduction
- 7.2 Economy of the Mauryan Empire
 - 7.2.1 Agrarian Economy
 - 7.2.2 Production of Other Resources
 - 7.2.3 Trade
 - 7.2.4 Extraction of Revenue Resources
- 7.3 Economy of the Kushana Empire
 - 7.3.1 Agrarian Economy
 - 7.3.2 Trade, Merchants and Monetization
 - 7.3.3 Craft Production, Guilds, and Urbanization
- 7.4 Economy of the Satavahana Empire
 - 7.4.1 Agrarian Economy
 - 7.4.2 Crafts, Industries and Trade
- 7.5 Economy of the Gupta Empire
 - 7.5.1 Agrarian Structure
 - 7.5.2 Non-Agricultural Production
 - 7.5.3 Guilds
 - 7.5.4 Trade and Merchants
 - 7.5.5 Coinage
 - 7.5.6 Extraction of Revenue Resources
- 7.6 Summary
- 7.7 Glossary
- 7.8 Exercises
- 7.9 Suggested Readings

7.1 INTRODUCTION

Fourth century BC to fourth century AD is marked by the emergence of Early Empires in the Indian subcontinent. The earliest of these was the Mauryan empire (c.324-187 BC), followed by the empires of the Satavahanas (c. BC 28-250 AD), Kushanas (c. AD 50-320), and the Guptas (c. AD 320-570). In the present Unit we will be focusing on the comparative economic structures of these empires. Mauryan period is generally considered as a landmark in the study of early Indian history. The Mauryas carved out an almost pan Indian empire and it stretched from Afghanistan in the north to Karnataka in the south and from Kathiawad in the west to perhaps north Bengal in the east. Obviously this vast empire was a melange of diverse ethnic and cultural components. It, however, goes to the credit of the Mauryas to have reduced the tremendous cultural gaps between different regions of the subcontinent. It has been argued that the Maurya Empire consisted of three zones viz. metropolitan state (Magadha in Bihar), core areas like existing states of Gandhara, Kalinga, Saurashtra, Malwa, and perhaps peripheral regions. It also included a number of peripheral regions could be anything from hunting gathering to producing societies. These may have included a large part of the peninsula as also some parts of the northern subcontinent.

In the 1st century AD, the Kushanas, originally a Central Asian nomadic tribe, established a huge empire with Bactria (Balkh in North Afghanistan) as its principal seat of power. The empire at the height of its power under Kanishka I (c.AD 100-123) embraced

extensive areas of north India up to Champa or Bhagalpur in the east, the lower Indus valley and Gujarat in the west, Chinese Turkestan and areas to the north of the river Oxus. Kanishka I's successors, however, had little control over areas to the east of Mathura. The death knell of the empire rang with the annexation of Kushanshahr up to Peshawar to the Sasanid Empire in or before c. AD 262. The territory between Peshawar and Mathura fell into the hands of the local powers.

The traditional seat of power of the Satavahanas, who are assigned to the Andhra lineage in the Puranic lists of kings, was at Pratishthana, modern Paithan in the Aurangabad district in Maharashtra. The family came to power in about the second half of the first century BC and was finally wiped out in about the first quarter of the third century AD. Their original territory was probably in the central Deccan. During the early phase of their rule their authority was extended to parts of central India including Sanchi, western Deccan and perhaps also the lower Deccan. Gautamiputra Satakarni (c. AD 167-196), the most famous of the Satavahana rulers, extended the Satavahana rule to eastern Deccan. The combined evidence of the Nasik inscription of Balasri, Nasik records of Gautamiputra, an epigraph found at Sannati (Gulbarga district) and the coins of Gautamiputra attributable to different areas indicate his authority over Kathiawad, a part of southern Rajasthan, eastern and western Malwa, western, central (including Vidarbha, mod. Berar), and the eastern Deccan. The Satavahana rulers bearing the epithet 'Dakshinapathapati' (lord of the Deccan) were engaged in protracted hostilities with the Saka Kshatrapas of western India. Economic motivation gave an added dimension to this hostility.

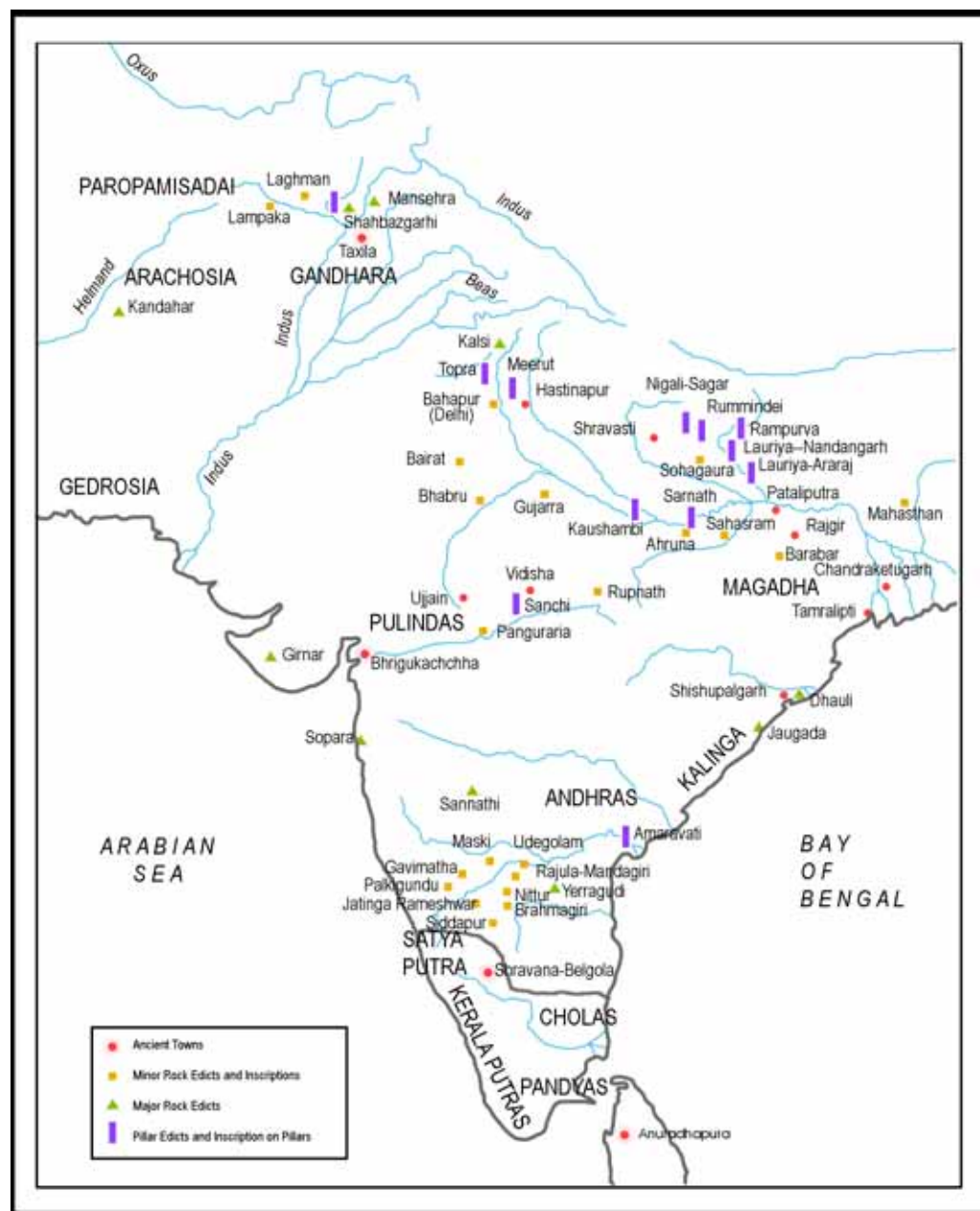
The Guptas were the most outstanding political power of North India from the beginning of the fourth to the middle of the sixth century AD (320-570). The foundation of the Gupta power by Chandragupta I brought the middle Ganga valley and the region around Pataliputra back to limelight. From the Allahabad Prasasti we learn that during the reign of Samudragupta (AD 335-375), successor of Chandragupta I, the Guptas aimed at the extermination of rivals in the Ganga-Yamuna doab, upper Ganga valley, Punjab and Haryana, Central India and Malwa plateau and tried to expand in the lower Ganga regions. Thus, in the last quarter of the fourth century AD, the Guptas emerged as the masters of virtually the whole of northern India except the western part, covering western parts of Malwa, Gujarat and Kathiawar. This task was successfully completed by Chandragupta II (AD 375-414), son and successor of Samudragupta. The penetration of the Gupta power into western Malwa was made possible due to their firm grip over Mathura which was a well known nodal point in the Ganga-Yamuna doab for reaching out into western India through the Malwa plateau. Silver coins of the Guptas, issued following the pattern of the coins of the Saka rulers, in Gupta era 90, ie. AD 409-410, clearly suggest the capture of this area which gave the Gupta monarchs access to the huge resources of western India in addition to the fertile tracts of the Ganga valley.

7.2 ECONOMY OF THE MAURYAN EMPIRE

The major sources for understanding the economy of the Mauryan empire are the *Indica* of Megasthenes, who came as an ambassador from Seleucus to the court of Chandragupta Maurya, Asokan inscriptions which were engraved in prominent places covering more or less the major part of the empire, archaeological remains found from explorations and excavations and the *Arthashastra* of Kautilya which champions the economic interest of the political authority.

This vast empire was supported by a large army and an equally impressive administrative set up, maintenance of which required enormous resources. Mobilization of huge resources was possible in an economic structure which was controlled by the state. The Maurya state actively participated in the production and distribution of commodities. The Mauryas

had a well established revenue system and in the Arthashastra revenue collection has been categorized as the most important administrative business of the state and instructions in this connection are specific, detailed and thoughtful.



Map 1 : Mauryan Empire (After Romila Thapar,
Early India from the Origins to AD1300, Penguin, 2002, Map 5)

7.2.1 Agrarian Economy

Agriculture and the revenue from the agrarian sector was the mainstay of their economy. The Mauryas were the first political authority to have exercised control over both the Indus and the Ganga river systems which supported the major agrarian communities. The royal farms working under the supervision of the *sitadhyaksha* or superintendent of agriculture formed a major source of income to the royal treasury. From Megasthenes we learn that the tillers of the soil form the most numerous class of population. The cultivator's listed as the largest category, underline the centrality of agriculture and its requirement to maintain the Mauryan infrastructure both civil and military. Apart from the activities of the state in agriculture, private owners as farmers or land owners, cultivated the land or had it cultivated and paid the state a variety of taxes. The hunters and shepherds used to clear the countryside of wild beasts and thereby helped the administration in

expanding the area under cultivation. This act must also have facilitated the growth of new settlements, the importance of which is also indicated in the *Arthashastra*. The new settlements helped in the expansion of the existing economic and fiscal base of the empire. Megasthenes has commented upon the absence of slavery, but domestic slaves were a regular feature in prosperous households. The compound phrase *dasa-karmakara* meant slaves and hired labourers. The status of both were not pleasant and perhaps there were much oppression. Slave labour was also used in the mines and by some craft associations. State initiative in irrigation, both during the time of Chandragupta Maurya and Asoka, is amply clear from the history of Sudarshan reservoir as gleaned from the Junagarh Prasasti (AD 150) of the Saka ruler Rudradaman (c. AD 130-150). Asoka not only maintained the lake but also decorated it with conduits which definitely helped distribution of water to nearby arable areas. The state also provided local level irrigation facilities and regulated water supply for the benefit of the agriculturists. Megasthenes speaks of a special category of officers who inspected the sluices so that the cultivators could have equal supply of water. These officers might have been the Rajukas who along with other things also supervised welfare works.

JUNAGARH PRASASTI

(Be it) accomplished:

(Line 1) This lake **Sudarsana**, from **Girinagara** [even a long distance?] . . . of a structure so well joined as to rival the spur of a mountain, because all its embankments are strong, in breadth, length and height constructed without gaps as they are of stone, [clay] . . . furnished with a natural dam, [formed by?] . . . and with well provided conduits, drains and means to guard against foul matter, . . . three sections. . . by . . . and other favours is (now) in an excellent condition.

(Line 3) This same (lake)- on the first of the dark half of *Margasirsa* in the seventy-second – 72nd – year of the king, the Mahatsatrapa Rudradaman whose name is repeated by the venerable, the son of . . . [and] son's son of the king, the Mahakshatrapa Lord Cashtana, the taking of whose name is auspicious, . . . when by the clouds pouring with rain the earth had been converted as it were into one ocean, by the excessively swollen floods of the *Suvarnasikata Palasini* and other streams of Mount *Urjayat*, the dam. . . ; though proper precautions [were taken], the water churned by a storm which, of a most tremendous fury befitting the end of a mundane period, tore down hill-tops, trees, banks, turrets, upper stories, gates and raised places of shelter-scattered, broke to pieces, [tore apart] . . . , with stones, trees, bushes and creeping plants scattered about, was thus laid open down to the bottom of the river.

(Line 7) By a breach four hundred and twenty cubits long, just as many broad, [and] seventy-five cubits deep, all the water escaped, so that [the lake], almost like a sandy desert, [became] extremely ugly [to look at].

(Line 9) . . . – he the Mahakshatrapa Rudradaman, in order to . . . cows and Brahmanas for a thousand of years, and to increase his religious merit and fame, –without oppressing the inhabitants of the towns and country by taxes, forced labour and acts of affection – by [the expenditure of] a vast amount of money from his own treasury and in not too long a time made the dam three times as strong in breadth and length. . . [on] all [banks] . . . [and so] had [this lake] made [even] more beautiful to look at.

(Line 16) When in this matter the Mahakshatrapa's counsellors and executive officers, who though fully endowed with the qualifications of ministers, were averse to a task [regarded as] futile on account of the enormous extent of the breach, opposed the commencement [of the work], (and) and the people in their despair of having the dam rebuilt were loudly lamenting, [the work] was carried out by the minister *Suvisakha*, the son of *Kulaipa*, a *Pahlava*, who for the benefit of the inhabitants of the towns and country had been appointed by the king in this government to rule the whole of *Anarta* and *Surastra*, [a minister] who by his proper dealings and views in things temporal and spiritual increased the attachment [of the people], who was able, patient, not wavering, not arrogant, upright [and] not to be bribed, and who by his good government increased the spiritual merit, fame and glory of his master.

F. Kielhorn, 'The Junagadh Rock Inscription of Rudradaman', *Epigraphia Indica*, Vol. 8, 1981, pp. 45-9.

7.2.2 Production of Other Resources

Resources in the Mauryan empire were realised from the non-agrarian sector too. Recommendations of the *Arthashastra* and the observations of the classical authors suggest that revenue from the agrarian sector was considerably supplemented by trade, exploitation of metals and minerals, working in metals and the existence of different types of industries. Parts of the southern Deccan which were not perhaps in the same cultural level as that of Magadha and Gandhara became economically very important due to the availability of iron, gold and diamond. A number of Asokan inscriptions have been located in the Deccan. The areas of Kurnool, Gulbarga, Raichur, Bellary and Chitaldurga districts, the first belonging to Andhra Pradesh and the rest to Karnataka, have yielded Asokan edicts. They perhaps belonged to the southern province whose head quarter was at Suvarnagiri (a site near Maski). This is a pointer to the fact that the Mauryas were aware of and interested in the rich mineral resources of the region. The state enjoyed a monopoly in the working of mines and in trade in mineral products. The evidence of direct supervision of mines by Maurya officials, which obviously included those yielding metallic ores usable for manufacturing of weapons, should have naturally encouraged the administration to find out and excavate new mines which were source of great income. The *Arthashastra* dwells in detail on the technique of mining and metallurgy. The characteristics of ores and methods of smelting and purification of ores are discussed. It frequently reminds that mines are an important source of wealth and they constitute a main reason for seeking to establish new settlements. It is significant to note that the southernmost headquarters of the Mauryas named Suvarnagiri was situated very near the famous Kolar gold fields. Raymond Allchin discovered traces of very old workings of gold and diamond fields in Karnataka and western Andhra Pradesh. These, according to him, could possibly go back to the days of the Mauryas.

STARTING OF MINES AND FACTORIES

No. 1 The Director of Mines, being conversant with the science of (metal) veins in the earth and metallurgy, the art of smelting and the art of colouring gems, or having the assistance of experts in these, and fully equipped with workmen skilled in the work and with implements, should inspect an old mine by the marks of dross, crucibles, coal and ashes, or a new mine, where there are ores in the earth, in rocks or a new mine, where there are ores in the earth, in rocks or in liquid form, with excessive colour and heaviness and with a strong smell and taste.... (p.105, 2.12.1)

No. 5 Ores in earth or rocks, which are yellow or copper-coloured or reddish-yellow, which, when broken, show blue lines or are of the colour of the *mudga*, or *masa* bean or *krsara*, which are variegated with spots or lumps as of curds, which are of the colour of turmeric or myrobalan or lotus-leaf or moss or liver or spleen or saffron, which, when broken, show lines, spots or *svastikas* of fine sand, which are possessed of pebbles and are lustrous, which, when heated, do not break and yield plenty of foam and smoke, are gold-ores, to be used for insertion, as transmuters of copper and silver.... (p. 106, 2.12.2).

(Kautiliya's *Arthashastra*, tr. R. P. Kangle, 2nd ed. Bombay, 1972, Part II, Chapter Twelve, Section 30, pp. 105-106)

Almost unrestricted monopoly was enjoyed by the state in trade in liquor and salt. Ships were built by the government and were let out to sailors and merchants. All these

helped the growth of economy and should have also enriched the treasury by way of taxes. The spread of the use of Northern Black Polished Ware (NBPW) and punch-marked coins over the greater parts of India since c. 300 BC is also compatible with the literary evidence of trade during the Mauryan times. This pottery type is subsequent to and technologically more advanced than the Painted Grey Ware (PGW). The chronological span of NBPW is more or less assumed to be from c. 600 BC to 100 BC. The heaviest concentration of NBPW sherds have been at numerous places in the middle Ganga plains in association with iron objects though it has also been found in other parts of the empire. The advent of the use of NBPW coincides with the emergence of urbanisation in the middle Ganga plains. This ware was used by affluent sections of the society and thus considered to be a deluxe pottery. The metal for punch-marked coins were either silver or copper and were round/roundish or square/squarish in shape. These coins did not carry the name or imprint of any ruler or political authority. Instead different symbols were struck with the help of separate punches on the metal pieces. Recovery of a large number of silver punch-marked coins indicates that a great volume of money was in circulation. Regular use of these coins as a medium of exchange definitely points to burgeoning trade. Copper cast coins datable to the Maurya period have also been found. In the *Arthashastra*, coin minting was a state prerogative. We have reference to an officer called '*rupadarshaka*', who was authorised to monitor the production and circulation of the coins. Mauryan administration was instrumental in transforming coinage into an all India phenomenon or nearly so.

7.2.3 Trade

Mauryan expansion of trade and the facilitating of contacts between distant areas accelerated exchange particularly in small items such as glass, clay and shell beads as also beads of agate, carnelian, jasper and lapis-lazuli. Bhṛigukaccha (Broach) was associated with the manufacture of ivory and shell items. Mathura was also an important bead manufacturing centre. Kautilya *Arthashastra* strongly advocates state supervision and control of trade. The overall supervision and the framing of the commercial policy of the state are entrusted to the *panyadhyaksha* or the Director of Trade. The *Arthashastra* seems to have been well aware of the revenue bearing potential of trade, including foreign trade. However it is difficult to ascertain to what extent the Mauryas actually controlled and supervised trade in the absence of relevant data. From Megasthenes we learn that Mauryas had a state monopoly on shipbuilding. *Arthashastra* recommends the state supervision of shipping under the officer *navadhyaksha* (Director of shipping). Though these facts are not enough to understand Mauryan attitude to the sea and maritime trade yet the fact that the Mauryan realm included within it long stretches of coastal strip on both the seaboard of India may suggest some interests of the Mauryas in seaborne commerce. Archaeological discoveries at Failaka near Bahrain show active trade in the Persian Gulf during the Seleucid rule with whom the Mauryas had regular contacts. In the Failaka collection we have Indian material like moulded pottery, stamped pottery (rosettes, leaves), black washed pottery etc and these archaeological data from Failaka are becoming a key reference to the interpretation of the relations between Mesopotamia and India in the Hellenistic period. Trade in Indian goods during the Seleucid rule is also attested by many Hellenistic sources, e.g. we have reference to Seleucus I's (311-281 B.C.) offerings to the temple of Apollo in Didyma in 288/7 B.C., which included frankincense, myrrh, cassia, cinnamon and costus, the three latter products being definitely imported from India.

7.2.4 Extraction of Revenue Resources

Imposition of taxes was an important mode of resource extraction for the Mauryas. The

normal taxes were not considered sufficient to meet all the needs of the state and hence the state undertook and regulated numerous economic activities which formed profitable sources of income. A large number of customary and new taxes were levied. The chief tax was the royal share (*bhaga*) in the produce of the peasants, amounting to $1/6^{\text{th}}$ or $1/4^{\text{th}}$. Besides the regular *bhaga*, *bali* and *udakabhaga* (water tax) were also imposed. That the Maurya state imposed both *bhaga* (share of the produce) and *bali* (an obligatory payment) is amply borne out by the Rummindei Pillar Inscription of Asoka. The peasants were required to pay the *pindakara* which was lump assesment made on groups of villages. The irrigation cess was not levied at a flat rate but according to the manner of procurement of water. Another important source of income was customs and ferry dues. Taxes were also levied from the guilds of artisans living in the capital. The urban centres were important not only because of the state control of crafts and commerce but also because of rich dividends they paid in the form of various types of taxes. To replenish the depleted treasury, additional tax like *pranaya* could be levied only once and amounted to $1/3^{\text{rd}}$ or $1/4^{\text{th}}$ of the produce according to the nature of the soil. The government officials collected taxes and used to superintend the crafts connected with land—those of wood cutters, carpenters, workers in brass and miners. Even if the rate of taxation was high and heads of taxes numerous the government had a strong machinery to realise the dues. The *Mahabhashya* of Patanjali, which states that ‘images were made by the Mauryas longing for gold’ suggests that the Mauryan administration was bent upon looking for economic gain from every possible source.

RUMINDEI PILLAR INSCRIPTION

King Piyadasi, beloved of the gods, having been anointed twenty years, came [1] himself and worshipped [2], saying [3] : “Here Buddha Sakyamuni was born.” And he caused to be made a stone (slab) bearing a big sun (?) [4]; and he caused a stone pillar to be made free of taxes and a receipt of wealth [6].

G. Buhler, ‘The Ashoka Edict of Paderia and Nigiliva’, *Epigraphia Indica*, 1898-99 Vol. V, p. 4

The resources, thus extracted, were employed for a variety of purposes. Expenditure in maintaining a huge administrative machinery as well as a large standing army obviously claimed a major bulk of the resources extracted. Resources were also needed for public welfare works as well as the general development of the Maurya state though this development was not uniform in all the areas. It has been argued that efforts were directed at enriching the metropolitan state of Magadha and its relation with other areas was therefore exploitative. In spite of being a part of the Maurya empire, the important sites in Deccan show the continued predominance of the Megalithic culture ways. The location of Asokan inscriptions throughout the vast empire is an indicator of the well maintained communication system of the empire. Asokan edicts were located at strategic points of both the Uttarapatha and the Dakshinapatha. In the Uttarapatha, e.g. the Lauriya-Nandangarh and Lauriya Araraj inscriptions in the Champaran district (Bihar) were clearly along the route towards the Nepalese Terai where Asokan epigraphs are found at Lumbinigrama and at Nigalisagar. Another branch from Bihar went along the Barabar hills through Sasaram towards Benares and Kausambi. Asokan inscriptions have been found in all these places. The location of Asokan edicts along the Dakshinapatha is also significant. Thus we have Gujjara, near Jhansi, Rupnath, on one of the arterial routes from Bundelkhand to the Godavari delta, Sanchi, a few kilometres off ancient Vidisa, Deotak in ancient Vidarbha and Sopara on the Konkan coast. Andhra Pradesh was also strategically very important. This can be understood not only by the presence of Asokan

edicts in the Kurnool district but also by the archaeological evidence of a mint with the authority to issue Mauryan currency at Veerapuram in Kurnool. The distribution of Asokan edicts suggests that from Kurnool the line of interaction went to the Raichur doab, Bellary and Chitaldrug districts. Strabo, on the authority of Megasthenes, stated that the *Agronomoi* make public roads and at every ten stadia set up a pillar to indicate by roads and distances. This is substantiated by the two Lamghan edicts of Asoka which served as indicators of distances to different places. Construction of roads and maintenance of a well set-up communication network can only be made possible when the state has a strong economic base. Resources generated from taxation and other sources were also used for the propagation of Asoka's *Dhamma*. Employment of new officials, undertaking of *Dhamma Yatras*, establishment of religious monuments including monasteries naturally involved huge money. This money could only be gained not only by exploiting existing resource base but also by creating new resource bases and restructuring the economic programmes. The economic programmes were however more government or administration oriented.

The enormous resources from agricultural and non-agricultural sectors led to the formation and development of urban centres. Mauryan levels from excavations of urban centres show an improvement in the standard of living. We have a frequency of ring wells and soaked pits. Apart from the towns in the Ganga plains like Pataliputra, Rajagriha, Kausambi, etc. the other major towns were Taxila (in Pakistan), Ujjaini (in Madhya Pradesh), Mahasthan (Bogra district of Bangladesh), Shishupalgarh (Orissa), (Amaravati (in the Krishna delta), Sopara (near Mumbai) and Kandahar (in Afghanistan). Shishupalgarh is identified by some with Toshali and shows evidence of careful planning. The urban centres were however not of uniform size and pattern.

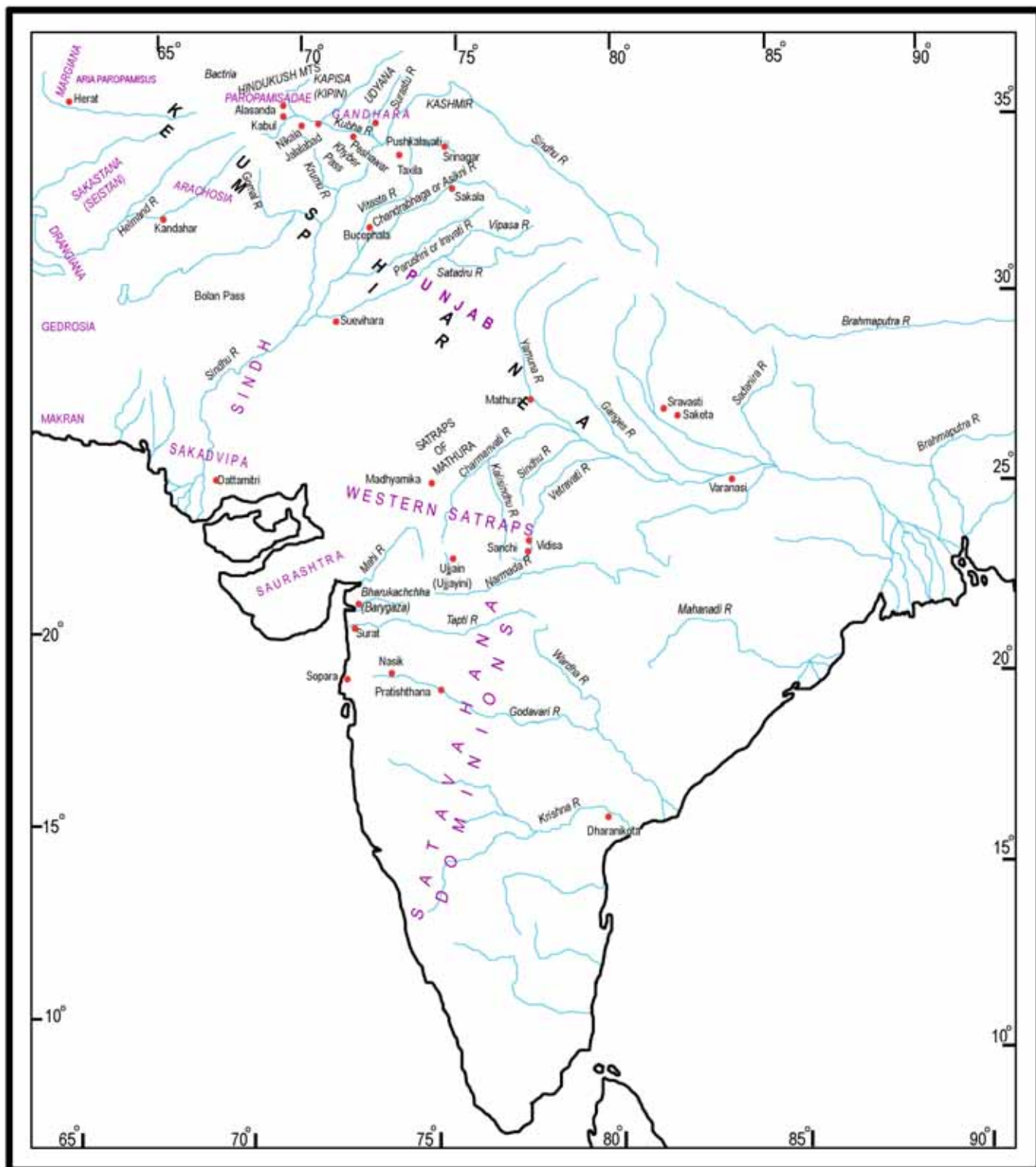
7.3 ECONOMY OF THE KUSHANA EMPIRE

Archaeology of excavated and explored sites together with literature, epigraphy and numismatics form the main source for the study of the economy of the Kushana empire. The period has yielded numerous inscriptions, most of which are donative in nature, as also a huge number of coins issued by the Kushana monarchs. The important literary sources are the *Periplus of the Erythraean Sea* (c. late 1st century AD), Pliny's *Naturalis Historia* (about AD 79), Strabo's *Geographikon* and *Geographike Huphegesis* by Claudius Ptolemy (c. AD150). Chinese historical works like *Hou Han-shu* (the official history of the Later or Eastern Han Dynasty (25-220 CE), compiled in the fifth century by Fan Ye) and *Chi'en Han-shu* (the official history of the Later or Eastern Han Dynasty, generally attributed to Pan Ku, was begun by his father, Pan Piao, and completed by his sister, Pan Chao) also throw ample light on the economy of the period. Though Indian literature does not directly enrich us with information about the economy of the period concerned, some of them like the *Jatakas*, the *Angavijja*, the *Lalitavistara*, etc. enlighten us with some reflections of the economic condition of the Kushana times.

7.3.1 Agrarian Economy

We possess very little information on the land system under the Kushanas. State initiative in agricultural production is not much evident. Large area of land tilled by the administration is hardly seen in the Kushana realm. However due importance to irrigation for the expansion of agricultural production was given at least in the northwestern part of the empire. A survey of the Peshawar region has enabled scholars to locate remains of old canals, indications of agricultural land on the river courses, and traces of fields on hill terraces with devices to channelise rain water from fields at the top to those at the bottom, the origins of which can be dated to the Kushana age. Private donative Kharoshti

inscriptions of the Kushana period are replete with references to digging of wells. This may suggest that in the regions concerned, a well was looked upon as another important source of water which could be used for irrigation and hence an attempt to create water reservoir was considered as an act of merit. The excavation of one such well at Sorane in the Varter area to the east of Dargai (now in Pakistan) has been dated to the same period. The Kushanas, though having natural granaries in the fertile valley of the Indus and in a part of the Gangetic valley did their best to boost agricultural production in areas which did not receive bountiful supply of rainfall.



Map 2 : Kushanas and Satavahanas (based on K. A. Nilakanta Sastri, *A Comprehensive History of India, Vol. II The Mauryas and Satavahanas 325BC-AD 300*, Calcutta, 1957, facing page 288)

7.3.2 Trade, Merchants and Monetization

Agriculture, however was not the mainstay of the economy in the Kushana realm. The Kushana monarchs mobilized huge amount of resources, primarily, through trade - internal and external. The other financial and fiscal sources of the empire were gaining control over areas which were of utmost economic importance, crafts production, mining and different kinds of taxes were imposed on the subjects.

Trade within the empire is indicated by substantial archaeological data. Excavations at Begram in Eastern Afghanistan have brought to light a store house of the Kushana period consisting of wares from different countries as well as from areas within the Kushana realm itself. Thus we have plaques of carved bone and ivory which display figures carved out on the style of Mathura art. Pottery recovered from a Kushana stratum at Ahichchhatra (Uttar Pradesh) shows a preference for a stable base in pots by making them flat based or ring based which certainly was a feature of Sirkap (Taxila II) pottery. This innovation in Ahichchhatra pottery was the result of the local potter's knowledge of earthen wares from Taxila which had been an important trading centre from a pre- Kushana age. Some new types of pottery found at the Kushana levels of occupation at Kausambi (Kosam in eastern Uttar Pradesh) is also said to have been inspired by potteries from Taxila. Certain incised designs on pottery at Kosam are comparable with those on the pottery of some nomadic tribes of Central Asia. The source of inspiration of some stylistic traits of Mathura art may be traced through Taxila (Gandhara) to west Asia. Again north Indian sites of this age have produced terracotta human figurines with non Indian features, head dresses and costumes. This was only possible when the artists came into contact with people having such features. We have epigraphic data from Taxila and Mathura to suggest that people from western part of the empire visited those cities. Thus there were movements of ideas and people in the form of merchants, artists, etc. between the far flung localities of the Kushana empire. This movement was possible as the strong central authority of the Kushanas over an area from the Oxus territories to the Arabian sea as well as interior of northern India offered security and freedom of movements to traders of different parts of a vast territory.

Channels of communication connecting far flung provinces of the empire were many and varied. The *Periplus* alludes to transit of articles of commerce from Thina (China) and through Bactria, north India and Ozene (Ujjain), to Barygaza, the famous port in western India.

Besides internal trade, the most significant aspect of commercial activities of this period is the brisk participation of India in long distance international exchange network- both overland and maritime, particularly with the Roman empire. Roman empire had trade links with China and there was a great demand for Chinese silk in Roman market which was supplied together with other items along the famous overland Silk Road. This was not a single linear route for it incorporated a number of branches. The route began from Loyang in China and reached the two Mediterranean ports of Antioch and Alexandria by traversing through Central Asia, West Asia and Eurasia. A passage in the Hou Han-shu, which gives information datable to c. AD 105 or even to c. AD125 refers to commercial communication between Ta-ch'in (Roman Orient) and Shen-tu (the lower Indus area) which was under the Yueh-chih (or the Kushanas). According to Pliny, Indian wares were sold in the Roman empire 'at fully one hundred times their prime cost'. From the *Periplus of the Erythraean Sea*, Pliny's *Naturalis Historia* and Strabo's *Geographikon* we learn that increasingly better knowledge and the utilization of the monsoon wind system greatly facilitated oversea contacts with India, especially its west coast, through the Red Sea channel. A ship sailing from the Red Sea port of Berenike or

Myos Hormos or Leukos limen could reach the western sea board of India in less than forty days if not in twenty days. This naturally facilitated an alternative and faster communication between India and eastern Mediterranean areas. Thus the establishment of the Kushana power resulted in the movement of commodities through the north western borderland of the subcontinent to the western coast of India. (for map of the network see Maps 3, 4 & 5 Unit 8 of the present Block)

Two major ports of north India, namely Barbaricum at the mouth of the river Indus and Barygaza (Bhrigukachchha) on the mouth of the river Narmada in Gujarat figure prominently in the *Periplus* and Ptolemy's *Geography*. The Hou Han-shu stated that after conquering the Lower Indus area the Kushanas became extremely rich and powerful. As lower Indus area had regular commercial relations with the Oriental possessions of the Roman empire, this statement of the Hou Han-shu may suggest that the advent of the Kushanas in the lower Indus region (Shen-tu of Chinese records) was motivated mainly by the prospects of gain offered by its thriving commerce with the Roman empire, in which the balance of trade was in favour of India. Recent petroglyphs, discovered in the Karakoram highway demonstrate the use of a shorter, perhaps more dangerous, Chi-pin (Kashmir) route to reach north India from Central Asian region. The occasional depiction of horses would suggest a strong possibility that Central Asian horses reached north Indian plains through this Karakoram route. This is evident from the fine representation of horses with men wearing Yueh-chih (Kushan) dress in painting and etchings on rock. The cities of Taxila and Pushkalavati, acting as gateways to overland access to Central and West Asia, and the famous city of Mathura, a major political centre of the Kushanas, gained much out of this international commerce. The items of export and imports in this international trade, as gleaned from Hou Han-shu, *Periplus* and Pliny are many and varied.

Such commercial prosperity naturally called for extensive monetization. This was an important aspect of Kushana economy. Provenances of a great number of Kushana coins, including some hoards, may suggest their circulation in parts of India and Central Asia even beyond the limits of the Kushana dominions e.g. a hoard of Kushana gold coins was found in Ethiopia. This is a pointer to the international value of Kushana gold coins. Large influx of Roman gold pieces into India as a result of the trade with the Roman empire perhaps influenced the decision of the Kushanas to strike gold coins. Roman coins however were mostly used as bullion in India. From the *Periplus* we learn that the Indian subcontinent, a substantial part of which was in the Kushana empire, was favourably placed in terms of exchange of goods with the Roman Orient and some other countries of Asia and Africa. The balance was received among other things in Roman gold. So the Kushana empire was not required to export her gold coins in any great quantity. This caused Pliny to lament for the drainage of a great number of Roman coins from the empire. The Kushanas, themselves, struck silver coins only in the lower Indus area. However an inscription from Mathura of the year 28, suggests that silver coins struck by private agencies were allowed to be circulated in the Kushana empire. Another significant aspect of coinage was the availability of a large number of copper coinage. Copper coins generally used for petty transactions indicate an impact of monetization even on the daily life of the common people. Copper coins were truly meant for circulation throughout the empire and did not have any local character. The system of barter, however, was very much in practice. Pliny alludes to the system of barter followed in Seres (Kashgarh). Gold needed for the numerous gold coins probably came from Bactria, which was famous from an early age for the availability of gold in its markets and in certain gold producing areas of the Indian subcontinent. The mint masters of the Kushanas also could have procured gold by melting down imported Roman gold coins and gold objects (*Periplus*, sections 39 and 49.).

In a period, which is characterised by booming trade, we are surely to come across different categories of merchants. Epigraphic data available within the limits of the Kushana empire and during the Kushana times refer to *vanik* (petty merchant), *sarthavaha* (caravan trader), *vyavahari* (a trader) and *sreshthi* (rich trader and leader of a mercantile guild). In the Pali canonical text and the *Jataka* stories, a *sreshthi* appears as one of the closest friends and associates of the king. Immediately before the reign of the Kushanas, during the time of the Indo-Parthian ruler Gondophares (c. AD 20/21-AD 45/46), we find reference to *raja sreshthi* (royal merchant). The various terms used to designate different types of merchant obviously indicate their difference in economic as well as social status. Some of the merchants were rich enough to make magnificent donations.

7.3.3 Craft Production, Guilds, and Urbanization

Another remarkable feature of economic life was proliferation of crafts which is closely related with expanding trade. Sifting through the epigraphic material of the Kushana period particularly from Mathura we get an idea of the occupation and crafts in practice at that time. Thus we come across superintendents of constructions (*navakarmikah*), actors (*sailakah*), carpenters (*vaddhaki*), perfumers (*gamdhika*), goldsmith (*suvarnakara*), clothmakers (*pravarika*), *lohakara* (ironsmith), jewellers (*manikara*) and so on. The archaeological material discovered from the sites of the Kushana period in the form of pottery, terracotta objects, metal, stone, ivory and bone objects, plaques and sculptural pieces, beads, etc. indicates the existence of potters, smiths, sculptors, weavers and similar other craft groups in the material milieu of the Kushana period. The working of bone and ivory also developed during the Kushana times. These were used for manufacturing luxury goods, domestic objects and weapons. The best specimens of ivory work are found at Begram and Taxila. Craftsmen of different categories produced articles of daily necessities and also luxury items.

However, one sector of industrial production where state control is evident is the mining industry. Wealth of the state was augmented through mining. Epigraphic and literary materials, including the *Geographike Huphegesis* of Ptolemy, may indicate that the Kushanas took initiative to work out diamond mines in eastern Malwa (variously called Dasarna, Akara, Purva Malava and Kosa). It appears that rich diamond mines might have lured the Kushanas into Akara (which may be identified with eastern Malwa on the basis of some literary sources). The Kushana administration must have exercised some control over mining and marketing precious stones, which were important articles of commerce. The *Naturalis Historia* of Pliny refers to crystal like astrion stone found on the shore of Patalene (in the Indus delta). The Hou Han-shu indicates that the lower Indus area produced (or rather made available in its markets) gold, silver, copper, iron, lead, tin, etc. At least some of these articles must have been acquired from mines situated in the Kushana empire. The *Naturalis Historia* of Pliny refers to the practice of salt quarrying Mount Oromenus (Salt Range in Pakistan), the author says that political authorities derived greater revenue from salt mines than even those of gold and pearls. The importance of salt manufacture has been rightly assessed from the point of view of its revenue yielding potentials.

Guilds (mostly called Srenis) were gaining importance in this period. Almost every industrial activity and major profession were organized under their respective guilds. The guilds' activities were many and varied. They acted as somewhat like an early form of bank. In a number of cases the guilds accepted permanent deposits of money (*akshayanivi*) on condition that the principal would be kept intact and only the interest would be utilized. This ensured supply of capital to expanding craft activities and traders. (For further details on guilds see Block 1 Unit 4 of our course EHI-03).

The economic prosperity of the empire facilitated brisker rate of urban growth. Important cities like Bactra, Peucolaotis (Pushkalavati), Taxila, Modoura (Mathura), etc. which had already been in existence prior to the Kushana rule, blossomed further. Taxila (Sirkap) was a fully planned city. Residential houses were laid out in a well-defined manner. Such planned urban centres are a novelty and the influence of foreigners is quite unmistakable. In Ahichchhatra, a concrete road was found from a layer assignable to about 200 AD. Mathura witnessed a remarkable growth first under the Scytho-Parthians and later under the Kushanas. The ground plan of level 16 at Sonkh near Mathura shows the most developed and systematic phase of urban lay out. Remains of residential houses made of mud and burnt bricks of diverse sizes have been unearthed. Fortifications at Mathura were revived, enlarged and repaired. Traceable ruins of fortifications indicate that Mathura of the Kushana age was a fairly large city. Thus Mathura emerged as a large and prosperous urban centre in the age of the Kushanas. Mathura's prosperity depended on trade, transit trade in particular, as it emerged as a nodal point where several important overland routes converged. The singular commodity that Mathura could really boast of was its textile products. (See also Unit 8 of the present Block).

Burgeoning trade and proliferation of crafts and industries offered enough opportunity to the Kushana monarchs to fill their exchequer by imposing different form of levies on traders, industries and crafts mainly run by private enterprises. Testimony of large number of Kushana coins may indicate that taxes were primarily paid in cash. However, archaeological excavations suggest that these were also paid in kind. Excavations at Begram in Eastern Afghanistan have brought to light a store house of the Kushana period comprising wares from different countries. Mortimer Wheeler has suggested that this store house was probably a customs depot for receipt of dues in kind collected from traders participating in international trade. Begram was very much within the Kushana empire and so this evidence might indicate that the Kushana officials also collected taxes in kind. The heaviest amount of taxes levied on industrial products, agricultural products and other articles of trade was apparently paid by the rich and large scale entrepreneurs. It is evident that the traders helped the empire in augmenting its financial resources. However concentration of wealth was naturally in the hands of the comparably small number of people of the society and that a section of this class made a vulgar show of wealth is indicated by Bardesanes in his 'Book of the Laws of the Countries' where he refers to the Kushana habit of getting their horses adorned with gold and precious stones. Such extravagant show of opulence, should have accentuated the distinction between classes on the basis of the possession of wealth or monetary power. That this perhaps was the case is suggested by a passage in a Chinese translation of the Assalayana Sutta, which refers to the society of the Kushanas as consisting of two classes, masters and slaves. In the original Pali text the terms concerned are ayya and dasa. Slavery was very much present. Prisoners of wars could have been condemned to slavery. Hard pressed members of the 'servant' class could have resorted to slavery for food. Slaves were probably regularly imported into the Kushana empire. Slaves were perhaps appointed for domestic purpose as well. Growth of slavery was advantageous to the ruling class and commercial enterprisers, since slaves constituted a source of cheap labour. In the Kushana domain there was probably the system of imposing 'forced labour' on people who were theoretically free. The Junagadh inscription of Rudradaman of c. A.D. 149-50 refers to the prevalence of vishti or forced labour in the empire. Since the family of RudradamanI probably held the territory on behalf of the Kushanas for a period not much earlier than c.A.D. 149-50, the system of compelling people to do forced labour might have been in vogue in the Kushana empire or at least in its Indian provinces.

The rule of a central authority over a large empire should have allowed unhindered movement of at least the free people, rich or poor, in a vast territory. The secure political climate was instrumental in the efflorescence of trade and crafts.

7.4 ECONOMY OF THE SATAVAHANA EMPIRE

The major sources for understanding the economy of the empire were the epigraphs of the Satavahanas and their contemporary rulers the Saka Kshatrapas of western India, the coinage of the Satavahanas, the Graeco-Roman literature like the *Periplus Of the Erythraean Sea*, Pliny's *Natural History*, Ptolemy's *Geographike Huphegesis*, etc. The indigenous texts which historians have used are the *Gatha Saptasati* of the Satavahana ruler Hala, the *Jataka* stories and so on.

7.4.1 Agrarian Economy

During the time of the Satavahanas, the potential of some parts of the Deccan as a rich agricultural zone was realized. In the inscriptions as well as in literature, we have references to a large number of crops that were grown in the region. Several new crops appear on the scene along with the new ones. These include two major cash crops, coconut, in northern Konkan and pepper in the Malabar coast. The availability of pepper in the Malabar coast is reported in the *Periplus of the Erythraean Sea* and Pliny's *Natural History*. Inscriptions speak of plantations of no less than 8000 seedlings of coconut trees.

PLINY'S ACCOUNT ON PEPPER

The pepper plant grows everywhere (in India), and resembles our junipers in appearance, though some writers assert that they only grow on the slopes of Caucasus, which lie exposed to the sun. The seeds differ from the juniper by their being enclosed in very small pods such as we see in kidney beans. These pods make what is called long pepper, if, before they burst open, they are plucked and then dried in the sun. But when they are allowed to ripen, they gradually split open, and at maturity disclose the white pepper, which then by exposure to the heat of the sun changes its colour and becomes wrinkled. These products, however, are liable to a peculiar disease, for if the weather be bad they are attacked with a smutty kind of blight, which makes the seeds nothing but rotten empty husks, called *bregma*, a term which in the Indian language signifies *dead*. Of all the kinds of pepper this is the most pungent and the lightest, while it is also distinguished by the extreme paleness of its colour. The black kind of pepper is more agreeable to the palate, while the white kind is less pungent than either. The root of this tree is not, as some have supposed, the article called by some writers, *Zimpiberi* while others call it *Zingiberi* (i.e. ginger), although its taste is very similar. For ginger is produced in Arabia and the Troglodyte country, in the cultivated parts being a small plant with a white root. It is liable to decay very quickly, notwithstanding its extreme pungency. The price it fetches is six denarii the pound. Long pepper is very easily adulterated with Alexandrian mustard. It sells at fifteen denarii the pound, the white kind at seven, and the black at four. It is surprising how it has become such a favourite article of consumption; for while other substances attract us, some by reason of their sweetness, and others because they are of an inviting appearance, pepper has nothing to recommend it either for fruit or berry, its pungency being the only quality for which it is esteemed; and yet for this it must be fetched from far away India. ... Both pepper and ginger grow wild in their respective countries, and yet here we buy them by weight like gold and silver. ...

John W. McCrindle, *Ancient India as Described in Classical Literature*, Westminster, 1901, Reprint, 1971, pp. 121-122

The riparian tracts between Godavari and Krishna became particularly prosperous for rice cultivation. As a result of the abundant production of rice, it was an important item of export. Other agricultural products were wheat, barley, millet, lentils, oilseeds etc. Of the various kinds of oil seeds, *tila* (sesame) was extensively cultivated. The region of the Narmada yielded sufficient quantity of sesame and sesame oil was exported from Barygaza. The formation of the guilds of *tilapeshakas* (oil pressers) in the Deccan points to the commercial value of sesame oil. Mustard was another important oil seed. The *Gatha Saptasati* refers to the cultivation of the *rajika* variety of mustard in the Godavari valley. Excavations at different sites also indicate cultivation of wheat, rice, barley, millet and lentils. The black soil in the valleys of the Tapti, Godavari, Narmada and Krishna provided the congenial atmosphere for large scale cotton plantation. Sugarcane and Palmyra palm were also cultivated in some areas of Deccan. The *Gatha Saptasati* refers to *Guda-yantrika* which was perhaps used to extract juice of sugarcane. From an inscription in Junnar we learn that a field was granted for plantation of palmyra palms.

Considerable attention was paid to irrigation. We have reference to water wheel with pot garland (*rahatta ghadiya*) in the *Gatha Saptasati*. An inscription from Kanheri dated to the second century AD records the construction of a tank (*talaka*) by *setthi* Punaka of Sopara. The most famous example of irrigation project in this period is undoubtedly the repair and renovation of the Sudarshana lake by Rudradaman I (c. AD 130-150), the Saka ruler. Irrigation facilities were controlled both privately as well as by the royal authority.

The Satavahana period saw the existence of smaller agricultural holdings which came mostly under private proprietorship. This is clearly corroborated by epigraphic evidence of gift/sale of plots to religious groups and persons. Ushabhadatta (or Rshabhadatta), son-in-law of the western Kshatrapa ruler Nahapana (c. AD 105-125) had to purchase a plot of land from a Brahmana owner and then donated it to the Buddhist *Samgha*. Epigraphs at Junnar mention gifts of land situated in different villages. State ownership of land was however very much in practice. Thus the Nasik cave inscription of Gautamiputra Satakarni of the year c. 130 AD refers to the grant of a royal land (*rajam khattam*) to some Buddhist monks. It further states that 'if the land is not cultivated the village is not settled'. Thus here we find an indication of the fact that some grants were made to get the land cultivated thereby implying that agrarian expansion was a part of royal policy.

7.4.2 Crafts, Industries and Trade

The most remarkable feature of economic life was, however, proliferation of crafts and expanding trade. The Satavahana period yielded epigraphic evidence of a large number of craftsmen, who left their names, traces of their occupation and religious leanings in the course of making donations to various religious groups and persons. Such records are available from western Deccan caves and Buddhist sites of Bharhut and Sanchi. Sifting through the epigraphic evidence one comes across carpenters (*vaddhaki*), bamboo-workers (*vasakara*), reed makers (*konachika*), braziers (*kasakara*), potters (*kularika*), weavers (*kaulika*), perfumers (*gamdhika*), cloth makers (*pravavrika*), oilmen (*tilapishaka*), garland makers (*malakara*), jewellers (*manikara*), ivory workers (*dantakara*), goldsmiths (*suvarnakara*), blacksmiths (*lohikakaruka*). Excavations at Paithan (old Pratisthan, 56 km from Aurangabad), Maski (Raichur, Karnataka) and Kondapur (90 km from Hyderabad, Andhra Pradesh) have yielded beads of lapis-lazuli, agate, crystal, carnelian, onyx, amethyst and ruby. Some of them however were not local products. The presence of nodules, unfinished beads and bead moulds suggest that bead making was a local industry at several sites such as Bhokardan (district Jalna, Maharashtra), Nevasa (district Ahmednagar, Maharashtra), Ter (Osmanabad district,

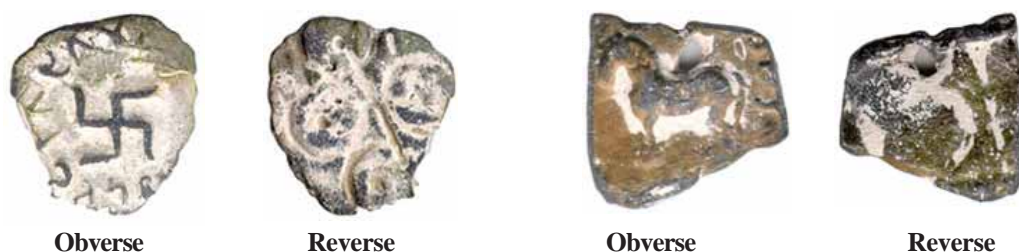
Maharashtra), Paithan, etc. The *Periplus of the Erythraean Sea* (assignable to middle or late 1st century AD) speaks of two active textile centres in central Deccan, namely Tagara (Ter) and Paithan (Pratishthana). Excavations at Ter have yielded a number of vats for dyeing cloth which corroborate the evidence of the *Periplus*. Similar dyeing vats are also reported from the excavations at Arikamedu (near Pondicherry). These structures belong to the 1st–3rd centuries AD, during which handloom industry flourished.

Guilds (*srenis*) were a special feature of trade and industry in the Satavahana period. These organizations enhanced production essential to commerce and became an important factor in urban life. The *srenis* fixed rules of work, as well as the quality of the finished product and its price in order to safeguard both the artisan and the customer. Almost every industrial activity and major profession were organized under their respective guilds. A large number of epigraphic documents from western, eastern or central Deccan and central India leaves little room for doubt about their economic importance. Their importance is also recognized in diverse literary sources e.g. the *Jatakas*, *Avadanas*, *Milindapanho*, *Manusmriti*, *Yajnavalkya smriti*, *Mahabharata*, etc. The leader of the guild was known as a *jetthaka* or *pramukha*. The legal literature of this period refers to executive officers (*karyachintakas*) thereby indicating growing complexities and expanding functions of guilds. In this period guilds began to function as banks. Guilds also helped in public welfare activities. An inscription from Junnar records the excavation of a seven celled cave and construction of a cistern by an association of corn dealer (*dhannikas*). In an ambience congenial to flourishing trade it was very natural that merchants would occupy a position of considerable eminence. Satavahana inscriptions indicate merchants by the use of terms such as the *setthi*, the *vanij*, the *sarthavaha* and the *negama*. These merchants are often found to have been organized under commercial guilds e.g. *Vaniggrama* in an inscription from Karle. It has been effectively argued that these occupational and commercial guilds had close association with religious establishments and monasteries and guilds in the Satavahana territory played a significant role in the expansion of commerce. Monasteries acted as agencies which furnished information on cropping pattern, distant markets, organisation of village settlements and trade.

It is important to note that there was a lesser degree of state control on craft and industry except viewing them as major revenue earners. This becomes evident from the imposition of levies on craftsmen (*karukara*) in an inscription from Karle. As there were tremendous growth of crafts and industries in this period, so naturally a tax on the craftsmen earned huge revenue for the royal coffer. Mining was however a royal prerogative. Epigraphic references to remissions from salt tax (*alonakhatakam = alavanakhadakam*) from the Satavahana records suggest prevalence of salt tax in the said period. That salt manufacturing was important from the point of its revenue earning potential was perhaps realized also by the Satavahana rulers. We find the expression ‘*deya meya*’ in the Karle inscription which was imposed on *Karukara* (artisans). *Deya meya* probably implied tax which were to be given (*deya*) and which were to be realised in some forms which were measurable (*meya*). It appears that Satavahanas realised taxes both in kind as well as in cash. From the Junagadh inscription of Rudradaman I (AD 150), the western Kshatrapa ruler, we learn of the usual *bali* (a kind of compulsory tribute or contribution from the subjects), *sulka* (ferry dues, tolls, duties on merchandise, etc.) and *bhaga* (royal share, generally one sixth of the produce). According to the same inscription, Rudradaman I caused the rebuilding of a dam ‘without oppressing the inhabitants of the town and country’ by *kara* (periodical tax or some other kind of tax), *vishti* (forced labour) and *pranaya* (benevolence tax of non recurring nature). Since the western Kshatrapas and the Satavahanas were contemporary powers exercising authority over more or less the same region, it is quite probable that the nature of taxation of these two powers would be similar.

Large scale monetization was a part of the economic programme of the Satavahanas. Their coins have been found in lead, copper, potin (an alloy of copper, zinc, lead, and tin) and silver. It is interesting to note that in the Satavahana empire the coinage of lead predominated. Silver issues of the Satavahanas are comparatively much less in number. Several Satavahana coin hoards have so far been found and apart from the Jogalthembi hoard which consisted of silver coins, all the other hoards comprised coins of copper, potin, or lead. Satavahana coins have a marked regional distribution and in many cases the influence from the preceding coinage system is undeniable. The provenances and some other considerations show that coins bearing a particular type might have been meant for circulation in a particular area. Thus a coin type of the Satavahanas has the lion as the prominent symbol on the obverse. This type is known from Gujarat, though a variation of the coin type is found in the Krishna Godavari districts of Andhrapradesh. The ship type of coins of the later Satavahanas with the Ujjain symbol on the reverse have been found mainly on the Coromandel coast. Some ship type of coins have also been found in the Guntur district and some other places of Andhrapradesh. The use of the ship symbol may suggest flourishing coastal trade network. That the entire east coast from the Bengal delta to the Tamil coast formed a part of a single network is evident from the distribution of Rouletted Ware sherds. The largest number of Satavahana coins have the elephant on the obverse and either the Ujjain symbol or the tree in railing on the reverse. The first group of coins with the Ujjain symbol on the reverse have been found extensively in the Deccan, while the second group is largely restricted to northern Maharashtra. The main source for lead was perhaps Agucha and Zawar mines of Rajasthan which contain the largest reserves of lead in India and which show traces of old workings. However, the lead isotope analysis of the Sadakana and Kura coins of the pre Satavahana period is significant. These coins have lead isotope ratios different from those of any known Asian source of lead, but closely match those of the Sardinian and Spanish lead sources exploited by the Greek and the Romans up to AD 50. In contrast, the lead isotope ratios of the coins of the later Satavahanas would suggest the exploitation of local sources such as the Zawar mines. Silver coins of the Satavahanas, known in small number, were perhaps meant for circulation throughout the empire. These had an imperial significance. Insignificant number of the known specimens indicates that these coins formed a sort of token currency. The Satavahana kings might not have found the necessity of striking silver coins in great number due to the fact that the bulk of local demand for silver coins was perhaps met by the Kshatrapa silver coins current in the Satavahana dominion.

Satavahana Coins



Proliferation of crafts, craftsmen and coinage was matched by spurt of trading activities in the Satavahana empire. It appears that by the early decades of their rule, the Satavahanas were in a position to control important trade routes leading from central India and the central Deccan to some of the ports situated in the north western Deccan. There was an expansion of long distance overland trade both within the subcontinent as

well as to central Asia and China. Maritime trade extended from the Mediterranean region in the west to the Southeast Asia in the East. It has been argued that one of the contributing factors may have been the encouragement and liberal environment provided by Buddhism. It appears from the *Periplus* that commercial connection between the Deccan and the Roman Orient resulted in the establishment of a lawful market town at Kalliena (Kalyan, near Bombay) during the time of an early Satavahana ruler. From *Periplus* again we come to know that during the rule of 'Sandanes', the port of Kalyan faced an economic blockade by the western Kshatrapa ruler and the Greek ships which by chance entered there were sent under guard to Barygaza (Broach). Thus apart from territorial control, lure of the profit in the trade between the Roman empire and India made these powers hostile to each other. *Periplus* has vividly described how western coast was humming with trade in the Satavahana period. The Roman ships were anchored in the ports of Barygaza, Kalyan and Chaul (15 km from Alibag, Raigad district, Maharashtra). In the Satavahana empire, two important ports of the eastern sea board were Kantokasylla and Allosygne of the Andhra coast. The importance of this coastal tract is evident from the Satavahana ship type coins and an inscription from Ghantasal (75 km from Vijayawada, Andhra Pradesh) referring to a *mahanavika*.

PERIPLUS' ACCOUNT OF THE BLOCKADE

52. The local ports [sc. Of Dachinabades], lying in a row, are Akabaru, Suppara, and the city of Kalliena; the last, in the time of the elder Saraganos, was a port of trade where everything went according to law. [Sc. It is so no longer] for, after Sandanes occupied it, there has been much hindrance [sc. to trade]. For the Greek ships that by chance come into these places are brought under guard to Barygaza.

Lionel Casson, *The Periplus Maris Erythraei*, Princeton University Press, New Jersey, 1989, p.18

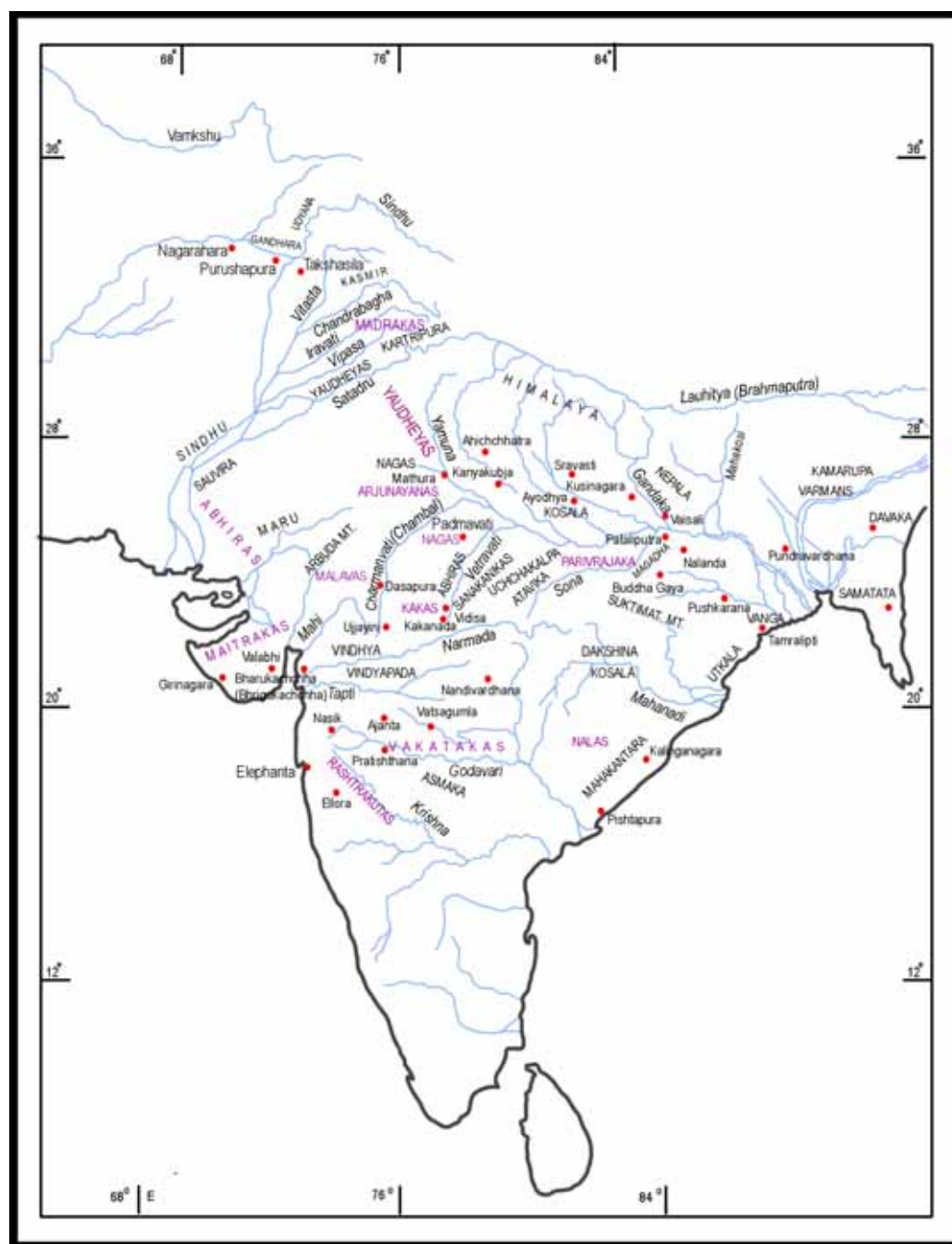
Reference to different craftsmen and merchants residing at Surparaka, Vaijayanti, Dhanyakataka, Kalyana, Nasik, Bhriugukachchha, Ghantasala in the inscriptions at Karle, Kanheri, Junnar, Amaravati show that there was a network of roads connecting all the important cities of Deccan. The overland route from Paithan to Maheshwar, Ujjain, Sravasti and Vaisali was full of traffic. This route had off-shoots going into the lower Krishna valley as well. One of these extended towards Surparaka on the western coast. Of all the branches, the most important was the one that went from Ujjayini to the famous port of Bhriugukachchha. Connecting the most important sea-port on the western coast with the inland marts, this route was very important to the traders. The Nanaghat, the ancient trade route also played an important role in the economic activities of the Satavahana empire. It served as the outlet for the products of the fertile tract around Junnar and other inland areas and the transportation of commodities and goods from the ports of Kalyan and Sopara to the inland areas. There was a route which ran from Ter towards the south where Kondapur is located and proceeded via Akkenpalle, Nalgonda district to Nagarjunakonda.

An environment which experienced agricultural expansion, proliferation of crafts and craftsmen, booming trade along with different categories of merchants and circulation of coins, would naturally have growth of urban centres. Thus several urban sites are reported from the western and central Deccan of which Nevasa, Ter and Satanikota are of outstanding importance. The eastern Deccan also came under the impact of growing urbanism on being an integral part of the Satavahana empire. Several excavated sites

like Amaravati, Bhottiprolu, Salihundam, Nagarjunakonda, all situated in the Krishna delta, show urban dimensions. Their importance was enhanced due to their close proximity to the eastern sea board which was dotted by a few important ports. The site of Dhanyakataka served as an inland port town, upto which the Krishna was navigable. Epigraphic records too speak of growth in urban centres. Thus we have inscriptions which speak of *nagara* (urban centres) and *nigama* (market centres).

7.5 ECONOMY OF THE GUPTA EMPIRE

For a proper understanding of the economy of the empire, we have to rely on both the archaeological as well as literary sources. The many epigraphs of the period of the Gupta rulers and their extensive coinage are extremely important. Apart from the *Smriti* texts, the *Brhatsamhita* and *Brhajjataka* of Varahamihira and works of Kalidasa, the most useful literary work is the *Amarakosha* of Amarasimha which gives us a mine of information regarding the economic life of the period.



Map 3 : Guptas and Vakatakas (based on R. C. Majumdar (ed.), *A Comprehensive History of India*, Vol. III, pt. II AD 300-985, New Delhi, 1982, p. 1483)

7.5.1 Agrarian Structure

The Gupta period is marked by creation of *agraharas*. The term *agrahara* stands for the donation of plot(s) of land and/village(s), which were exempted from revenue and granted generally in favour of religious persons and/or institutions (a Brahmanical temple/*matha*, a Buddhist *vihara* or a Jaina monastery), by issuing copper plate charters under the instruction of the ruler. These charters play a very important role in our understanding of agrarian history as these records the transfer of landed property. Besides they also provide us information regarding the socio-economic, political and cultural conditions of India.

Copper plates from Bengal provide us with valuable information on the types of land, systems of measurement of the plots, price of plots and the procedure of land transfer to a donee.

DAMODARPUR COPPER-PLATE INSCRIPTION

In the year 100, (and) 20 (and) 9 (=129), on the 13th day of Vaisakha, while *paramadaivata*, *parrama-bhattaraka*, *maharajadhiraja Sri-Kumara-gupta was the ruler of the earth and *uparika Chiratadatta* was the receiver of favours from him (lit. was accepted by his Majesty's feet) in the province (*bhukti*) of **Pundravardhana** and *kumaramatya Vetravarman*, appointed by him (Chiratadatta), was, in the *vishaya* of **Kotivarsha**, which was ever prospering under (Chiratadatta's) rule, administering the government of the locality in the company of Dhritipala, the guild-president of the town, Bandhumitra, the merchant, Dhritimitra, the chief artisan, and Samba(?) pala, the chief scribe, (whereas) thus addressed (them)—“Deign to make a gift (of land) according to the established rule . . . (for disposing of lands) by destroying the condition of *apradakshaya* [*nivi*]¹ (non-transferability), for the conducting of my five daily sacrifices² (*panch-mahayajna*).” When, after receiving this petition, it was, according to the determination of the record-keepers, Risidatta, Jayanandin and Vi[bhudatta?], ascertained thus—“Land may be given,” land measuring five *dronas* (?) with *hatta* and *panaka* (?) in the west of Airavata(?) Was given after two (?) (*dinaras*) had been received at the established rate of three *dinaras* for each *kulyavapa* of land. Hence, considering the religious merit (of such gifts), this (grant) is to be respected by the administering agents in the future. And there occur also these two verses with regard to grants of land:- (1) “O Yudhishtira, best of land-holders, preserve with care lands already given to the twice-born (Brahmanas); for the preservation of land-grants is more meritorious than the making of a grant.” (2) “Land has been given by many (persons) and will be given by many (in future); (but) the fruit (of land-grant) belongs to whosoever at any time possesses the earth.”*

Rradhagovinda Basak, 'The five Damodarpur Copper-Plate Inscriptions of the Gupta Period', *Epigraphia Indica*, Vol. 15, 1982, New Delhi, Plate No. 2 (tr.), p. 113

We learn that the cultivated area (*kshetra*) was differentiated from habitational plots (*vastu*) and forest (*aranya*). A fallow plot was known as *khila* and the term *khila kshetra* has been interpreted as an arable plot now kept fallow. Fallow plots were

further explained specifically as *aprahata* (never tilled before), *adyastamba* (covered with original shrubs and bushes never cleared before), *aprada* (unyielding) and *apratikara/ utpratikara/ sunyapratikara* (meaning the plot did not produce any revenue). The size of plots is determined in terms of *adhavapa*, *dronavapa*, *kulyavapa* and only once *pataka* (Gunaigarh copper plate of Vainyagupta of AD 507-8). *Pataka* was perhaps the highest unit of land measurement. The terms *kulyavapa*, *dronavapa* and *adhavapa* signify etymologically the area of land that was required to sow seeds of the measure respectively of one *kulya*, *drona* and *adhaka*. The land grants also refer to the fact that two rods or *nalas* were used in turn for the measurement of the plot. We have such expressions as *astaka-navakanalabhyam* (8×9) *nalas*, *sadkanavakanalabhyam* (6×9) *nalas* and *navaka-navakanalabhyam* (9×9) *nalas*. The exact interpretation of these expressions has been debated. It is probable that these rods were used for linear measurement of the plot. Arable plots naturally fetched high price. The cultivated plots in Vanga (Dhaka-Vikrampur-Faridpur regions of Bangladesh) were priced at the rate of four *dinaras* (Gupta gold coins) per *kulyavapa*, during the second half of the sixth century AD while in the region around Kotivarsha within Pundravardhanabhukti (ancient north Bengal), a plot of fallow, uncultivated and unyielding variety fetched the price of three *dinaras*. In other areas of the same bhukti, the same type of plot was transacted at a lower price, two *dinaras* per *kulyavapa*. Inscriptions show that the price of land in Kotivarsha remained static from AD 443/444 to AD 543/544. These charters from Bengal were sale-cum-gift deeds. In other parts of the subcontinent land was donated directly by royal proclamation.

The instances of purchase of plots indicate that the system of individual ownership of the soil was current in ancient Bengal. Though brahmanas became owners of land as land was generally granted to religious personages, we have examples of non-brahmana villagers as owners of land. A sixth century copper plate from ancient Samatata area show that the carpenter (*varddhaki*), mechanic (*vilala*) too had land in their possession. Lands granted to brahmanas were obviously not tilled by them. They employed agriculturists who were not owners of plots. In the hierarchical organization of land economy, Yajnavalkya introduces three stages, namely *mahipati* (king), *kshetrasvami* (land owner) and *karshaka* (cultivator), which is roughly corroborated by Brhashpati. Thus the *karshaka* is differentiated from the owner and the *svami* assumes the position of landed intermediaries. Hence there was an appreciable rise in the position and material condition of the donees who were by and large brahmanas. These donees enjoyed revenues and cesses by royal order.

The rise in the position of landed intermediaries has been interpreted by a group of scholars as an indicator of a major change in the material life which became rooted to the rural agrarian economy by relegating the non-agrarian sector of the economy into background. The vibrant urban economy of the early historical times, according to them, was beginning to be replaced by a self sufficient enclosed village economy in the Gupta period due to the preponderance of copper plate charter. It is, however, important to note that most of the lands granted in Bengal were fallow and uncultivated lands belonging to the royal authority. Therefore sale of these lands not only inflated the treasury, but also made the uncultivated lands gradually fit for cultivation. In the epigraphs of the Gupta period we find the *pustapalas* (record keepers) giving permission to land transfer as it did not affect the economic interest of the ruler. In some inscriptions from Pundravardhanabhukti (ancient north Bengal) we find two categories of representatives of the important social groups at rural levels, viz. the *kutumbin* and the *mahattara*. Both the terms meant well to do agriculturists. The *mahattaras* enjoyed greater social status than the *kutumbins*. The importance of the *kutumbin* and the *mahattara* in the rural society of early Bengal is evident from the fact that they were not only addressed in

the applications for land transactions, but oversaw the proper demarcation of plots when such transactions were complete.

In an economy, which was based mainly on agriculture, arrangements for irrigation were a necessity. Need for artificial irrigation was comparatively less in areas which were favoured by rainfall and rivers. Bengal being one of those regions, here we find abundance of tanks and ponds, marshy areas and ditches and embankments along rivers. Similar tanks are reported from various parts of the subcontinent. The most celebrated example of irrigation project is that of the *setu* (irrigation project) called Sudarshana situated in Gujarat. Though built originally during the time of Chandragupta Maurya in the later half of 4th century BC and further developed by Asoka, it underwent repair during the time of the Saka ruler Rudradaman I. During the reign of the Gupta monarch Skandagupta this *setu* was once again damaged and the Gupta provincial governors of Saurashtra (Parnadatta and Chakrapalita) repaired the same. Meagre archaeological traces of this large irrigation project have been found in the vicinity of Girmar (ancient Girinagara) in Kathiawad. Canals were constructed from the rivers or tanks and were taken to distant fields for irrigation. The canals also helped to stop inundation by rivers, for they are also referred to as *jalanirgamah* (drains) in the *Amarakosha*. Considering the economic importance of irrigation and agriculture, irrigation works were duly protected by the state. Fines and punishments were imposed on those who caused damage to them.

Establishment of irrigation works gave impetus to agriculture. The most important crop was of course rice (*dhanya*). Kalidasa in his *Raghuvamsa* gives us a list of diverse varieties of rice produced. They are *sali*, *nivara*, *kalama*, *uncha* and *shyamaka*. Of these *sali* was the best variety. Peasants are referred to as replanting the seedlings of *sali* paddy. Besides rice we have a large variety of other food crops mentioned in the *Amarakosha*. These are barley, peas, lentil, beans, wheat and pulses. Kalidasa mentions sugarcane plantation and especially those of Pundra (north Bengal). Sugarcanes were generally cropped during the winter. This is an indication of the cultivation/plantation of cash crops in this region. However, cash crops mentioned in earlier sources figure in the *Amarakosha*. They are cotton, oilseed, indigo and mustard seeds. Amarasimha informs us that the far south was famous for the cultivation of betel nuts and plantation of spices like pepper and cardamom. Kalidasa refers to coconuts of Kalinga. The Konkan coast appears to have continued the regular plantation of coconut. It was a very useful fruit as it provided in the form of a by product the coir which was indispensable for the construction of the stitched variety of traditional Indian water transports. Diverse types of crops produced indicate mature knowledge of different types of soil, conducive to their cultivation.

7.5.2 Non-Agricultural Production

The non-agrarian sector of the economy of the Gupta empire was equally important. Prevalence of a large variety of crafts is evident from the *Amarakosha*. A distinctive feature of craft activities is the growth in metal based industries, especially iron. Useful iron implements such as spades, sickles, ploughshares, chains, iron plates and pans, swords, other iron weapons and instruments for cutting and working on wood, bamboo and leather are known. However, the most famous example of the excellence of iron working is certainly the inscribed iron pillar at Mehrauli in Delhi, which remains free from rusting since the fifth century. Epigraphic references to the *karmakara* and *lohakara* speak of the presence of blacksmiths. In the *Raghuvamsha* there are references to working in iron by heating and beating piece of iron with the help of a steel hammer (*ayoghana*). The working of other metals such as gold, silver, copper, bronze and brass was well developed in the Gupta empire. After iron, copper was possibly the most

useful metal at that time. The *Amarakosha* also refers to coppersmith along with goldsmith and blacksmith. Copper plate charters of the empire indicate the high degree of technical efficiency of the copper smiths as well as the engravers. Copper and bronze were also used for making utensils and statues. From Bhita near Allahabad, numerous copper utensils like cooking pot, circular lid, cup, shallow saucer etc. have been excavated. The process of manufacturing in most cases was casting, though a few objects were hammered after heating. The colossal copper statue of Buddha from Sultanganj is an example of excellent standard of copper casting during Gupta times. The craft of the potter (*kumbhakara*) was inseparably associated with the daily life of the people. The profuse number of pottery manufactured is clearly evident from the excavated materials from Rajghat, Ahichchhatra and Bhita, the outstanding archaeological sites. Potters of this period showed much skill and efficiency in moulding colouring and burning pottery. The pottery includes cooking vessels of different sizes, different types of bowls, jars of many sizes, pot lids, a cloth dyer's mould and so on. The large varieties of textiles known from literature and also from sculptural representations amply bear out the flourishing condition of this craft. In the *Amarakosha* details of silk weaving are referred to. The most eloquent testimony to the silk industry is furnished by the Mandasore inscriptions of 436 and 473 AD.

GUILD OF MANDASORE SILK WEAVERS

(Verses 4-5) From the province of **Lata**, which is lovely in consequence of choice trees, bowed down with the weight of flowers, temples, assembly-halls, and *Viharas*, (and) the mountains of which are covered with flora, there came to (the town of) **Dasapura** those (people) of well known craft, first with their mind full of regard (for it), and afterwards (bodily) in a band, together with children and kinsfolk, disregarding the unceasing discomforts of journey and so forth, being manifestly carried away by the good qualities of the ruler of the country.

(Verse 15) Then having come in contact with constant meetings, and with cordiality augmenting day by day, (and) being honourably treated like sons by the kings, they lived in the town in joy and happiness;

(Verse 16) Some are intensely attached to music (so) pleasing to the ear; others, being proud of (the authorship of) a hundred excellent biographies, are conversant with wonderful tales; (others), filled with humility, are absorbed in excellent religious discourses; and others are able to say much that is pleasing, free from harshness, (and yet) salutary;

(Verse 17) Some excel in their own religious rites; likewise by others, who were self-possessed, the science of (Vedic astronomy) was mastered; and others, valorous in battle, even to-day forcibly cause harm to the enemies;

(Verse 23) While **Kumaragupta** was ruling over the Earth;

(Verse 24) There was king **Visvavarman**, the protector (of men), who was equal to Sukra and Brihaspati in understanding, who was the ornament of the kings on earth (and) whose deeds were like those of Partha in battles;

(Verse 26) His son (was) king Bandhuvarman possessed of firmness and statesmanship; beloved by (his) friends; a friend, as it were, to (his) people; who removed the afflictions of (his) friends; the only one skilful in destroying the haughty partisans of (his) enemies;

(Verse 29) While that same **Bandhuvarman**, a bull among kings, the magnanimous (and) the high-shouldered one, was protecting this (town of) **Dasapura** which was abundantly prosperous, a lofty and peerless temple of the bright-rayed (Sun) was caused to be made by the weavers of silk-cloth formed into a guild, with stores of wealth acquired through (their) craft;

(Verse 44) By **Vatsabhatti**¹ was caused to be made this edifice of the Sun through the order of the guild and in consequences of (his) devotion (to the god), and was composed with care this detailed descriptions;²

¹Mandsor Inscription of Kumaragupta (I) and Bandhuvarman Years 493 and 529', in J. Fleet, *Corpus Inscriptionum Indicarum*, Vol. II, pp. 328-332

It speaks of a guild of silk weavers, originally settled in Gujarat but subsequently migrating to Dasapura or modern Mandasore. The carpenter (*sutradhara* or *varddhaki*) is also known from inscriptions. The ivory industry was also well developed. The excellence of the ivory makers is seen in the excavated specimens from Bhita near Allahabad. Ivory was used for the manufacture of luxury items. Kalidasa refers to seats made of ivory. The manufacture of oil was another essential industry in our period. It was definitely a flourishing industry as we find the existence of guilds formed by oil men. During the reign of Skandagupta, in the city of Indrapura (Indore in Uttar Pradesh) there was a famous guild of oilmen whose head was named Jivanta. Literary texts and inscriptions also throw some light on the distillers industries. The distiller (*kallara*) is found to have been subjected to tax in the charter of Vishnusena (AD 592).

7.5.3 Guilds

Though the profusion of epigraphic references to *srenis* appears to have been less in the Gupta times in comparison to the period ranging from BC 175 to AD 300, yet the limited number of inscriptions are enough to show that they were still quite an important feature of the economic life of the period concerned. The importance of guild like occupational groups can be understood from the clay seals discovered at Basarh (ancient Vaishali in north Bihar). The seals referring to *sreshthi-sarthavaha-kulika-nigama*, *kulika-nigama*, *sreshthi-kulika-nigama* and so on suggest that these guilds had their official seals. Prior to AD 300 we do not find any reference to such seals which implies that the functioning of guilds became more organized and their scope of activities expanded. While the *kulika-nigama* was surely an organization of artisans, the *sreshthi-sarthavaha-kulika-nigama* may be interpreted as an umbrella organization embracing respective bodies of merchants, caravan traders and artisans. The charters of Bengal speaks of *prathama kulika* (chief artisan) and *prathama kayastha* (headman of the organization of scribes). A potter's guild (*kularika sreni*) is mentioned in a fourth century inscription from Nasik. The Mandasor inscription of Kumaragupta I (AD 415-455) and Bandhuvarman shows how a guild of silk weavers build a magnificent temple of the sun in AD 437-8 and repaired it again in AD 473-74. Some of the members of this guild changed their profession of silk weaving after coming to Mandasore and took to such professions as archery, astrology, and story telling, which were not really of much economic importance. The fact that the silk weavers not only changed their place of original habitation but some of them even changed their occupations, suggest, spatial and occupational mobility of a group of craftsmen. However, change of occupation was a threat to the general character of compactness and cohesion of a guild. The picture is different in the Smriti texts belonging to this period. The texts recommend a *madhyastha* (umpire) and a *karyachintaka* (executive officer) in addition to the headman of the guild. This naturally points to the expanding scope of activities of the guilds. Guild laws were recognized in these treatises as somewhat equivalent to the laws of the land. Guilds continued to receive perpetual deposits of cash from individuals and paid annual interests which were generally used for specific religious and welfare purposes. Guilds continued to receive perpetual deposits of cash from individuals and paid annual interests which were generally used for specific religious and welfare purposes.

7.5.4 Trade and Merchants

Proliferation of crafts and industries may indicate brisk commercial transactions during the rule of the Guptas. Literature of the period speaks of regular transactions among people. The term *kraya-vikraya* in the sense of commercial transactions appears in the *Amarakosha*. *Amarakosha* clearly distinguishes between an extremely rich merchant

(*sreshthi*) and a caravan trader (*sarthavaha*). Epigraphs of the period also speak of *sreshthis* and *sarthavahas*. From the copper plates of north Bengal belonging to 5th and 6th century AD, we learn that the *nagara sreshthi* and the *sarthavaha* were prominent members of the district board which indicates the importance of their profession. Kalidasa too seems to be well aware of *vipanis* or shops. Besides other shops, we find reference to liquor shops and of people flocking to drink there. These shops were sometimes arranged on both sides of the street (*apanamarga*). Since the traders were instrumental in enhancing the country's wealth, Kamandaka advises the king specially to patronise the trading class.

The security offered by the strong Gupta rule facilitated easy movements of men and merchandise. The Chinese pilgrim Fa-hsien who travelled in India from c. 399 to 414 AD has also echoed this. Merchants and merchandise moved not only through land routes but also through rivers, particularly in the middle Ganga valley and lower Gangetic areas. In the *Amarakosha*, various terms are found to designate different categories of crafts like *udupa* (rafts), *nau*, *tarani*, *droni*, etc. (boats) and *pota vanik* (merchant vessel). Among the crew of the *pota*, the *navika* (navigator/sailor), *niyamaka* (pilot) and *karnadhara* (operator of the steering oar or the rudder) are mentioned. Reference to various categories of water crafts in such detail obviously indicates knowledge of brisk riverine activities. The Gunaigarh copper plate of Vainyagupta (AD 507) mentions *nauyoga*, which denotes a boat parking station. Similar boat parking stations like *nau-dandakas* / *nau-bandhakas* are occasionally mentioned in the copper plates from Bengal belonging to 5-6th centuries AD. These boat parking stations could have provided facilities of inland movements in a riverine area like Bengal. This riverine area of Bengal was again connected to the Bay of Bengal. In fact it is important to note that the Bengal delta provided the only outlet to the sea for the land locked northern India. The port par excellence in this area was Tamralipta (Tamluk in the Medinipur district, West Bengal), situated on the right bank of the Rupnarayan. It was the chief commercial outlet for the middle Ganga valley and northeastern region of the subcontinent. This extensive hinterland was one of the reasons for its outstanding importance. Gupta period of Tamluk is marked by terracotta figurines, depiction of urban scenes on terracotta plaques, coins and semi precious beads. It was at its height when Fa-hsien visited Tamralipta in the fifth century AD. An inscription datable to sixth century AD from the Wellesly region in the Malay peninsula refers to a *mahanavika* (master mariner) named Buddhagupta who hailed from Raktamrittika, identifiable with Raktamrittika in the Murshidabad area of West Bengal. This naturally underlines Bengal's overseas contacts with south-east Asia and the importance of the Bengal coast in the network in the eastern sector of the Indian ocean during our period. The west coast of India which had somewhat lost its prominence with the decline in the demand for Indian and south east Asian products in the Roman empire since the middle of the third century AD, gradually became vibrant with the rise of Persian gulf as an important sea lane and the interests shown by the Byzantine emperors in Constantinople and the Sasanid power in Iran. The Gupta conquest of Gujarat and Kathiawad could have been prompted by the prospect of gain from trade with the Persian gulf.

7.5.5 Coinage

The Guptas are credited with the minting of superb gold and silver coins. Several hoards of the Gupta gold coins have been discovered. Though the early Gupta rulers followed the weight standard of the late Kushana rulers, it was Skandagupta who raised the weight standard of the Gupta gold coins from 124 grains (there were minute variations in the weight of different coins) to 144 grains (known as *suvarna* standard). It is to be noted that though there was a rise in the weight standard, from about the last quarter of

fifth century AD the percentage of gold in the coins gradually became less. This debasement of coinage indicates economic difficulties in the empire. In spite of the gradual increase in debasement the Gupta rulers continued to strike coins and maintain a uniform standard of 144 grains. As regards the source of gold it has been suggested that the Bihar gold mines were probably worked during this period. The minting of silver coins began during the reign of Chandragupta II (c. AD 380-415), when he conquered the western part of India from the Saka Kshatrapas towards the end of the fourth century AD. These coins were modelled on the silver coins of the western Satraps. Kumaragupta I (c. AD 415-455), the son and successor of Chandragupta II continued the minting of silver coins. These coins were meant not only for the western provinces as was the case of his father but he also introduced silver coins to the central provinces of the Gupta empire. Among the later Gupta emperors, only Skandagupta (c. AD 455-480) and Budhagupta (c. AD 476-495) continued the silver coinage. In addition to the gold and silver coins we have copper coins in the Gupta period which are however less in number. It has been argued that paucity of copper coins was the result of copper being a cheaper metal than gold or silver and hence were not often hoarded. It is to be noted that according to Fa-hsien cowry shells were in use along with gold coins. Thus the monetary history of this period had shades of complexities.

Gupta Gold and Silver Coins



RBI Monetary Museum Gallery-Ancient India Coinage

7.5.6 Extraction of Revenue Resources

For maintaining a vast empire it was very natural that the Gupta rulers took recourse to diverse forms of taxation. Land revenue formed the greatest source of wealth to the treasury as agriculture was the main stay of economy. The principal tax was *bhaga* or share of produce. No Gupta inscription directly states the proportion demanded in practices though the Baigram and Paharpur copper plates give to the king one sixth of the religious merit accruing from a donation of land. From this one may assume that this proportion was the standard rate of the period. That the king was called *sadbhagin* (receiver of the sixth portion) suggests that the traditional rate was also one sixth. Two other common revenue terms were *kara* and *uparikara*. It is not possible to specify the exact connotation of *kara* and *uparikara*. In the opinion of D.C.Sircar these were perhaps the principal and subsidiary tax respectively. Copper plate charters provide us with the names of some other taxes. One of them was *udranga* which was collected by

the *Audrangika*. It is often taken to denote tax on permanent subjects. *Hiranya* is another term recorded in some of our inscriptions. *Dhanya* is another revenue term found in the Maliya copper plate of Dharasena of Maitraka family of Valabhi. The term *halikakara* is recorded in the Khoh copper plate of Sarvanatha. *Dhanya* and *halikakara* were perhaps taxes on agriculturists. *Hiranya* was a king's share of certain crops paid in cash. Epigraphic records suggest that the number of agricultural taxes was much more than taxes on the non-agrarian sectors of the economy. An important fiscal due for the commercial sector mentioned in the *Amarakosha* was *sulka* or tolls and customs. The *saulkika* or officer in charge of the collection of *shulka* figures on a number of inscriptions. A feature of the revenue system of this period was the growing imposition of forced labour or *vishti*. From the *Kamasutra* of Vatsyana we learn that village landlord could force the wife of the peasant to render various services like threshing crops and filling up his granary without any remuneration. The numerous revenue terms enlisted on the copper plates suggest that the fiscal burden was quite high for the common people.

The picture that emanates from the above survey of the economy of the Gupta empire is that of a economy where the *agrahara* system of land grant played a dominant role. It caused the expansion of rural agrarian settlements which, however, did not throttle the lively urban socio-economic milieu. The description of a *nagaraka* in the *Kamasutra* of Vatsyana bears eloquent testimony to the vibrant urban life of the period.

7.6 SUMMARY

The above survey depicts a picture of interesting variations as well as similarities in the economic structure of these dynasties both in terms of region and the changing times. It appears from the available sources that the Mauryan economy was basically a state controlled economy having a strong base in the agrarian sector. The Kushanas, however, maintained a different economic policy. Their rule is marked by lessening control of the state and growing private enterprise. Huge amount of resources were mobilized by the monarchs from the non-agrarian sector, primarily, trade. They never tried to introduce a uniform standard of weights or of measures throughout the empire. The Satavahanas, on the other hand, put more or less equal emphasis on the agrarian and non-agrarian sector of the economy. They realized the potentiality of the region as a rich agricultural zone and at the same time like the Kushanas they were interested in long distance trade with the Roman empire. As for the Guptas, the very basis of their economy was agriculture. The earlier practice of making individual or group donation is replaced by the new practice of *agrahara* system. There is however no indication of decline in the non-agrarian sector of the economy. Circulation of coins could be seen in all the empires. The simple punch marked coins of the Maurya period gave way to the gold coins in the Kushana period. The Satavahanas, however, did not have gold coins. Coins began to be used as an agent of propaganda by the ruling authorities. The Guptas continued the tradition of issuance of diverse types of coins, primarily gold, then silver and also copper. Many areas saw the growth of urban centres during the rule of these four dynasties.

7.7 GLOSSARY

Avadana

In Buddhist tradition *Avadana* is a type of literature consisting of stories of the deeds of Buddhist personalities from the past. It is also known as *Apadana*.

Brahmi Script

A script which may have appeared in India around 4-3rd century BC. Most of the Asokan inscriptions are in Brahmi script.

Byzantine Empire

It is also known as Later or Eastern Roman Empire. The reign of the first Christian emperor, Constantine marks the beginning of the Byzantine empire (AD 312). The empire lasted till 1453 when finally the Constantinople (Byzantium) fell to the Ottoman Turks.

Doab

Land between two rivers.

Gupta Era

Era counted from the accession of Chandragupta I in about A.D. 319-20.

Indo Parthians

A Scythian tribe. The first Indo-Parthian ruler Gondophares in AD 20 declared independence from the Parthian suzerainty and founded an independent kingdom in the south-west Afghanistan. In the history they were known as.

Kanishka Era

An era counted from the first regnal year of Kanishka I. This era is generally identified with the Saka era of 78 AD.

Karakoram Highway

The Karakoram mountain ranges marked the Western end of the Greater Himalayas mountain chain and contain the greatest concentration of high peaks on earth as well as the largest expanse of glacial ice outside the polar regions. The winter snows from these mountains provide the meltwater for the mighty river Indus that cuts through the Karakoram from its source in Tibet. Karakoram pass lies on one of the highest trade routes in the world for Yarkand in Central Asia. The route begins from the Nurbra Valley in Ladakh over the Tulimpati La, and Siser La leading to the pass. The Karakoram Highway in Gilgit, Chilas, etc. has yielded considerable antiquities.

Kharoshti

The Kharoshti script was in use in the northwest frontier regions of India. It was written from right to left. Ashokan inscriptions of Shahbaz Garh Man (8 miles east of Mardan, Swabi) are in Kharoshti.

Megalithic Culture

Megaliths were burials made of large stones hence the name Mega-lith (mega means big/huge; litho means stone in Greek). The culture flourished in the first millennium BC and early centuries AD in peninsular India, particularly in Andhra Pradesh, Karnataka, Tamil Nadu and Kerala.

Prasasti

An eulogy or record of praise for kings or other personalities.

Rouletted Ware

A wheel turned pottery so named because of concentric rouletting in the middle of the dish/pot found in large numbers of sites close to the east coast of India.

Scytho-Parthians

The Parthians defeated Alexander the Great's

successors, the Seleucids, conquered most of the Middle East and South-west Asia, and controlled the silk route. The Parthians at one time controlled the areas now in Iran, Iraq, Turkey, Armenia, Georgia, Azerbaidzhan, Turkmenistan, Afghanistan, Tajikistan, Pakistan, Syria, Lebanon, Jordan, Palestine, and Israel.

Saka Kshatrapa

A Saka ruling house having two branches, one ruling from Mathura for sometime and the other ruling in western India till the 4th century AD.

Sasanid Empire (226-651 A.D.)

They established an empire roughly within the frontiers achieved by the Achaeminids, with capital at Ctesiphon. The dynasty was founded by the king Ardashir I who was the vassal of Parthian ruler. Shapur I (241-272) inflicted a crushing defeat on the Romans twice. Later he also attacked the Kushanas and occupied Peshawar, a centre of the Kushanas. The last Sassanid ruler was Yazdgard III (632-636). The Arabs took Ctesiphon and in 651, the last Sassanian king died as a fugitive.

Seleucus and Seleucid Empire

Seleucus was the founder of the Seleucid Empire (BC 312-65) who ruled over Asia Minor and Syria from BC 312-280. Seleucus accompanied Alexander the Great in his Eastern Campaigns. After Alexander's death he got the Babylonian Satrapy (modern Afghanistan, Iran, Iraq, Syria, Lebanon, and parts of Turkey, Armenia, Turkemenistan, Uzbekistan and Tajikistan) as his share. In 64 BC the Roman general Pompey the Great brought the Seleucid empire to an end.

Stadia

Ancient Greek units of length ranging in value from 607 to 738 feet.

Stitched Variety of Traditional Indian Transport

Ships or boats with sewn planks where nails are not used.

7.8 EXERCISES

- 1) Critically analyse the information provided in the Junagarh *prasasti*. To what extent is it useful for understanding the agrarian economy of the period.
- 2) Analyse the nature of agrarian taxation under the Mauryas on the basis of the information available in the Rumindei inscription.
- 3) Analyse the commercial activities in India during BC 300-600 AD on the basis of the accounts of Greeco-Roman and Chinese authors.
- 4) In what respect was urbanization linked to trading activities? Discuss the issue in the context of the rise and growth of towns during BC 300-600 AD.
- 5) Examine the economy of the empires on the basis of the study of coins.

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UNIT 8 PATTERNS OF TRADE, URBANISATION AND LINKAGES : NORTH INDIA (C. 600 BC-300 AD)

Structure

- 8.1 Introduction
- 8.2 Trade and Urban Development c.600-300 BC
 - 8.2.1 Trade and Traders
 - 8.2.2 Trade Routes
 - 8.2.3 Coins and Currency System
 - 8.2.4 Urban Centres
- 8.3 Trade and Urban Development c. 320-187 BC
 - 8.3.1 Trade, Market Places, and Trade Routes
 - 8.3.2 Urban Centres
- 8.4 Trade and Urban Development c. 200 BC-AD 300
 - 8.4.1 Traders and Trade Centres
 - 8.4.2 Long Distance Trade
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- 8.5 Summary
- 8.6 Glossary
- 8.7 Exercises
- 8.8 Suggested Readings

8.1 INTRODUCTION

As studies of the past are no longer limited only to enquiries about rulers and kings, the historian's attention has consequently shifted from 'episodic history' (to quote D.D. Kosambi) to the thorough understanding of social, economic and cultural situation. An in-depth enquiry of the economic life in the ancient times cannot be divorced from the social, cultural and political developments. With the availability of some new data and fresh insights into the previously known information during the last fifty years, it is now possible to trace certain stages in the economic life in early India. In other words, there is now the lesser compulsion to study the economic life in terms of the some prominent ruling dynasties. Historians have been able to discern certain significant changes in social and economic life and therefore have indicated a few phases in the economy. This, however, does not imply that there was no element of continuity; but early Indian economic life, contrary to earlier views, cannot be judged as static and repetitive. This shift in perspective helps realise the importance of trade and other related aspects of early Indian economy. Indian material life was certainly rooted in agriculture and rural life, but crafts and commerce did play a role in the overall agrarian milieu. Trade, along with crafts production, belongs to the non-agrarian sector of the economy the arena for which is towns and cities. Villages, where dwelt the bulk of India's population, were areas principally for cultivation and animal rearing.

The major difficulty of studying the non-agrarian sector of the economy lies in the lack of adequate evidence or source materials. Creative literature, religious texts, theoretical treatises or *sastras* and impressions left behind by foreigners offer only incidental notices of economic life in general and commercial activities in particular. These literary pieces are not primarily economic documents, but offer glimpses of economic life. Archaeological materials, in the form of inscriptions, coins, visual art and objects unearthed from explorations and excavations also bear significant information, though often incidental

and scattered in nature. Archaeological sources have one advantage over literary evidence. They are more securely dated and situated in a given area; they also offer material and visual evidence of certain condition of the past. However, neither in literary sources nor in the archaeological evidence is statistical data available, which is so important for understanding economic life.

The Harappan civilization (c. 2500-1750 BC), noted for its distinct urban society, marks the first stage of urbanism in India. It is characterised by a flourishing agrarian economy, various crafts including workmanship in copper and bronze, far-flung trade both within the subcontinent and with the Oman peninsula, Bahrein island and Sumerian civilization in Mesopotamia. The most remarkable feature of this civilization was a number of impressive cities. Although urbanism – and areas of craft specialisation which fed Harappan cities – declined, regions of Chalcolithic culture and of the early iron age show that varieties of crafts supplemented agricultural production, and expansive exchange networks were in existence.

A new movement toward the emergence of towns and cities thus had an extensive base in the cultures of the earlier period. The sixth-fifth centuries BC loom large in Indian history and at the same time reveal certain distinctive features in material, political, social and cultural life, especially in north India. The period from c. 325 to 185 BC is considered a landmark in Indian history as it saw for the first time a nearly pan-Indian Empire. The *mahajanapada* of Magadha gradually became the paramount power in the subcontinent during the Maurya rule, thanks to the efforts of two great rulers Chandragupta Maurya (c. 321-300 BC), the founder of the dynasty and his grandson Asoka (c. 272-233 BC). The distribution of Asoka's many edicts over greater parts of Indian subcontinent shows that his instructions were meant to have been followed in those areas. This suggests that the findspots of Asoka's edicts were part of the vast Mauryan realm. At the height of its power the Maurya Empire extended from Afghanistan in the north to Karnataka-Andhra in the south and from Kathiawad in the west to Orissa (if not Bengal) in the east (for details see Unit 7 of the present Block and Unit 18 of Block 5 of our Course EHI-02). This vast Empire was carved out by the military might of the Mauryas and it was maintained by an impressive number of royal functionaries. The maintenance of a standing army and a bureaucracy speaks of the availability of enormous resources to the Maurya rulers. This brings before us the question of economic conditions in general and commerce in particular during the Maurya period.

A great reliance of scholars on the *Arthashastra* and to some extent on the Greek account led to the portrayal of the Mauryan economy as state controlled and state regulated. The Maurya Empire was perceived as having a monolithic and highly centralised set up. It was argued that the enormous resources required maintaining the army and functionaries could be realised if the Maurya Empire itself participated in the process of production and distribution (i.e. trade) of commodities. Recent readings of different sources underline that the Maurya realm did not have a unitary character; though it was well organised, the Maurya Empire was not monolithic nor was it possible to impose a highly centralised system over the vast expanse of the Empire. The lack of adequate facilities of communication would have precluded the establishment of a uniform and centralised political system. The Maurya realm, according to Romila Thapar, had in it three distinct zones: a) the metropolitan area around Magadha, b) core area in the Ganga valley where Maurya authority was firmly entrenched at the expense of erstwhile *mahajanapadas*, and c) peripheral/outlying areas. The Maurya administrative and economic control was felt in the metropolitan and core areas, but not perhaps to a great degree in the peripheral zone like the Deccan. The long Maurya presence in the Deccan did not bring about any major economic change there as the Mauryas were probably interested to extract the

mineral resources of the Deccan to enrich the metropolitan area (i.e. Magadha). The Maurya realm was indeed sustained by its vast agricultural resources.

The rich diversity of sources, archaeological and literary, indicate that during these five centuries there was an unprecedented growth in trade and urbanism in the entire subcontinent. The period under review experienced a maturity of certain tendencies in economic life which had begun in the sixth century BC. This is particularly seen in the development of commerce and city life in the whole of India, though we are looking here specifically at the north Indian scenario. The changes in the non-agrarian sector of the economy and the rise of urban centre were primarily an experience of the Ganga valley during the age of the Buddha. The spread of Magadhan power to a nearly pan-Indian stature paved the way for the penetration of these traits in material life into disparate areas of north India and also to some parts of the Deccan. The chronological segment from 200 BC to AD 300 saw the spread of agricultural society, specialised crafts, organisation of crafts and professions, commerce and urbanism for the first time in peninsular part of India, including the far south. Though there was no power of a pan-Indian nature in the subcontinent since the fall of the Maurya Empire in c. 187 BC and though many foreign powers entered India through the northwestern frontier areas, these five centuries did not witness any crisis in social, economic and cultural life. The development in trade is particularly marked by brisk and intense contacts between India and the eastern Mediterranean areas under Roman Empire from c. late first century BC to third century AD. As India became involved in a vast international trade network, contacts and communications among diverse ethnic groups and disparate localities left their imprints in social and cultural fields too. The period under review is one of the most creative phases in Indian history.

The survey of commerce and urban centres of north and south India during the period of nine hundred years will be presented in three chronological segments: 600-320 BC, 320 BC to 187 BC and 187 BC –AD 300.

8.2 TRADE AND URBAN DEVELOPMENT

C. 600-300 BC

The earliest Buddhist canonical literature, some Jaina texts and the famous grammatical treatise, the *Ashtadhyayi* of Panini (c. fifth century BC) offer valuable glimpses of socio-economic, cultural and political life. It must be pointed out here that we shall use the evidence of the pre-4th century BC Buddhist texts only and not the *Jataka* texts which were never contemporary to the Buddha (c. 566-486 BC) and which were composed in c. 200 BC-AD 200. These canonical Buddhist texts are the *Vinaya Pitaka*, *Dighanikaya*, *Majjhimanikaya*, *Anguttaranikaya*, *Samyuttanikaya* and the *Suttanipata*. The literary evidence will be compared and supplemented with field archaeological evidence of pottery, bricks, and ringwells. To this will be added the evidences of actual coins, which as metallic medium of exchange appeared for the first time in Indian history.

In the light of these sources, the most apparent changes are seen in political and economic life, which was of course intimately linked with social and cultural atmosphere of the period. For the first time in Indian history, we encounter the emergence of territorial polities (*mahajanapada/janapada*), traditionally sixteen in number, according to a Buddhist canonical text. Buddhist texts were also clearly aware of cities and towns, generally described as *nagaras* and *puras*, distinct from villages (*gramas*). Though the term *nagara* appears for the first time in the *Taittiriya Aranyaka*, a later Vedic text, the

regular references to cities in the Buddhist canonical texts firmly point to the emergence of urban economy and life in and around the sixth century BC. This is also supported by archaeological evidence revealing the actual remains of urban centres. The evidence of coins, already stated before, cannot but prove considerable advancement in trade as coins primarily served as metallic medium of exchange. The very word *janapada* stands for a populated territory. The existence of several *mahajanapadas* or territorial polities, of both monarchical (*rajya*) and non-monarchical (*ganarajya*) types, shows the consolidation of a power structure. These polities not only had a monarch or an oligarchical set up, but also efficient administrative organisation and powerful armies. The maintenance of officers to administer the realms and of armies for offensive and defensive purposes required substantial resources. The principal resource base must have been the agricultural sector. The Buddhist texts and Panini's grammar alike speak of profuse amount of crops grown in north India, especially in the middle Ganga plains, (i.e. from Allahabad in the west to Bhagalpur in the east, located to the north and the south of the Ganga). It is significant to note that out of the sixteen major polities, seven prominent *mahajanapadas* were located in the middle Ganga plains. These polities must have prospered on the availability of the agricultural resources, which were profusely generated. As the rulers procured agricultural resources through revenue measures, it is evident that the agrarian sector yielded the vital excess crop, also called the surplus. Crops were produced in excess of the actual need of the producing peasantry. This not only speaks in volumes of the advancement in agriculture, but the availability of the vital surplus was crucial to the maintenance and flowering of the non-agrarian sector of the economy. A combined testimony of Buddhist texts, the *Ashtadhyayi* of Panini and archeological artefacts indicates the active presence of diverse types of craftsmen like the *vaddhaki* (carpenter), *kammara* (blacksmith), *kumbhakara* (potter), *kaulika* (textile worker), *rangakara* (dyer), *rajaka* (washerman), *suvarnakara* (goldsmith), and *manikara* (jeweller).

One of the salient features of crafts production – certainly indicating development of the non-agrarian sector of the economy – is their diversity and specialization. The most telling evidence of this comes from archaeology. We have already pointed to the growing presence of craftsmen in metals of which iron was certainly the most important. Ujjayini, Sambhar and Rairh, for example, have yielded massive quantities of iron slag, which were smelted and given the shape of required tools. This not only suggests the active role of the blacksmith in the urban life, but highlights the possibilities of impressive output of iron tools a considerable part of which are likely to have been manufactured for the market. From Atranjikheda have been discovered remains of blacksmiths' furnaces in workshops which were located within the residential area of the urban centre. That iron axes, chisels, knives and a few ploughshares began to occur regularly in archaeological contexts from c. 500 BC onwards is unmistakable. With the increasing use of iron implements, copper tools became relatively fewer, the latter's use, however, continued in the manufacture of ornaments and toiletries, obviously catering to the needs of the urbane population. Beads of precious and semi-precious stones (e.g. agate, amethyst, carnelian, chalcedony, onyx, quartz, jasper, coral and lapis lazuli) were widely used by the jeweller for ornament making. Impressive finds of these beads in finished, semi-finished and unfinished forms from Ujjayini and Sravasti cannot but point to the presence of jewellers in these cities. Champa (near Bhagalpur), the capital of Anga *mahajanapada* has yielded a unique set of jewellery-moulds. There is little doubt that urban centres of this period experienced regular use of bricks, both sun-dried and baked ones, for construction of monumental architecture (notably fortification and rampart at Kosambi, Ujjayini) and dwelling houses (for example, at Bhir mound, Taxila). The manufacture of burnt-bricks implies the construction of brick-kilns. One of the products for mass consumption must have been potteries of various types. The Northern Block Polished Ware, manufactured

mostly in sites from middle Ganga plains, was possibly a luxury ware. The Black and Red Ware outnumbers the NBPW, suggesting thereby that the latter was meant for mass consumption and also for daily use. The scenario of urban development has also to accommodate another aspect of the metalsmith's craft: this relates to the production of large number of coins, both punch marked coins (largely in silver) and cast coins (mostly copper).

A comparison with the information on economic life gleaned from the later Vedic texts strongly suggests that there was a noticeable growth in both agricultural and craft products. This in turn paved the way for regular transactions in exchangeable products. These preliminaries prepare our grounds for taking a close look at trade and commerce during the period from 600 to 300 BC.

8.2.1 Trade and Traders

Persons belonging to the *vaiśya varṇa* were supposed to have followed the profession of merchants, according to the Vedic *varṇa* system; but the *vaiśyas* were rarely accorded an honourable status in the Vedic norms. Trade was generally not held in high esteem in the Vedic tradition. In sharp contrast to the Vedic attitude to trade and merchants, the Buddha viewed trade (*vanijja*) as one of the excellent professions (*ukkatthakamma* = Sanskrit *utkrishtakarma*) along with agriculture (*kasi* = Sanskrit *krishi*) and cattle keeping (*go-rakkha* = Sanskrit *goraksha*). These professions were fit to be followed by persons of excellent pedigree (*ukkatthakula* = Sanskrit *utkrishtakula*, *Vinaya Pitaka*, IV.6). In an interesting dialogue the Buddha explains to his favourite disciple Sariputta the comparative advantages between agriculture and trade. As agricultural operations are full of uncertainties, they need constant care and supervision; handsome gain in agriculture is possible only when one is immensely successful in it. Trade, on the other hand is a less tiresome occupation with lesser responsibilities than agriculture, but it generates enormous profits. For a merchant (*vanijjapayutta* = Sanskrit *vanijyaprayukta*) there were four possible outcomes of his ventures: it could lead to a loss (*chedagamini*), the gain may not be as much as anticipated (*na yathabhippaya*), the gain may be as much as anticipated (*yathabhippaya*) and sometimes the gain could much exceed the expected profit (*parabhippaya*). One of the regular meeting points of merchants and Buddhist monks was the urban centre which figures prominently in the Pali canonical texts. The monk and merchant were both essentially itinerant. During the four months of monsoon the monks were allowed to remain at a fixed place (*vassavasa* = Sanskrit *varshavasa*) where also converged merchants. This may explain the intimate knowledge of the world of merchants in the Pali canonical texts.

Trade and merchants appear prominently in Jaina canons also, though these were later compositions. The excessive importance given to nonviolence (*ahimsa*) in Jainism led to the belief that agricultural operations resulted in the killing of many plants and animals. Trade was seen in Jainism as the least violent profession and it was therefore lauded in the Jaina texts too.

That the merchants were involved in buying and selling of commodities (*krayavikraya*) is clearly evident from the *Ashtadhyayi*. The common term for a merchant is *vanij/vanik*. But a close look at Buddhist texts, the *Ashtadhyayi* and the Jaina literature suggests the presence of a greater variety of merchants than is covered by the general term *vanik*. There were *sarthavahas* or leaders of caravan traders, usually undertaking journeys to distant destinations. The richest merchant generally figures in our sources as *sreshthi* or *setthi*. The term *sreshthi* occurs for the first time in later Vedic literature but was only infrequently used. Literally meaning one having the best, the term *sreshthi* in

the period under review appears more frequently in our sources and denote a fabulously rich merchant. He is described to have possessed eighty crores of wealth (*asitikotivibhava*) which is certainly a stereotyped figure and not an actual description of his riches. Panini was aware of merchants of Madra and Gandhara areas (*Madra-vanija* and *Gandhari vanija*), respectively in the Sialkot region of Punjab and Peshawar-Rawalpindi areas of Pakistan. The grammarian also informs us about merchants dealing in cattle (*go-vanija*) and horses (*asva-vanija*). This shows the importance of merchants engaged in the trade in animals which were prized in the-then society. It is likely that textiles of Varanasi reached faraway trade centres. The discovery of lapis lazuli from the excavation at Sravasti (in Uttar Pradesh), a precious gem found only in the Badakhshan area of Afghanistan, points to the availability of this exotic stone in the Ganga valley by an overland long-distance network. Though merchants could have earned great profit in the trade in luxury items, catering to the needs of the affluent section of city dwellers, there were certainly transactions in daily necessities. When the Buddha, for instance, is said to have met Belattha Kachchana, a merchant, the latter was moving with his caravan of five hundred wagons carrying molasses (*guda*). It may logically be assumed that some merchants dealt in the transportation of food and salt from villages to cities, though such movements of edible items did not probably cover great distances.

One is not sure to what extent the external trade of India was important during this period. Textual sources are not explicit on this point. The north-western part of the subcontinent, including the lower Indus valley and the Indus delta, was linked up with the vast Achaeminid Empire in Iran due to Darius I's (c. 522-486 BC) conquests of these areas. It appears on the basis of the Persipolis and Hamadan inscription of Darius I that Hi(n)dush or the lower Indus valley up to the Indus delta became a province of his Empire sometimes around 518 and 515 BC. His Empire also included Gandhara region. Darius I's military success in this region is also corroborated by Herodotus in his *History*. Herodotus informs that Darius engaged Scylax of Caryanda to ensure the navigability of the river Indus and then frequented the 'southern sea'. The southern sea certainly denotes the Arabian Sea. It will be reasonable to infer that Darius I was keen to ascertain the importance of the Indus delta as an outlet to the sea. This could have been done with a view to voyaging down the Arabian Sea and reaching the Persian Gulf. Herodotus explicitly says that India, i.e., the lower Indus valley was the twentieth and richest 'satrapy' (province) of the Achaeminid Empire, yielding 360 talents in gold dust as revenue. The importance of the lower Indus valley was possibly due to its proximity to the sea which could facilitate maritime trade in the Persian Gulf zone.

FROM CENTRAL DECCAN TO NORTHERN INDIA

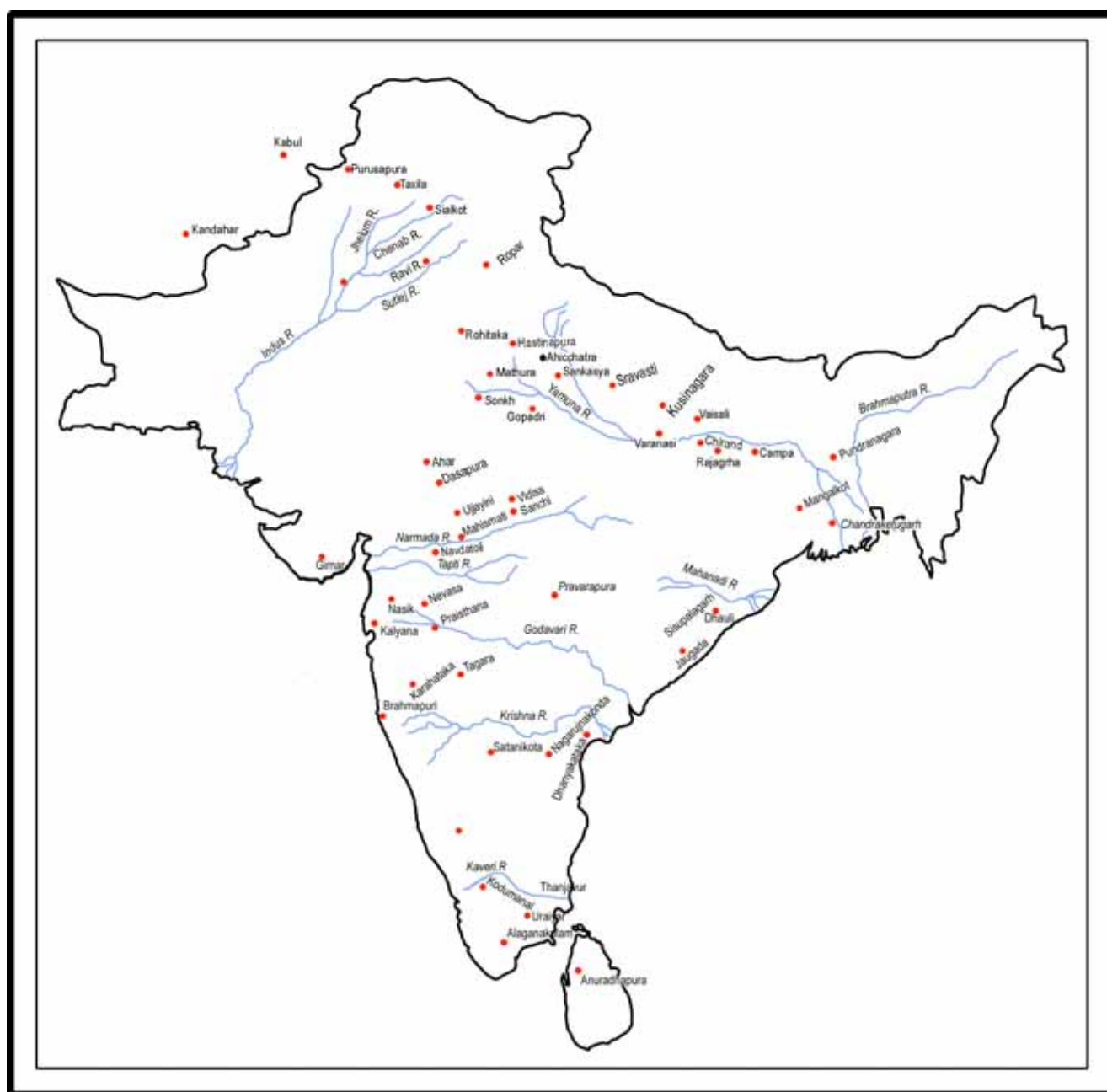
"Patithana of Alaka first, then to Mahissati and also to Ujjeni, Gonaddha, Vedisa, Vanasavhaya, and also to Kosambi, Saketa, Savatthi, the most excellent of cities, to Setavya, Kapilavatthu and the city of Kusinara, and to Pava, the city of wealth, to Vesali, the city of Magadha... "

Suttanipata, Vatthugatha, verses 36-38, trs. V. Fausboll, Sacred Book of the East, Vol. 10, pt. 2, p.188

8.2.2 Trade Routes

It will be logical to discuss here the possible routes of communications linking various parts of northern India. The itinerant monks and merchants must have used well established routes during their journeys. Baveru, according to the *Suttanipata* started on an extensive

overland journey from Pratisthana (modern Paithan in the Osmanabad district, Maharashtra) to Sravasti (the capital of Kosala *mahajanapada*), identified with the excavated sites of Sahet-Mahet. He passed during the journey Mahissati (Mahishmati, modern Mandahata, Nimar district, Madhya Pradesh), Ujeni (Ujjaiyini, Madhya Pradesh), Vedisa (near Bhopal, Madhya Pradesh), Tumbavana (Tumain, eastern Madhya Pradesh), and Kausambi (near Allahabad, Uttar Pradesh). This has been rightly described as the north-south trunk road of great antiquity. Jivaka, the greatest physician of this period, hailed from Rajagriha, the capital of Magadha (in Bihar) and undertook his training in medicine in far off Takshasila (Taxila near Rawalpindi in Pakistan). He moved from Takshasila to Bhadrakara (Sialkot), Udumbara (Pathankot), and Rohitaka (Rohtak); this is possibly the same as the northern route (*Uttarapatha*), mentioned in the *Ashtadhyayi*. His frequent movements in major cities in the middle Ganga plains for treating his patients also point to overland communications in this area. The Buddha on his last journey, according to the *Mahaparinibbanasuttanta*, started from Rajagriha and passed through Ambalaththika, Nalanda, Pataligama, Kotigama, Vaisali, Pava, and Kusinara where he attained his *Parinirvana*.



Map 1 : Centres of Trade/Exchange and Urban Centres C. 600 BC - AD 600
[After Ranabir Chakravarti (ed.), *Trade in Early India*, OUP, Delhi, 2001, facing page 1]

This speaks of his overland journey from south Bihar to north-eastern UP through north Bihar. These literary impressions of communications seem to have been corroborated by the archaeological evidence of the Northern Black Polished Ware (NBPW). The NBPW was a pottery tradition of a very high technological excellence, mainly produced in eastern Uttar Pradesh and Bihar. Unmistakable for its unique mirror-like black polish, the NBPW was in fact a deluxe pottery, not meant for daily use. This is proved by the small percentage of NBPW among the entire assemblage of pottery and pottery sherds in archaeological sites. The NBPW, manufactured in the middle Ganga valley, has been reported from Charsadda (near Peshawar in Pakistan), Taxila (near Rawalpindi), Ludhiana, Hissar, Ambala, Rohtak, Kurukshetra, Amritsar, Gurudaspur (sites in Punjab and Haryana), Mathura, Agra, Aligarh, Meerut, Bulandshahr, Etawah, Etah, Lucknow, Gorakhpur, Basti, Varanasi, Allahabad, Fatehpur, Mirzapur, Azamgarh (sites in Uttar Pradesh), Gaya, Patna, Saran, Monghyr and Purnea (sites in Bihar) during the 600-300 BC period. In other words, the distribution of NBPW sites clearly suggests a network of exchange. Though the movements were mostly overland, the Ganga and its tributaries could have also facilitated riverine traffic. Buddhist legends narrate riverine journeys on the Ganga from Campa, the capital of Anga (near Bhaglpur in eastern Bihar) to the Ganga delta.

8.2.3 Coins and Currency System

The most emphatic evidence of burgeoning trade comes from coinage which appeared for the first time in Indian history. A coin is a metallic piece used as a medium of exchange having a definite metallic purity and weight standard. A coin could be manufactured in a metal of common use like copper or a precious metal like gold or silver. The principal metal is generally mixed with a smaller percentage of alloys for facilitating the hardening of the molten lump of metal. The metallic purity or the more or less fixed content of the principal metal should be maintained for its widespread acceptance. Similarly the coin must have a definite weight. A coin is usually struck with certain devices, symbols, labels and designs to authenticate the metallic purity and weight standard of the metallic piece. This authentication is usually, but not uniformly, done by a politico-administrative authority. A coin with improper metallic purity and weight standard is not accepted generally at its face value, and the coin lacking in its intrinsic value is considered debased. Certain terms like *nishka*, *satamana*, *krishnala*, etc. appear in the Vedic literature to denote either a piece or a lump of metal or a weight standard. But there is no archaeological proof to corroborate the circulation of coins in the Vedic times. Coins appeared in India around sixth-fifth centuries BC. The use of metallic money for transactions definitely suggests a more advanced and complex exchange system than that involved in barter.

Excavations at the Bhir mound in the famous city of Taxila, the capital of Gandhara *mahajanapada*, reveal that the city had already come into existence by about fifth century BC. From the excavations were discovered a hoard containing 1171 silver coins. A few of these were issued by Alexander the Great and Philip, his governor in Gandhara. These Greek coins were in mint fresh condition, implying that these were the latest coins buried in the hoard. These coins must have been issued in the late fourth century BC when these were buried under the earth along with other coins. The bulk of the other coins (1134) belong to a different type and were in a worn out condition. It can safely be presumed that those silver coins of worn out look were manufactured earlier than the mint-fresh coins of Alexander. These coins therefore can be dated at least to a century ago, i.e. fifth century BC. These coins have no inscriptions recording the names of their issuers. A few symbols were punched only one side (obverse) of the coins. These silver coins from Taxila, distinct from those of Alexander, on an average weigh 54 or 55 grains. The Pali texts are replete with references to a particular coin, *karshapana*, made of silver or copper (mostly silver). Panini too knew silver coins under the name *rupya*. Alexander's historians narrate that when Omphis (Ambhi), the ruler of Gandhara submitted to Alexander, he gave the Greek

conqueror many silver pieces (*signati argenti*). These literary data, coupled with the visual evidence of silver coins, from Taxila hoard, leave little room for doubt about the circulation of Indian silver coins in north India. According to Indian tradition of metrology, the *karshapana* coins were issued on the weight standard of 32 *ratis*. 1 *rati* or *krishnala* was equal to 1.8 grains; so the 32 *ratis* would correspond to $1.8 \times 32 = 57.6$ grains. We have already mentioned that the bulk of the silver coins of the Taxila hoard weighed 54-55 grains. In other words they were possibly struck on the *karshapana* weight standard of 57.6 grains. It should be borne in mind that in so remote times the manufacturing of coins with precise maintenance of a weight standard and an exact shape was not achieved. But these approximated to a particular standard.

Silver Bent Bar and Punch Marked Coins



Bent Bar Coin

Seven Symbols

Five Symbols

Five Symbols

RBI Monetary Museum Gallery-Ancient India Coinage

Indian tradition right from the later Vedic times speaks of another weight standard, *satamana*, literally meaning 100 standard. The primary unit of this *mana* or standard was possibly 1 *krishnala* which was equal to the weight of 1.8 grains. The *satamana* weight standard would therefore refer to a metallic piece weighing 180 grain (1.8grain x100). Another hoard of coins is known from Chaman-i Huzuri near Kabul. In a container were found many Greek coins issued in c. fifth century BC; this implies that coins buried in the hoard cannot be later than the fifth century BC. Apart from the Greek coins, a few bent bar coins of silver were also discovered from the same hoard. These bent bar coins are without any inscription; they are different from both Greek coins and the *karshapana* coins in shape, size and weight. These coins weigh either around 90 grains and 45 grains. These coins were probably based on the 180 grain *satamana* standard and can be identified as half *satamana* (90 grains) and quarter *satamana* (45 grains) pieces. So far, no early coin of full 180 grains weight has been found. The major purpose of this elaborate description of these coins is to underline the fact that by fifth century BC north India certainly witnessed silver coins struck on two types of Indian weight standards, the *karshapana* standard of 57.6 grains and the *satamana* standard of 180 grains. The former was much more prevalent than the *satamana* pieces. Profuse number of punch marked coins struck on the 57.6 grain standard have been discovered from various parts of north India. These are uninscribed and stamped with a few symbols only one side of the coins. It is unlikely that these were initially issued by any ruler. The symbols were punched on them (hence the expression 'punch-marked') probably by merchants as marks of authentication of their weight standard and metallic purity. That the use of coins for transactions was well established during the time of the Buddha may also be inferred from a well known story of Anathapindika, the fabulously rich devotee of the Buddha. Anathapindika is said to have purchased Jetavana,

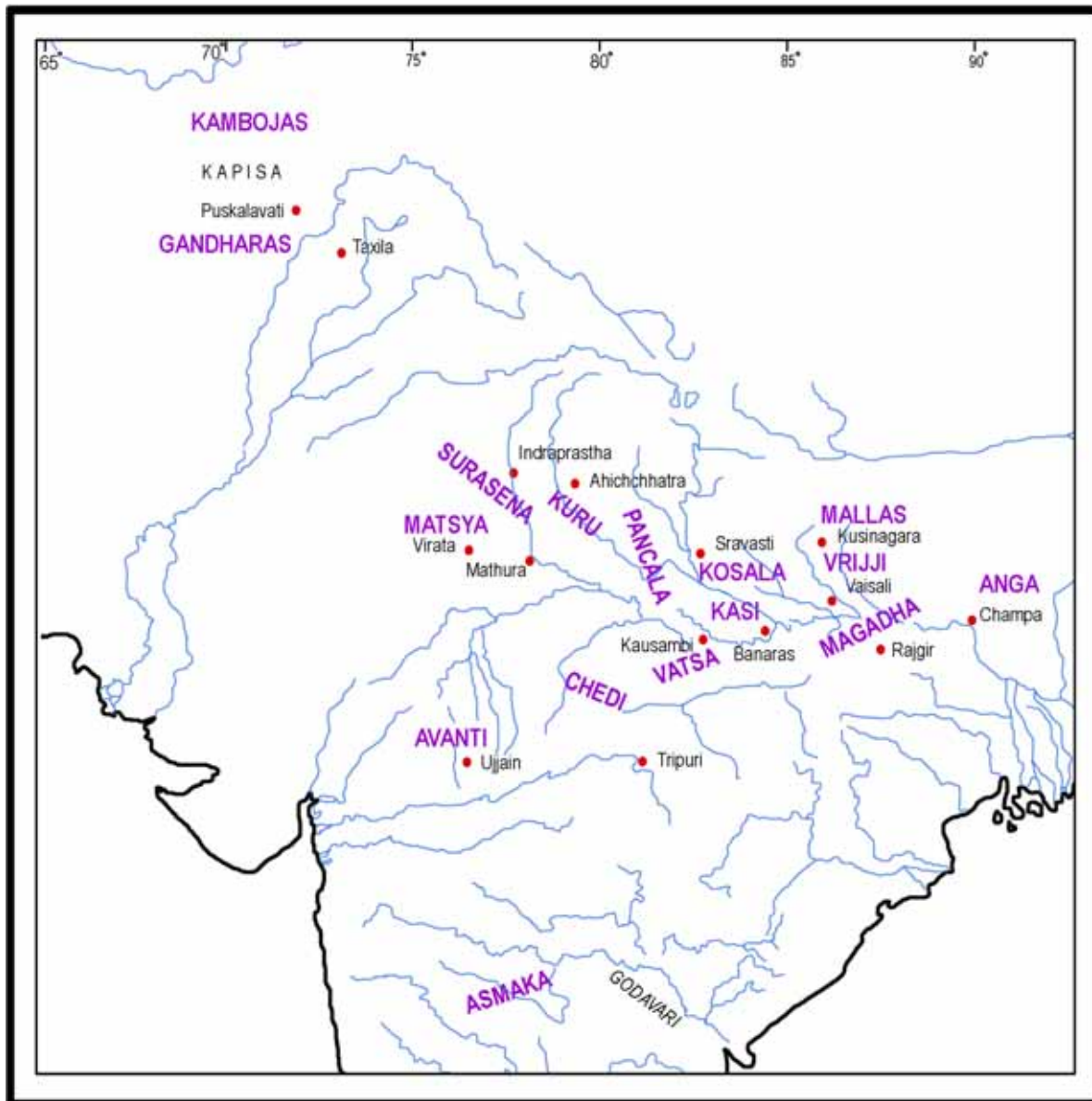
a pleasure garden in the city of Sravasti, which he later donated to the Buddha. The price of Jetavana was the number of coins (*karshapanas*) that would be required to cover the entire area of the pleasure garden. The memory of this is immortalised in a later sculpture from Bharhut showing the covering of the ground of Jetavana by coins. All these would demonstrate the development of money economy to some extent in north India which, we have already mentioned, experienced a marked improvement of commerce.

Trade and availability of metallic money may also imply a credit system, which is badly needed to sustain commercial transactions. The Buddhist texts mention *ina* or *rina*, i.e. loan, which was viewed as essential for launching any enterprise (*kammante payojeyya*). From any business (*yena kenachi kammathanena*), a person could start by earning as little as half a *kahapana* (Pali for *karshapana*), then he could earn 50 *kahapanas* daily. He becomes well off when he earns 100 *kahapanas* a day and a rich person when he gains more than 1000 *kahapanas* (*Anguttaranikaya*). The *Dighanikaya* also lays down that a borrower should be able to earn so much that he is able to pay off his debt and maintain his family too. The above texts impress upon us the distinct possibility of the circulation of money for credit and commercial purposes. We would like to take into account here the frequent references to *setthi-gahapatis* in the Pali canonical texts. The *setthi-gahapati* does not figure in any previous literary sources. The *gahapatis* were very rich persons, usually landholders, who used the epithet *gahapati* as a status symbol to mark them out from their extended kin-group. The *setthi* was a prominent and wealthy merchant. The *setthi-gahapati* was neither identifiable with the *setthi* nor with the *gahapati*, since the Pali sources never use the three terms as interchangeable ones. It has been suggested that some of the *gahapatis* probably invested apart of wealth in trade; in this way they were associated with the world of trade without being themselves *setthis*. The relevance of the *setthi-gahapati* lies in the urban economy of this age witnessing the minting of coins.

8.2.4 Urban Centres

The most significant change visible in the material life during the period 600-320 BC is the emergence of towns and cities. The Vedic literature is steeped in rural culture and the city is virtually absent in the Vedic texts. The Buddhist texts, on the other hand, are replete with references to and descriptions of cities and towns (*nagara*). As many as sixty cities figure in the Pali canonical texts. Of these six cities stood out: Champa (near Bhagalpur, Bihar), Rajagriha (Rajgir in Bihar), Varanasi (Benares, Uttar Pradesh), Kausambi (Kosam near Allahabad, Uttar Pradesh), Sravasti (Sahet-Mahet, Uttar Pradesh), and Kusinagara (Kasia in eastern Uttar Pradesh). All these cities were located in the middle Ganga valley. Cities also emerged in the Ganga-Yamuna doab and the upper Ganga valley, e.g. Hastinapura, Mathura, Kampilya, and Ahicchhtra. Outside the Ganga valley city life is clearly visible in Ujjaini, the capital of Avanti *mahajanapada*; in Takshasila (Taxila), the capital of Gandhara *mahajanapada*. It is true that there was a concentration of large cities in the middle Ganga valley, the principal theatre for changes of far reaching consequences during the period under review. Panini, residing in Salatura (close to present Sialkot in the Punjab), impresses upon us that cities were numerous in the eastern (*prachya*) direction; he seems to have been aware of the cities flourishing in the middle Ganga basin. Historians have been aware of the textual descriptions of cities in the Buddhist texts. These texts give graphic and lively accounts of cities with imposing fortification wall (*prakara*) and moat (*parikha*) around them, well laid out streets, fine houses and large palatial structures, teeming population especially merchants and courtesans and other entertainers. The descriptions, however valuable, also indicate that these were stereotyped and were applied uniformly to all cities. This has raised the logical doubt to what extent these texts gave realistic impressions of city life. From the

1950s onwards archaeological data are increasingly being utilised, along with literary impressions, for understanding the urban layout. Excavations and explorations throw immense light on the actual remains of fortification, layout of roads, dwelling houses and other structures, use of bricks and drainage systems. Archaeology also reveals very clearly that all urban areas were not of the same size and dimensions and there were large cities and smaller towns. Field archaeological materials help us determine the beginning and end of an urban settlement. The present survey of urban centres in north India during c. 600-320 BC will therefore draw from both archaeological and literary data. Many of the cities figuring in textual sources have been identified on the basis of archaeological excavations; there are some urban centres the remains of which have been found but these could not be identified with cities appearing in literature.



Map 2 : Mahajanapadas (After F. R. Allchin et. al., *The Archaeology of Early Historic South Asia : The Emergence of Cities and States*, Cambridge, 1995, p.116)

Before the survey of urban centres is taken up one has to confront the crucial question, what is a city. The definition of a city or the features by which a city is distinguished from a rural area have caused major controversies among historians, sociologists, political scientists, demographers, geographers and anthropologists. It is also neither correct nor

expected that the features of a modern city can be applied to a city of pre-industrial revolution days. There is however a general consensus among specialists that the two primary types of human settlements are villages and cities. A city or town is usually larger in size and area than a village; the population in a city is more numerous and the density of population is higher in cities than those found in villages. The most distinctive character of the two types of settlements lies in their economic life. While the village is essentially associated with agriculture and some handicrafts, the city is peopled by those who are not direct growers of food. The non-food producing community of the city consists of specialist craftsmen, merchants, administrators, rulers and sometimes religious leaders/preachers. It is therefore also clear that the city is sustained by a secure supply of food which is not grown in urban areas but is to be brought to the city from elsewhere. This naturally brings in complex operation and organisation. The city usually has much diverse population than in rural areas, as people from different areas and belonging to diverse ethnic and religious groups often tend to converge at cities. The social and cultural life in a city is therefore more complex and also more open than that in rural areas. (for further details see our Course EHI-03, Block-1, Unit 2).

V. Gordon Childe, the noted archaeologist, suggested ten typical features of an early city. These are:

1. The city is more extensive and with denser population than that in villages.
2. The main population of the city is essentially a non-food producing community.
3. Surplus from agricultural sector is extracted to city where it is concentrated for the sustenance of the city dwellers.
4. Construction of monumental structures is a distinctive mark of city life; it is also an indication of the concentration of social wealth.
5. Priests, military and civil officers enjoy a position of pre-eminence among the residents of the city. By claiming and enjoying considerable parts of the concentrated surplus, these gradually form into the ruling elite group.
- 6/7. Invention of writing, emergence of a group of clerks are inseparably associated with the formation of cities. Maturation in three exact and predictive sciences, arithmetic, astronomy and geometry is linked up with the emergence of cities.
8. The presence of skilled artists, sculptors, painters, seal-cutters is noticeable in cities; the artist generally practised his craft according to conceptualised and sophisticated styles.
9. Trade and market place, especially long-distance trade, are major features of city life.
10. The city dwellers generally enjoy security in a state organization based on common residence than kinship ties.

Scholars are however not unanimous whether Childe's criteria can be uniformly applied to all cities of pre-industrial age.

Atranjikheda in western Uttar Pradesh is one of the most important archaeological sites yielding remains of an impressive city. It has not, however, been identified with an ancient city known from literary texts. The Painted Grey Ware level (c. 900-500 BC) at Atranjikheda spreads over 650 square meters; but the succeeding NBPW layer measures 850m x 550m. The site in c. sixth century BC assumes an urban dimension; there is clear growth in the size of the site which also suggests a demographic increase. One of the most significant archaeological trait of an ancient city is the fortification around it. Rajghat, representing the ruins of the famous city of Varanasi, the capital of Kasi *mahajanapada*, yields the remains of fortification which was constructed before the arrival of NBPW.

The fortification was thus raised there perhaps before 600 BC. The capital of Magadha, namely Rajagriha (Rajgir), was famous for its stone fortification over a circuit of 40 kms. Rajagriha had around it as many as five hills which provided it with further natural protection. Two important urban centres in Madhyapradesh—outside the Ganga valley proper—were Ujjaiyini in western Malwa and Eran in eastern Malwa. Fortifications were constructed around these two cities as early as 700 BC, that is before the advent of NBPW. Habitational areas and dwelling houses have been discovered in the Bhir mound representing the earliest phase of the city of Taxila, the capital of Gandhara *mahajanapada*. F. R. Allchin suggests that archaeologically speaking the earliest site which could claim the features of a city in South Asia was Kandahar in south eastern Afghanistan. Archaeology also suggests that the city of Mathura on the banks of the Yamuna had already come into existence in what was known as Surasena *mahajanapada*, though the archaeological wealth is not as impressive as that in Atranjikheda. In fact the *Anguttaranikaya* scornfully describes Mathura as a city full of dust, with bad roads, poor economy where alms were difficult to procure for the Buddhist monks. A city hallowed by the memory of the Buddha is Sravasti, a major city of the Kosala *mahajanapada*. Excavations at Sravasti clearly impress upon its urban character by 600 BC though it was not fortified at that time. That Sravasti was a major centre of various crafts, especially bead making, is clearly demonstrated by archaeology. The capital of Vatsa *mahajanapada* was Kausambi parts of which have been excavated. An enormous mudbrick fortification was raised around Kausambi. The excavator G.R. Sharma assigned it to c. 1000 BC which is considered too high an overdating by most archaeologists. The huge fortification was constructed in Kausambi, however, before the advent of NBPW, i.e. prior to 600 BC. Recent in-depth investigations by George Erdosy show that Kausambi spread over an area of 60 hectares. It was undoubtedly the largest site in this area. But it did not stand in isolation. Closely located were two more towns the remains of which are found at Kara and Sringaverapura, both measuring 12 hectares. Between Kara and Sringaverapura stood another site measuring 6.12 hectares. Similarly, a site was located between Kausambi and Sringaverapura and it measured 6.75 hectares. Around Kausambi have been discovered as many sixteen sites, but much smaller in size, ranging from .42 hectare to 2.0 hectares. A large and premier city like Kausambi thus stood in relation to smaller and subsidiary urban sites which formed a clear graded scale in terms of their sizes. The smallest settlements around Kausambi were almost rural, combining some agricultural and crafts activities. The bigger sites like Kara and Sringaverapura indicate production of daily necessity items and luxury products. Kausambi stood above them as the premier centre of trade and was the apex political centre of the region. On the other hand, archaeology also proves beyond doubt that Kusingara where Buddha attained his *Parinirvana* could hardly match Kausambi, Sravasti, Varanasi or Ujjaiyini in dimension and wealth.

TWO CONTRASTING DESCRIPTIONS OF MATHURA

"It appears from the tradition recorded in the *Anguttara Nikaya* that is the area of Mathura the ground was uneven and dusty, the locality was infested with fierce dogs. These were bestial yakkha (Yakshas), Alms were locality obtainable from people" B. N. Mukherjee, *Mathura and its Society*, Calcutta. 1981, p 101."

The city of Mathura... "is prosperous and large and beneficial, and (a place where) alms are easily obtainable and which is abounding in men" Description of Mathura in the *Lalitavistara*, quoted by B.N. Mukherjee, *Mathura and its Society*, Calcutta, 1981, p. 132.

Literary and archaeological data thus offer unmistakable images of urban development in north India with a concentration of major urban centres in the Ganga valley. This certainly signalled a significant change in material life. What factors did lead to the formation of cities have been assessed from different points of view by various scholars. We have already mentioned that a major pre-condition of the emergence of cities would be the availability of food crops for the non-food producing people residing in the city. This implies the generation of crucial surplus agricultural products which after meeting needs of villagers could feed the city dwellers. D.D. Kosambi and R.S. Sharma explain that cultivation of the very fertile but thick heavy soil in the Ganga valley (especially the middle Ganga plains) with iron ploughshare hold the clue to the generation of surplus. The more advanced technology of iron ploughshare helped deep ploughing of the soil which yielded profuse crops. Iron implements like axes and adzes also helped clear the dense forest and made available large tracts for cultivation. Numerous literary descriptions of the manufacture of the iron ploughshare and actual ploughing of the arable tract have been cited in the Buddhist literature. Iron ploughshares belonging to the sixth century BC have been discovered from the excavations at Ropar (Haryana), Jakheda (western Uttar Pradesh), Kausambi and Vaisali (north Bihar). D. D. Kosambi and R. S. Sharma thus lay emphasis on the technological change in the shape of iron tools as the principal agent of ensuring surplus production which in its turn helped the emergence and growth of cities. Kosambi and Sharma seem to have followed V. Gordon Childe's formulation that technological changes led to social and economic changes. This intelligent explanation has, however, not gone unchallenged.

Whether iron technology was the prime factor towards urban formation has been questioned. It has been pointed out that the-then trans-Vindhyan India was also acquainted with iron tools which are associated with the Megalithic burial culture in central India, the Deccan and the far south. But no city figures in trans-Vindhyan India either in literary tradition or in archaeological context during the period from 600-320 BC. It then follows that the mere presence of iron technology could not necessarily generate urban formation. Dilip K. Chakrabarti, A Ghosh and George Erdosy, on the other hand, opine that surplus was not simply a technological product, but an outcome of the socio-political demand. It is the pressure from the coercive political authority which demands the agricultural surplus from the peasantry that ensures the generation of the surplus; this surplus is necessary for the maintenance of the non-food producing craftsmen, merchants, political elite and administrators at a certain centre which assume the character of a city. Craftsmen may need certain raw materials which are not locally available; this implies some exchange related activities at that centre. On the other hand, the ruler and his important administrators may feel the urge to procure exotic, luxury and precious prestige goods from non-local and distant sources. This will also encourage commercial exchange at an important centre which could assume urban features in due course. The importance of the formation of state power in the making of a city cannot be lost sight of. One cannot miss that major cities of early historic north India were also political centres of different *mahajanapadas*. Urban centres are not found in areas which did not experience the emergence and consolidation of territorial polities. Thus in the Deccan and the far south we encounter neither *mahajanapadas* nor urban centres. The easternmost *mahajanapada* of Anga was also the easternmost limit of urban development during the time of the Buddha. There was no territorial polity in the Ganga delta and correspondingly no urban centre in this region prior to fifth-fourth century BC. The urban centres in the age of the Buddha combined the role of political and market centres, like Ujjayini and Taxila. Some urban centres earned prominence for being simultaneously political, commercial and cultural centres: the best illustrations of this combination can be seen in the cases of Varanasi and Sravasti. Significantly enough, the new religious ideas of Buddhism and Jainism were

more popular in urban centres than in rural areas. The orthodox Vedic culture, on the other hand, was steeped in ruralism. Buddhism as a monastic religion depended largely on patronage which took the form of *dana* or gift-giving of movable and immovable objects. Such *dana* in cash or kind was more suitable in an urban milieu than in rural society. This is contrasted by the Vedic practice of *dakshina* or sacrificial fee (gold, slaves and cattle) given to the officiating priest. The new socio-religious movements like, Buddhism Jainism, Ajivikism, and Lokayata engaged in active debates for which the city provided a more suitable environment than the traditional village society.

Trade was certainly a contributing factor to urban development, but was perhaps not the most significant agent of change. It is interesting to note that in the list of cities given by the Pali canonical texts, the name of Pataliputra, the greatest city and premier political centre of north India does not appear. The *Mahaparinibbanasuttanta* knew it as Pataligama on the junction of the Ganga and the Sona. It has been described not as a *nagara* or *pura*, but as a *putabhedana*. The *putabhedana* literally denotes a place where the lids (*puta*) of boxes of merchandise were broken or unsealed (*bhedana*). In other words, *putabhedana* stands for a market centre which functioned like a stockade. When the Buddha passed through it he is said to have noted the fortification being constructed around it to safeguard it from invasions from the Vajji *mahajanapada*. The Buddha did not fail to appreciate the importance of Pataligama as a trade centre and its strategic location. He, therefore, prophesied the future greatness of the *putabhedana* as the greatest city (*agganagara*) of future. It was in the reign of Udayin, also called Udayibhadra, that the Magadhan political centre was finally shifted from Rajagriha to Pataligama which came to be celebrated as Pataliputra. Pataliputra became the greatest city of north India and the political citadel of the entire subcontinent from the fourth century BC as in it combined commercial, political and strategic advantages.

8.3 TRADE AND URBAN DEVELOPMENT

C. 320 TO 187 BC

An enquiry into the commercial activities from the fourth to early second century BC is possible for there is valuable data available. The Seleucid envoy to the Maurya capital Pataliputra (Palimbothra), Megasthenes left his impressions about India in his Greek text *Indika*. Megasthenes' impressions are therefore eye-witness accounts though his understanding of Indian situation was not always flawless. This text is now lost and known only through summaries, quotations and excerpts in later accounts like those of Diodorus, Arrian and Strabo. It is important to note that these summaries and excerpts of Megasthenes are not identical and the later writers differ among themselves. Another contemporary source is the inscriptions of Asoka which are strewn over a vast area. To this should be added the evidence of punch-marked coins and other field archaeological materials. The last but not the least is the famous *Kautiliya Arthashastra*. There is a strong tradition that it was composed by Kautilya/Chanakya, the chief minister of Chandragupta Maurya, though the text itself does not prove it. It was perhaps not the product of a single author and may have assumed its present shape around first or second century AD. The *Arthashastra* may not have been composed during the Maurya period and was later in date. But Trautmann who has done a statistical analysis of the text also points out that the earliest portion of the text, the section called *Adhyakshaprachara* (Concerning the Heads of Departments), goes back to the third century BC which is contemporary to the Maurya period. This section offers valuable data on administrative measures in different sectors of the economy, including trade. There is also some correspondence between the *Arthashastra* data and those contained in the Greek accounts and Asoka's edicts. Contrary to earlier historical researches,

recent studies of the Maurya economy does not solely depend on or orient to the *Arthashastra* evidence. The *Arthashastra* certainly attaches considerable importance to economic activities. But the text mainly lays down recommendations, the validity and practicability of which must be attested in the light of other sources.

8.3.1 Trade, Market Places, and Trade Routes

Available sources clearly suggest that agriculture was the most important sector of the economy. The Maurya period however also witnessed continuity of trade from the previous period. Megasthenes' impressions about the seven-fold divisions of the population of India include dealers and artisans in the fourth group. Megasthenes also reports about the municipal administration of the Maurya capital. According to him, six boards—each consisting of five members (in all 30 members, called *astynomoi*)—were entrusted with the administration of the Maurya capital, Pataliputra, which, we have noted earlier, was a famous trade centre. One board was entrusted with the supervision of items brought to the market, so that no mixture between the old and new items could take place. No person was allowed to deal in more than one commodity without paying a double tax. It is possible to infer therefore that along with agriculture, trade generated some revenue for the Maurya realm. This becomes clearer when Megasthenes speaks of the obligatory payment of one-tenth of the sale proceeds; failure to pay this tax was punishable with death. The revenue yielding potential of trade seems to have attracted the attention of the Maurya ruler. The *astynomoi* (city officials) were also jointly responsible for the maintenance of markets and harbours. Megasthenes also mentions about another class of Maurya officers, called *agoranomoi*. One of their functions was to maintain roads in good condition and erect direction-giving and distance-marking signals (like mile posts) on highways after a specific distance. Eratosthenes, a younger contemporary of Asoka, informs us of a 'royal road' between the Maurya capital Palibothra (Pataliputra) and Susa in Iran. The Greek accounts have been strikingly corroborated by two inscriptions of Asoka discovered from Laghman in north-eastern Afghanistan. These two edicts, written in Aramaic (a West Asiatic script and language), record the existence of a royal road (*karapathi*; *kar/kara* an Iranian word meaning lord/king; *pathi* = *patha* or road; i.e. a royal road or highway). These unique edicts of Asoka also enlist certain places and mention their respective distance. These are actual road registers, the like of which figures in the account of Megasthenes. It is quite evident that the Mauryas took some care of the communication system in the Empire. B.N. Mukherjee argues that a close perusal of Asoka's edicts suggests that the central draft of the edicts was prepared at the Maurya capital Pataliputra from where they were disseminated to different parts of the realm. This speaks of the presence of some communication system within the realm, though it was probably not of a high standard. That Asoka himself was on tours for over 256 nights also points to his movements along the established routes of communication. Our knowledge about official tours undertaken by Maurya functionaries after specific periods further points to the possibility of a network communication, however inadequate, in the realm.

Before delving into the external trade of Mauryan India, it will be worthwhile to take a close look at the recommendations of the *Arthashastra* on trade. The *Arthashastra* upholds the importance of trade (*vaniya*) by considering it as an ingredient of *varttasashtra* (the science dealing with *vritti* or occupation). The theoretician strongly favours royal intervention into economic activities and recommends the participation of the government in commercial life. Kautilya is openly suspicious of merchants whom he brands as dangerous of thorns (*kantaka*); so Kautilya recommends their *sodhana*, literally meaning purification, but actually implying suppression. That merchants took to many fraudulent practices is discussed by the theoretician. He recommends the appointment of a high

ranking Director of Trade (*panyadhyaksha*). He should be aware of different types of commodities, their places of origin, whether brought to the market place by overland or riverine routes, the changing patterns of their demand and the change in their prices. In the event of glut of a commodity and the falling price of that commodity, the *panyadhyaksha* should purchase that commodity, so that the falling price is arrested and a substantial stock is created by the state. Here the *panyadhyaksha* acts in the interests of the producer of that commodity. If, however, on the other hand, a shortage in the supply of the commodity takes place, this will lead to spiralling of prices. The *panyadhyaksha* should intervene in this situation and release the stock previously created. This will arrest the soaring prices and increase the supply. The *panyadhyaksha* here acts in the interests of the consumer. Thus the *Kautiliya Arthashastra* views the *panyadhyaksha* as one striking a balance between the interest of the producer and the consumer. Kautilya strongly recommends that the rate of profit should be stipulated: five percent on indigenous commodities and ten percent on foreign commodities. The *panyadhyaksha* is entrusted with the sale of goods produced in royal farms and manufactories (*rajapanyam*) which would be distributed through a single centralised channel (*ekamukham*). He is to look after trade not only within the realm of the king (*svavishaya*), but also trade abroad (*paravishaya*). Kautilya recommends sending out of trade missions to countries abroad to assess the potentialities of long-distance trade. The *panyadhyaksha* is advised to go wherever there is profit and avoid the absence of profit.

ARTHASASTRA ON SULKADHYAKSHA

20 For the trader taking out a commodity for which duty has not been paid along with one for which duty has been paid, or carrying off a second (commodity) under one stamp after breaking open the package, forfeiture of the same and an equal amount as fine (shall be the punishment). 21 For the (trader) carrying off (goods of high value) from the customs house after securing acceptance of cowdung (cakes) or straw as the basis (for calculating duty), the highest fine for violence (shall be the punishment).

22 For the (trader) taking out any one of the unexportable articles, viz., weapons, armours, coats of mail, metals, chariots, jewels, grains and cattle, there shall be a fine as proclaimed as well as loss of the goods. 23 In case any one of these is brought in, its sale (shall be effected) duty-free outside (the city-gate) itself.

24 The frontier officer should charge a road cess of one *pana* and a quarter for a cart-load of goods, of one *pana* for a one-hoofed animal, of half a *pana* for cattle, of a quarter *pana* for small animals, of one *masaka* for a shoulder-load. 25 And he shall make good what is lost or stolen (on the way). 26 He should send on to the Superintendent a caravan from a foreign land after making an investigation as to goods of high and low value and giving them an identity-pass and stamp (on the goods).

27 Or, a secret agent appearing as a trader should communicate to the king the size of the caravan. 28 In accordance with that information, the king should tell the Collector of Customs about the size of the caravan, in order to make his omniscience known. 29 Then the Collector, on meeting the caravan, should say, 'These are goods of high and low value belonging to such and such a merchant. It should not be concealed. This is the king's power.' 30 For one concealing goods of low value the fine shall be eight times the duty, (for concealing) goods of high value, confiscation of everything (shall be the punishment) .

31 He should cut out goods that are harmful to the country and that are worthless. He should make goods that are highly beneficial duty-free, also seeds that are rare.

R. P. Kangle, *The Kautiliya Arthashastra*, Part 2, 2nd edition Bombay, 1972, Chapter 21, Section 39 (2.21.23, 2.21.24), The Collector of Customs and Tolls, pp. 143-144

Two other officers were entrusted with some official supervision and invigilation of trade in the *Arthashastra*: they are the *samsthadhyaksha* (officer in charge of the market place) and the *sulkadhyaksha* (officer in charge of collection of tolls and customs). The *Arthashastra*, by prescribing the office for the collection of tolls and customs (*sulka*), clearly recognises the revenue bearing potential of trade. Though taxes from the agricultural sector must have been the most important resources for the Maurya administration, the imperial treasury seems to have been further replenished by tolls and customs imposed on commercial traffic. One has to take note that Kautilya includes trade routes (*vanikpatha*) as one of the seven heads of revenue. We have earlier encountered a particular type of trade centre called *putabhedana*. It also figures in the *Arthashastra* under a slightly different nomenclature: *panyaputabhedana*. By using the prefix *panya* (commodity), Kautilya strongly underlines the commercial character of *putabhedana*. While Pataligama in the days of the Buddha was a *putabhedana* but without being located in an urban area, the *panyaputabhedana* of the *Arthashastra* has a more pronounced urban character. The theoretician prefers the location of a *panyaputabhedana* within the fortified urban centre (*durga*). It should be established within a *sthaniya* (an administrative headquarters) over eight hundred villages. An ideal *panyaputabhedana*, according to the *Arthashastra*, should be easily approachable by overland (*amsapatha*) and water (*varipatha*) routes alike. The spread of the Maurya power over greater parts of the subcontinent seems to have facilitated trade and communication. This is also evident in the growing use of silver punch-marked coins.

The spread of the Maurya power over greater parts of the subcontinent seems to have facilitated trade and communication. This is also evident in the growing use of silver punch-marked coins. The punch-marked silver *karshapana* coins appeared in the economic scene around the fifth century BC; the Maurya period witnessed their considerable proliferation. Profuse number of silver punch-marked coins are found from Uttar Pradesh and Bihar. Though these coins are still uninscribed, the regular use of certain symbols on these coins suggest that these were issued by a particular authority. The widespread use of these symbols on punch-marked coins, assignable to the Maurya times, has led scholars to logically infer that these coins were indeed minted by a major political authority which could ensure uniformity in minting standard. Such a strong political authority can logically be identified with the Mauryas. The *Arthashastra* entrusts the responsibility of minting coins to a high ranking officer called *rupadarsaka* (the Mintmaster). The *Arthashastra* recommends the payment of salary for royal officers in cash. The text lays down several grades of salaried officials, ranging from 48000 *panas* to 60 *panas* per year (*pana* is a particular coin term). All these suggest the growth in the use of coinage which in its turn implies expansion of trade network in Mauryan times than that seen during the previous times, c. 600-320 BC.

To what extent long distance contacts developed with areas abroad during the period under review may now be briefly discussed. We have already mentioned about a royal road figuring in Greek sources and also in two Asokan edicts. Asoka in his Rock Edicts II and XIII clearly informs that he sent out *Dhamma* missions not only within his realm but to areas which lay outside his jurisdiction (*amta avijita*, literally meaning an unconquered frontier). His edicts explicitly mention contacts with five Yavana kings and with Tambapamni (=Tamraparni or Sri Lanka). These Yavana kings are: Amtiyoka (Antiochus II Theos of Syria), Amtekina (Antigonus Gonatas in Macedonia), Turamaya (Ptolemy Philadelphos in Egypt), Alikasudara (Alexander of Epirus) and Maga (Megas of Cyrene). There is little doubt about growing contacts with contemporary West Asia, the contacts being maintained largely through the northwestern border land of India through which passed the royal road. The *Dhamma* mission to Sri Lanka must have reached the island by a maritime route. Buddhist tradition narrates that the voyage to Sri

Lanka started from the port of Tamralipta in Bengal. That the Mauryas were alive to the importance of seaborne commerce may be indicated by the Greek accounts. Megasthenes notes that the city commissioners (*astynomoi*) looked after harbours. The Greek ambassador to Pataliputra also suggests that ship-building was a state monopoly in the Maurya realm. It is difficult to assess the accuracy of such a statement. However, the *Arthashastra* recommends the appointment of the *navadhyaksha* (Director of Shipping). The discovery of Asokan inscriptions at Sopara (ancient Surparaka), a noted port (in the Konkan coast) close to modern Mumbai, and Amaravati in Andhra may reflect upon the Maurya interests in the west and east coasts. The Maurya political control over Gedrosia or Baluchistan could have also paved the way for maritime trade in the west coast of India and the Persian Gulf region. Recent archaeological discoveries at Failaka near Bahrein in the Persian Gulf point to the active trade in this sea-lane during the rule of Seleucid kings with whom the Mauryas maintained regular contacts.

8.3.2 Urban Centres

The ability of the Mauryas to extract enormous resources from agrarian and non-agrarian sectors and the establishment of a number of administrative headquarters in different areas of the vast Empire provided vital impetus to the development of urban centres. The *Arthashastra* drives home the significance of urban centres (*durga*) by including *durga* in the list of seven elements of the state (*saptaprakriti*) and also in the seven heads of revenue.

The most outstanding city of the Maurya Empire was certainly Pataliputra, the Maurya capital. Greek authors eloquently praised this city as the greatest urban centre of India. Eighty stadia in length and fifteen in breadth, Pali(m)bothra (=Pataliputra) had the shape of a parallelogram; it was surrounded by a wooden wall and a moat. Excavations at Kumrahar, near Patna, have revealed the remains of a vast pillared hall of third century BC. The columns were polished monolithic pieces, their height and diameter at the base being respectively 20 feet and 3 feet 6 inches. A remarkable series of long wooden platforms have also been unearthed from close to the pillared hall. All these could have formed parts of Maurya palace complex. The *Arthashastra* does not mention Pataliputra, but provides the first systematic description of an ideal urban lay out. The term *durga* in the *Arthashastra* is not literally a fort, but a major fortified urban settlement. In his recommendations for layout of the city (*durganivesa*) Kautilya earmarks different areas of the city for habitational, administrative and commercial purposes. Maintenance of the civic amenities of the urban centre is entrusted with the *samahartta*, a high ranking officer who was also in charge of collection of revenues. Asoka's inscriptions inform us about several administrative centres and provincial headquarters located at important cities. These were Ujjayini, Takshasila, Tosali (near Bhuvaneshwar in Orissa), Samapa (in Ganjam, Orissa), and Suvarnagiri (in Kurnool district, Andhra Pradesh). Girinagara or present Girnar in Kathiawad was also another possible seat of provincial government. It is evident that some of the major cities of the previous period continued to flourish, while a few new centres of administration in Orissa and the Deccan also emerged for the first time.

The epigraphic and literary data on urban centres in the Maurya realm seem to have been corroborated by archaeology. The Bhir mound at Taxila reveals stone houses and a road in this major city of the northwest. The city of Pushkalavati to the west of the river Indus is seen in the ruins of Charsadda. Ahichchhtra and Sravasti, known since the times of the Buddha, witnessed their first fortifications during this phase. A metalled road datable to the second half of the fourth century BC is found at the famous urban centre of Kausambi near Allahabad. Mathura, which was despised as an urban centre in the

Anguttaranikaya, probably experienced improvement in its urban life. Mud fortification was raised around this city in the period 400-200 BC; its excellent textile began to attract the attention of a theoretician like Kautilya. At the vicinity of Mathura stands the archaeological site of Sonkh which offers the evidence of a flourishing bead making industry in and around Mathura. The diversity of the ground-plan of secular houses – square, oblong and circular – at Sonkh is a significant feature of urban layout in this city. Patanjali who belonged to the early second century BC remarks in his *Mahabhashya* (a commentary on the grammatical treatise of Panini) that the inhabitants of Mathura were more cultured (*abhirupatara*) than the residents of Pataliputra and Sankasya. All these point to the development of Mathura as a major urban centre in the Ganga valley. An inscription of c. third century BC, possibly of the Maurya period, was found from Mahasthan in present Bangladesh. It records the name of Pundranagara, which was prosperous and well laid out; a granary (*koshthagara*) and a treasury (*kosa*) also stood within this city. Pundranagara, identified with Mahasthan-itself an extensive archaeological site-was the earliest urban centre of Bengal. In the Maurya period north Bengal had another urban centre the remains of which were found at Bangarh (South Dinajpur district, West Bengal). Epigraphic and excavated materials, therefore, clearly demonstrate the beginning of an urban tradition in Bengal from the third century BC onwards. There was neither a *mahajanapada* nor an urban centre in Bengal during the time of the Buddha. Urbansim seems to have reached Bengal from the middle Ganga valley to the northern part of Bengal as an impact of the spread of Maurya political control over this region. That Bengal was coming into the orbit of north Indian material culture will be evident from the availability of NBPW and punch marked coins from archaeological sites. The recent discovery of an impressive hoard of silver punch-marked coins from Wari Bateswar, near Dhaka in Bangladesh, is a strong pointer to the spread of trade and urbanism in the Ganga delta from the third century BC onwards. Most of the urban sites of this period, widely distributed over the vast area of north India, have yielded NBPW, punch-marked coins and terracotta ringwells (for the disposing of waste water). It appears that the typical features of urban settlements of middle Ganga valley were reaching disparate areas of north India in course of the spread of Maurya political authority over these areas. This, however, does not imply that urban centres were of uniform size and pattern. Excavated urban sites offer us information about their varying sizes. The list below gives rough estimate of sites of different urban centres:

Pataliputra	2200 hectares
Rajagriha, Kausambi, Vidisa	181-240 hectares
Ahichhatra, Sravasti, Tosali, Mahasthan	121-180 hectares
Ujjayini, Samapa	61-120 hectares
Kandahar, Taxila, Balirajgarh	31- 60 hectares
Kapilavastu, Pushkalavati	16- 30 hectares

It is interesting to note that while the *Arthasastra*, which upholds the Brahmanical social ideology, shows a positive attitude to urban society, the *Baudhayana Dharmasutra* (c. fourth century BC) representing an orthodox position, considers the city to be a place of permanent *anadhyaya* (absence of Vedic studies). The *Dharmasutra* text lays down that visiting a city led to defilement which could be cleansed by expiation (*prayaschitta*). The relatively open and less rigorous urban society was a definite attraction to merchants, Buddhist and Jaina monks and rulers in general, but it was considered as a negation of Vedic ideals in the orthodox priestly tradition.

8.4 TRADE AND URBAN DEVELOPMENT

C. 200 BC- AD 300

The age under consideration produced diverse literature in India. Two premier theoretical treatises, namely the *Dharmasastras* of Manu and Yajnavalkya were composed between c. 200 BC-AD 200. The age also witnessed composition of the greater portions of two epics, the *Ramayana* and the *Mahabharata*. The Buddhist *Jataka* tales, though dealing with much earlier traditions, also belong to this period. The same is true about the Buddhist *Avadana* literature and the *Gathasaptasati* of the Satavahana ruler Hala, a Prakrit collection of poems. Immense light is thrown on Indian material life and long-distance contacts by the Classical texts: the *Bibliothekes Historikes* by Diodorus Siculus (c. BC 90-21), the *Geographikon* of Strabo (c. AD 96-180), the *Indika* by Arrian (c. BC 63-AD 21), the *Periplus Mari Erythraei* commonly known as *Periplus of the Erythrean Sea* by an anonymous Greek sailor/merchant, the *Naturalis Historia* by Pliny (AD 23-79) and the *Geographike Huphegesis* by Claudius Ptolemy (c. AD 87-150). The period is noted for the availability of many inscriptions, mostly composed in Prakrit language. A bulk of the inscriptions are donative records, informing the donations to Buddhist and Jaina religious establishments by people from different walks of life including merchants. Some evidence of commerce is furnished by seals and sealings. A major source of our knowledge of trade are coins, struck by both indigenous and foreign ruling houses in gold, silver, copper and billon. One of the surest proofs of the spurt of urban centres in north India is available from field archaeological materials. The period is famous for its sculptural art which offer many visual representations of commercial contacts and urban centres.

8.4.1 Traders and Trade Centres

Buddhist *Jatakas* not only speak eloquently of merchants but indicate their diverse categories. The term *vanik* stands for a merchant in general. The *sarthavaha* was the same as the leader of caravan merchants. The *apanika* means the shop keeper who must have been engaged in retail trading. However, the most important type of merchant was the *setthi* or *sresthi* whom we have already encountered in section 9.4. Numerous references to the *setthi* in the Buddhist *Jatakas* cannot but suggest that the *setthi* was prominent in economic life than in the previous ages. The *Jatakas* invariably describe the *setthi* as a fabulously rich merchant whose wealth amounted to eighty crore (*asitikotivibhava*, obviously a standardized figure). The immense wealth of the *setthi* is clearly hinted in a *Jataka* story which tells us that the king took possession of the vast estate of the *setthi* when he died without an heir. His sons usually followed their father's profession, implying thereby that the occupation of the *setthi* assumed a hereditary character. The term *setthiputta*, literally meaning a son of a *setthi*, actually denotes a *setthi*. The office of the *setthi* was known as *setthithana* (*sresthithana*). The *setthi* was certainly a merchant of great prominence and prestige; one of the avenues of his prosperity was his role as an investor of money in other people's business. Some *Jataka* stories bear impressions of the *setthi* investing money in the trade of smaller merchants and craftsmen. He thus played the vital role of a financier and probably became richer by charging interest on loans to other merchants. Interestingly enough the *setthi* regularly figures in the Buddhist texts as having visited the royal court thrice a day; some *Jataka* stories also suggest friendly relation between the ruler and the *setthi*. Though the *setthi* goes to the royal court daily he does not belong to the list of salaried officers (*rajabhogga*) of the realm. The *setthi* paid regular visits to the king not merely as a rich merchant prince, but probably in the more significant capacity as a representative of the mercantile community. This suggests that the *setthi* probably had an official role to play, in addition

to his function as an individual merchant of great prosperity. The official status of the *setthi* as the representative of merchants to the ruler undoubtedly enhanced his prominence. This is indicated by the formation of an exclusive group of *setthis* (*setthikula*) who in the *Jataka* texts often claimed an exalted position.

JATAKA ON SETTHIS

"There lived a *setthi* in the country (or in a border district) who was a business friend of Anathapindika, but they had never met or seen each other. Once upon a time this *setthi* loaded five hundred carts with country produce and gave orders to the men in charge to go to Savatthi, and barter the wares in the shop of the great *setthi* Anathapindika for their value, and bring the merchandise received in exchange. After they agreed to do this they came to Savatthi and met Anathapindika. First presenting him a passport they told him their business. 'You are welcome', said the great *setthi* and ordered them to be lodged and provided them with money for their needs. After kindly enquiries about his friends' well being he sold the merchandise and gave them the goods in exchange"

Jataka No.377 translated by E B. Cowell (ed.), *The Jataka or Stories of Buddha's Former Births*, Cambridge

Along with *vanik*, *vaidehaka*, *sarthavaha* and *setthi* were present *naigama* type of merchants. They are particularly seen in several donative records from Bandhogarh (in eastern Madhya Pradesh), datable to the early centuries of the Christian era. The term *nigama* stands for a market town and also for a professional group. The *naigama* type of merchants therefore could have denoted a trader belonging to a guild-like professional group. The itinerant nature of a large number of merchants can be easily guessed from regular references to their presence at cultural and trade centres which they reached from diverse places. A close perusal of donative records at Sanchi (nearly 625 small inscriptions), Bharhut, Mathura and Bandhogarh shows that these were convenient points of convergence of merchants and travellers.

CONVERGENCE OF DONARS (MERCHANTS AND TRAVELLERS) AT SANCHI

Tope I, No. 46= C. 107 "The gift of Samika, inhabitant of Navagama (*Navagrama*) from the district of Ujjain." p.102

No. 47= C.108 "The gift of the merchant Siriguta (*Srigupta*)." (p.102)

No.81= C. 162 "The gift of Saghadeva (*Samghadeva*), a trader, inhabitant of Virohakata." (p. 106)

No. 91 "The gift of the merchant Isiguta (*Rishigupta*) from Asvavati (*Asvavati*)." (p. 107)

No. 99 "The gift of the Sheth Siha (*Simha*), inhabitant of Kuraghara." (p.108)

No. 109 "(the gift) of Mahida (*Mahendra*), inhabitant of Bhogavadhana (*Bhogavardhana*)." (p.109)

G. Buhler, 'Votive Inscriptions from the Sanchi Stupas', *Epigraphia Indica*, Vol. II, p.109

"The gift of Nagadata (*Nagadatta*) from Paithana (*Pratisthana*)." (p.360)

"The gift of Namdutara (*Nandottara*), an inhabitant of Tuba (*van*) [Sagaur district MadhyaPradesh] (p. 378)

N.G. Majumdar, *Inscriptions of Sanchi*, in John Marshall (ed.), *The Monuments of Sanchi*, Delhi, Reprint, 1983

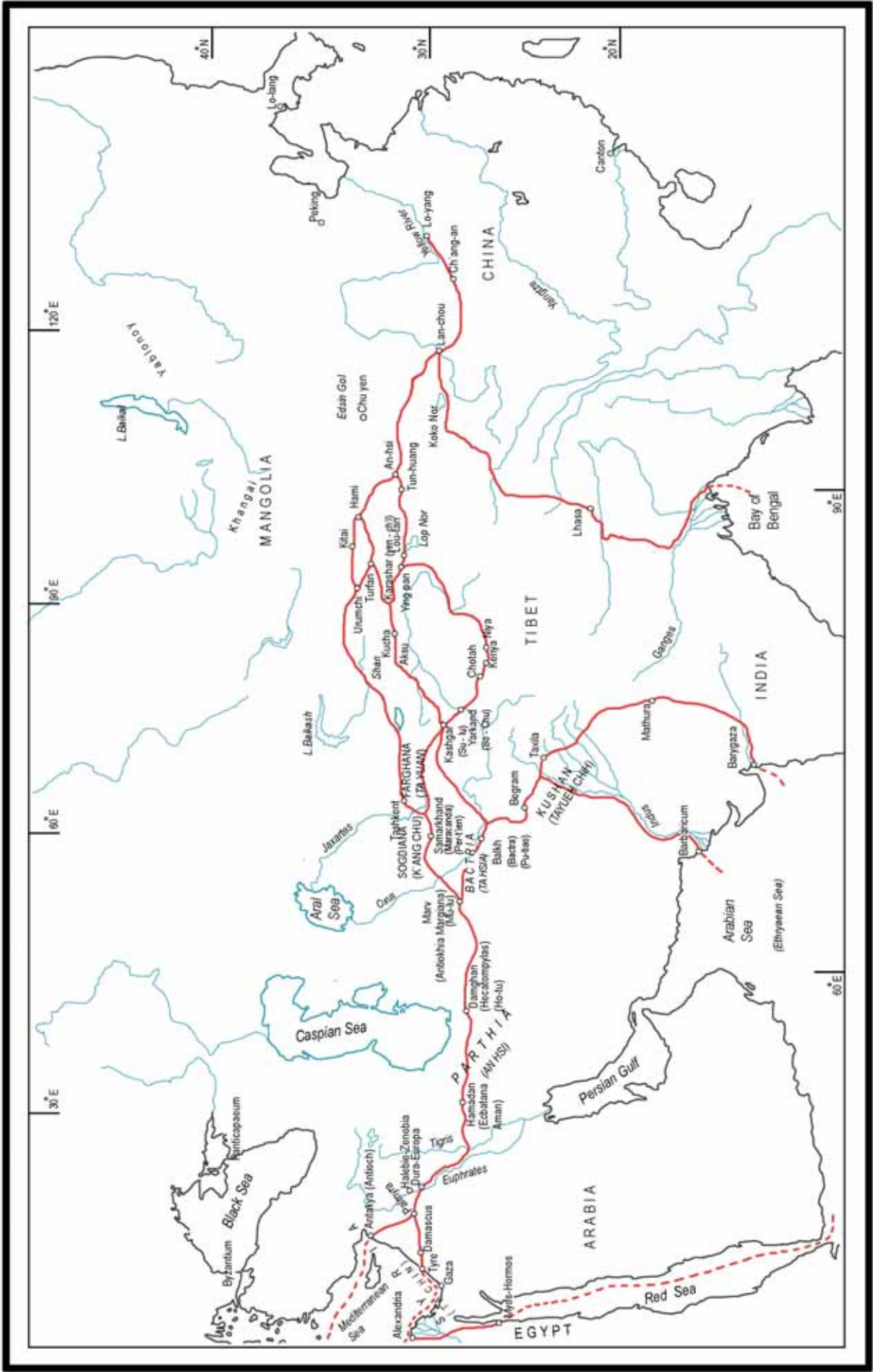
8.4.2 Long Distance Trade

The most spectacular development of trade is seen in the long-distance commerce of India. We have seen that already by the time of the Maurya Empire there had been ample scope and opportunity to establish contacts between West and South Asia through the north-western borderland of the subcontinent. Such contacts ramified and prospered to an unprecedented degree during these five centuries. As early as the second century BC it was possible for Heliodoros (Greek ambassador), who became a devout Vaisnava, to reach Vidisa in central India from Taxila in the north-western part of India.

In Sialkot area of Punjab, where the great grammarian Panini had lived in the fifth century BC, emerged a city of prominence. This is Sagala, identified with Sialkot. During the late second century BC it figures as the capital of Milinda or Menander, the Indo-Greek ruler. The well known Buddhist text, *Milindapanho* (Questions of Milinda), deals with the conversion of the Greek ruler to Buddhism. It also describes his capital as a major trade centre. Sagala, according to the *Milindapanho*, is a *nanapanyaputabhedana*. We have already explained that the *putabhedana* was a type of trade centre where probably bulk was broken. The prefix *nana* certainly underlines that various types of commodities were brought to this place by merchants from different places. It had a store house (*kotthagara*) which must have had arrangements of warehousing. Sagala was noted for its gate (*gopura*), archways (*torana*), rampart (*pakara*), moat (*parikha*), royal palace (*antepura*), streets (*vithi*), squares (*caccara*), crossroads (*catukka*) and shops (*apana*). One has to admit that the rich descriptions of Sagala as a centre of trade, however, are not matched by archaeological evidence.

For a proper appreciation of the contacts of north India with distant areas in West and Central Asia a broader background of Central and Western Asian situation is necessary. Movements of men and merchandise over long distances took a spectacular turn by the late second century BC. Certain changes in the political and economic scenario in Central Asia, West Asia and the eastern Mediterranean paved the way for increasing linkages with South Asia. There was a growing demand for silk and other luxury and exotic products of Han China in the Roman Empire. The celebrated overland route, designated 'Silk Road' by a nineteenth century German scholar, started from Lou Lan in China, then from Tun Huang the route bifurcated to the north and south of the Taklamakan desert. This led to the prominence of what is later known as the northern and the southern silk routes which converged at Kashgarh, called Su-le in Chinese texts. The same area was also called Seres/ Serice in Classical sources, because of the Greeks' knowledge of the availability of silk there. The overland route then passed through Bactra (modern Mazar-i-Shariff in Afghanistan), Merv (Mu-lu of Chinese texts), Hecatompylos, Ecabatana (Hamadan) and Seleucia. From Seleucia it went westwards to Palmyra, a celebrated centre for caravan trade, which was connected to the well known port of Antioch (in Syria) on the eastern Mediterranean littorals. There was another major centre of caravan trade, namely Petra in modern Jordan which was also connected with eastern Mediterranean ports. Areas located to the north of the river Oxus were also well integrated to this widespread network of over land routes. The route thus has a strong Central and West Asian orientation in which South Asia's role was not initially very significant.

There were, however, a few important changes at the beginning of the first millennium which led to intense South Asian participation in this network. By the first century AD the Kushanas, originally a Central Asian nomadic tribe, established a huge Empire with Bactria as its principal seat of power and embracing extensive areas of north India up to Campa or Bhagalpur in the east, the lower Indus valley and Gujarat in the west, Chinese Turkistan and areas to the north of the river Oxus. The rise of the Kushana power thus

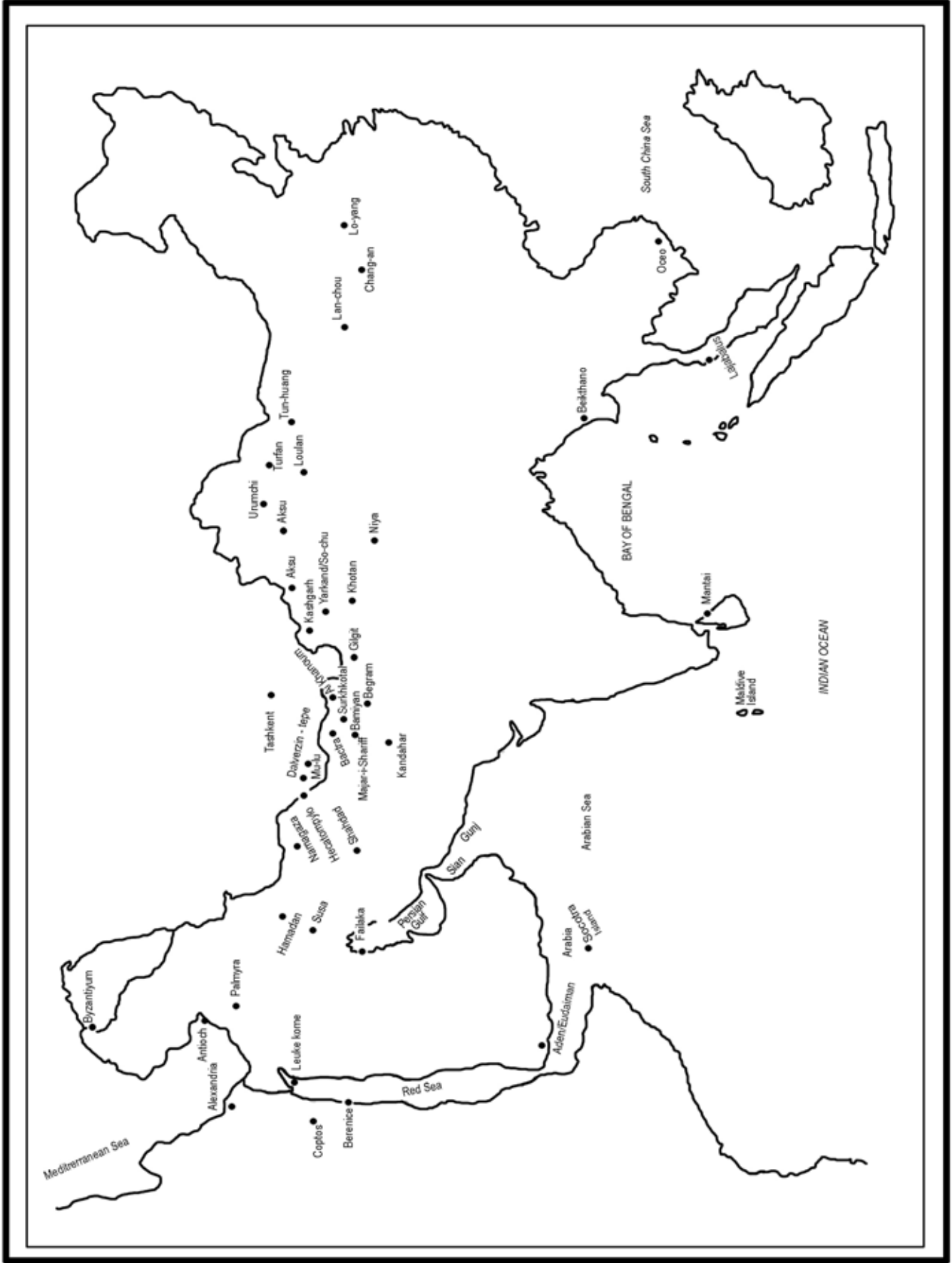


Map 3 : Silk Route from China to the Roman Orient (After *Cambridge History of Iran*, Vol.III (i), Cambridge, 1983, p.544-45

politically integrated major arteries of north Indian commerce with the northwestern borderlands of the subcontinent and also with Central Asian and West Asian network. More or less at the same time, according to the *Periplus of the Erythraean Sea* (c. late first century AD), Pliny's *Naturalis Historia* (about 79 AD) and Strabo's *Geographikon*, the shippers and sailors of the Red Sea and the eastern Mediterranean began to make use of the monsoon wind system to reach the west coast of India by a maritime route. The more or less predictable alteration of the monsoon wind system became intelligible to the sailors and shippers from the West and they began to frequent western Indian ports regularly. A ship sailing from the Red Sea port of Berenike or Myos Hormos or Leukos Limen could reach the western seaboard of India in less than forty days, if not in twenty days. This provided an alternative and quicker communication between India and the eastern Mediterranean areas. It provided an opportunity to avoid the Parthian empire in Iran which was an unavoidable geographical and commercial intermediary on the overland route between the Roman Empire and the Han Empire in China. The establishment of the Kushana power resulted in the movement of commodities through the northwestern borderland of the subcontinent to the western coast of India. It also linked up the movements of men and merchandise of the entire Ganga valley with the overland Silk Road trade.

The *Periplus of the Erythraean Sea* and Ptolemy's *Geography* (c. AD150) eloquently speak of two major ports of north India, namely Barbaricum at the mouth of the river Indus and Barygaza (Bhrugukaccha) on the mouth of the river Narmada in Gujarat. The *Periplus* offers excellent accounts of how commodities, including Chinese silk, was brought to Barbaricum and Barygaza from Kabul, Puskalavati and Taxila. While the overland route linking the northwest with the Indus delta must have passed through the plains of Punjab, the route to Barygaza passed through Mathura in the Ganga-Yamuna doab. From Mathura the overland route touched Ujjayini which in its turn was closely connected with Barygaza. Barygaza also received regular consignment of textiles from two centres in central Deccan, viz. Paithan and Ter. The above accounts clearly impress upon the extensive hinterland of the two ports. Inscriptions of mid-second century AD from West Asia show that Scythia, which was the lower Indus valley and which included the port of Barbaricum, maintained overseas network with Charax, the premier port at the head of the Persian Gulf. Charax in its turn was closely connected with major West Asiatic cities by overland and riverine routes. The port of Barygaza, also prominently figuring in the *Jataka* stories, was perhaps the greatest port of western India. According to the *Periplus*, Nambanus (Saka Kshatrpa ruler Nahapana, c. AD 105-125) arranged for the safe piloting of foreign ships to this port as the access to the port was not easy.

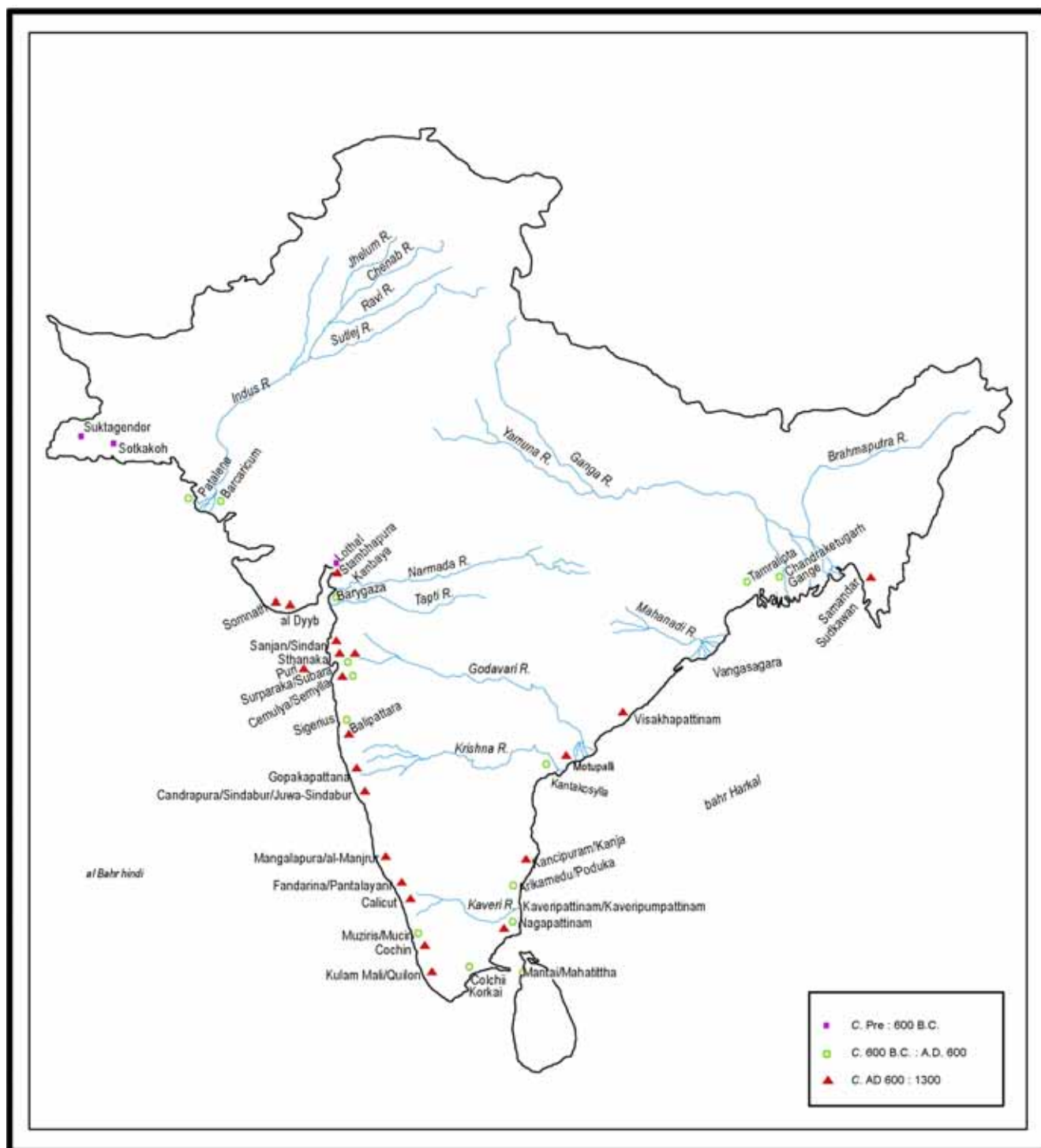
Recent archaeological discoveries in the Karakorum highway speaks of the presence of non-Indian merchants, Chinese, Sogdian, and Iranian, in this region. Inscriptions in Chinese, Sogdian, Prakrit (written in Kharoshti script) in the Karakorum highway demonstrate regular presence of merchants of diverse places in this area. This speaks of a shorter, but perhaps more dangerous, route to reach north India from Central Asian region. The Chinese texts knew this route as Chi-pin or Kashmir route. There is a strong possibility that excellent Central Asian horses, in great demand among north Indian powers, reached north Indian plains through this Karakorum route. Fine representations of horses with men wearing non-indigenous dress are clearly visible in painting and etchings on rock in this region. The cities of Taxila and Puskalavati acted as gateways of overland access to Central and West Asia. In this context must be mentioned the discovery of many Indian objects, including ivory products, from Begram near Kabul. The famous city of Mathura, a major political centre of the Kusanas, reaped great advantages out of this international commerce. Mathura was well connected in the east with areas in the middle Ganga valley; it was also linked up with the northwest through what is known as



Map 4 : India's Contacts with the Outside World C 600 BC-AD 600 (After Ranabir Chakravarti (ed.), *Trade in Early India*, OUP, Delhi, 2001)

the Uttarapatha route. Mathura was important for its communication through Rajasthan to Ujjayini, a great centre of trade and commerce in Malwa. Ujjayini in its turn had regular overland communications with Barygaza, the premier port of this region. Sculptures of the Gandhara and the Mathura school leave little room for doubt about the rich fusion of diverse cultural traits which came along with commercial transactions. The opulence of urban life, thriving on brisk trade, is also faithfully portrayed in contemporary sculptures.

At the eastern fringe of the vast north Indian plains is situated the Ganga delta. Bengal in the early centuries of the Christian era experienced a flourishing agriculture. Moreover, the Bengal delta provided the only outlet for the land-locked middle Ganga plains to the sea. The Bengal delta had two major ports, known from a large number of archaeological and literary evidences: these were Tamralipta (Tamalites and Taluctae in Classical sources)



Map 5 : Ports of Early India [After Ranabir Chakravarti (ed.),
Trade in Early India, OUP, Delhi, 2001, facing page 1]

and Chandraketugarh (an impressive archaeological site to the north of Calcutta, often identified with the port of Gange of the *Periplus* and Ptolemy's *Geography*). The *Periplus* speaks very highly of the Gangetic nard and Gangetic muslin as major export items from this area. The nard was probably grown in the north-eastern regions from where it was brought to coastal Bengal for shipment. A recently discovered mid-second century AD loan contract document on a papyrus unambiguously states the loading of Gangetic nard on board the ship Hermopollon which stood at the port of Muziris in Kerala. A masterly study of this document by Casson strongly corroborates the account in the *Periplus* about this product from the Bengal coast. The *Periplus* also suggests that Chinese silk could have reached Bengal through the north-eastern borderlands. From the Bengal coast Chinese silk was then transported by coastal voyages to Damirica or Limyrike, i.e. the Coromandel Coast. Attention may be drawn here to a particular type of pottery named Rouletted Ware (RW). The RW was earlier thought to have been an imported pottery from the Roman world. Recent researches by Vimala Begley suggest that these were in use from c. 200 BC to AD 200 and these were not imports from Rome. No less significant is the fact that Rouletted Ware is found on a large number of sites along the entire east coast from Bengal to Tamilnadu. This possibly suggests a distinct network of coastal communication, just like the distribution of NBPW speaks of commercial contacts. Chemical and x-ray analysis of the soil of the RW has led V.D. Ghogte to suggest that Chandraketugarh-Tamluk zone in the Ganga delta was the principal manufacturing and distribution area of this pottery. Thus Bengal assumes a special position in the overland and coastal commerce of this period.

Such a possibility gains further ground by the discovery and decipherment of the Kharoshti-Brahmi documents, known mainly from coastal Bengal, by B.N. Mukherjee. Chandraketugarh has yielded unique inscribed images of sea-going vessels on several seals. These include the figures of a *trapyaga* ship (cf. *trappaga* type of coastal vessel in the *Periplus*), a ship fit for long oceanic journeys (*tridesayatra*) and a ship called the Indra of the Ocean (*jaladhisakra*). Chandraketugarh has also yielded the earliest known visual representation (c. third century AD) of the transportation of horses by ship from an Indian harbour. Tamralipta was undoubtedly the most famous port of Bengal. It is known more from literary sources than from archaeological evidence. The recent discoveries of Kharoshti script in mainland and maritime Southeast Asia (Dvaravati in Burma, Beikthano, Lopburi, Oc-eo in Thailand and Sembiran in Bali) highlight the importance of the ports in the Bengal delta for the commercial and cultural contacts across the Bay of Bengal. It is true that north India's long distance trade is more oriented towards overland commerce of the Silk Road than the maritime trade which is more frequent in both the seaboard of peninsular India.

The *Periplus*, Pliny's *Natural History* and Ptolemy's *Geography* impress upon us that textiles, spices, gems and stone, and ivory were major items of export from India to the Mediterranean world. The *Periplus* suggests the export of some food grain from Barygaza. That paddy was regularly transported from Bengal by ships will be evident from the frequent depiction of stylised stalks of grain on a sea going vessel figuring in inscribed terracotta seals/sealings from coastal Bengal. A combined testimony of Ptolemy's *Geography* and inscriptions of the Satavahanas and the Sakas may indicate that diamond of eastern Malwa was a highly prized export commodity. On the other hand, precious metals (including gold and silver), silk, various types of wine, wine-storing vessels (amphora) and horses were brought from distant sources. The intense interactions with areas abroad led among other things to remarkable cultural exchanges, including the growing popularity of Buddhism in Central Asia and China.



Terracotta seal from Chandraketugarh showing a ship



Terracotta seal from Bengal depicting stylized stalks of grain on a seagoing vessel

One of the surest proofs of thriving trade in north India lies in the profusion of coinage. North India had already been well accustomed to the *karshapana* type of silver coinage (of 32 rati or 57.6 grains weight standard) during the second half of the first millennium BC. The numismatic tradition was indeed enriched with the silver coins of the Bactrian Greeks and Indo-Greeks. While these coins were initially engraved only with Greek legend, they were subsequently inscribed with both Greek and Prakrit legends, clearly showing that they were meant for circulation among Indians. To the Kushana ruler Vima Kadphises (first half of the first century AD) goes the credit of issuing the first gold coins in India. The Kushana gold coinage was based on the gold species of the Imperial Parthian ruler Gotarzes I (c. BC 95-90). The immense variety of devices in gold coinage of Kanishka (generally but not unanimously assigned from AD 78-101) and Huvishka (c. AD 105-145) suggests their wide circulation. The importance of the Kushana coins in international transactions is borne out by the discovery of Kushana coins in Ethiopia. The Kshatrapa rulers of Ujjayini who had probably served the Kushanas before 150 AD also struck high quality silver coins. The find of Roman coins in north India (though these are more numerous in the peninsular part) illustrates its commercial linkages with the eastern Mediterranean region. It is, however, not certain whether the Roman pieces were used as regular coins or bullion in India. Less spectacular than coins of precious metals, but no less significant is the presence of copper coins in profuse numbers in greater parts of north India.

Indo-Greek coins



Kushana Gold coins



Copper coins and coin moulds are found in large numbers in areas associated with several non-monarchical clans in Madhya Pradesh and Rajasthan (Malavas, Arjunayanas, Yaudheyas etc.). Punch marked and cast copper coins along with copper coins struck as imitation of Kushana coinage are available from Bengal and Orissa. These coins were minted on the *karshapana* 57.6 standard and not on the Attic tetradrachm standard. The regular striking of copper coins cannot but point to the use of metallic currency for local level transactions.

8.4.3 Urban Centres

Literary and archaeological sources are replete with information on cities which proliferated to a great extent. The five centuries from 200 BC to AD 300 saw the peak of urbanism in north India, a process which had begun since the sixth century BC. While earlier cities continued to flourish, new cities also appeared; this is known particularly from archaeological evidence. The frequent portrayal of urban life in the sculptures of Gandhara and Mathura schools and Sanchi, and Bharhut also speak of the spread of urban experience over the whole of north India. Urban development is also noticeable in the Deccan and the far south, which will be dealt with in the next Unit.

The most important city in the northwest was Taxila, closely linked with the contiguous city of Pushkalavati (identified with the site of Charsadda). Excavations at Sirkap mound at Taxila highlight the most prosperous phase in the history of the city. It was extended and fortified by masonry wall by Indo-Parthian rulers. It was a planned city with main highways running north-south and smaller lanes going east-west; this provided a grid pattern layout of the city. In contrast to the haphazard construction of dwelling houses of Bhir mound, residential structures were laid out in a well-defined manner. In the planning of this city, the influence of Hellenistic model is evident. A. Ghosh, the noted archaeologist, remarked, 'foreign in origin and conception, Sirkap was not a representative Indian city'. Excavations at Ahichhatra yielded remains of a concrete road in a layer assignable to c. 200 AD. Literary and archaeological evidences point to the continuous prosperity of already established cities like Sravasti, Kausambi, Varanasi and Pataliputra. Remains of a large urban centre have been found out at Khairadih in Uttar Pradesh though its exact identification with an ancient city is yet to be made. A remarkable growth can be marked in the case of Mathura and its nearby site at Sonkh. The area around Mathura enjoyed considerable prominence under the Scytho-Parthian and Kushana rule, especially in the rule of the latter when it served as one of the major centres of the vast Kushana realm. Archaeological materials from layers 23 and 24 at Sonkh (assignable to the Kshtrapa age (1st to 4th century AD) reveal that houses were irregularly placed and streets looked crooked in comparison to earlier periods. Pieces of stones were projected from buildings at street corners probably as a protection from damages by moving vehicle. This may be reasonably interpreted as a sign of greater movements of vehicular traffic. Under the Kushan occupation, regular use of burnt bricks for construction cannot be missed. New fortifications were also raised in Mathura. In sharp contrast to the derogatory remarks about Mathura in the *Anguttaranikaya* (see above), the *Lalitavistara* lauds Mathura as prosperous, extensive, beneficial, for easy availability of alms and teeming population. The *Ramayana* and the *Mahabharata* graphically describe the cities of Ayodhya in Kosala and Indraprastha, the newly founded capital of the Pandavas by burning the Khandava forest tract. In North Bihar, Vaisali (Muzaffarpur) witnessed three successive fortifications between second century BC and second century AD. Urban development can also be noted in Bengal. While the two earlier urban centres at Mahasthan and Bangarh continued to flourish, new urban centres sprang up in the early centuries of the Christian era. The most prominent of these were Mangalkot, Chandraketugarh and Tamluk. Of these Tamluk was the same as the ancient port of

Tamralipta, while Chandraketurgarh, a huge archaeological site, is often identified with the port of Gange in the *Periplus* and Ptolemy's *Geography*. Orissa also experienced the growth of a major urban centre in the form of Sisupalgarh, located close to Bhuvaneshwar. A massive mud rampart was raised around 200-100 BC and this was further reinforced by brick rivetments. The most important feature of Sisupalgarh was its magnificent gateway complex.

Urban settlements of north India generally share certain common features, as revealed by archaeology. These are usually fortified, occasionally with a rampart or a moat. Several streets are noticeable in urban areas which also bear increasing use of burnt bricks. Seal cutting and bead making industries are abundant in urban areas. The urban centres of north India generally had characteristics which were typical of 'primary' urban centres of the sixth-fifth century BC during the age of *mahajanapadas*. Seen from this angle, the spread of urban centres was modelled more or less on the urban experience in the middle Ganga valley. Hence these had their epicentre in the middle Ganga plains; the later urban centers, therefore, are sometimes regarded as 'secondary' ones, influenced by the formation of 'primary' cities. Most of the urban centres commanded a rich and strong agricultural hinterland from where came the major food supply to the city. Most of the products manufactured and transacted in the city were rooted to agriculture and animal rearing (e.g. textile production, and sugar making craft). H. Sarkar in a masterly study of contemporary cities in Andhra considered urban centres as 'agro cities'. Long distance trade, including trade with the eastern Mediterranean region, was an additional factor to urban growth. But it was not the prime factor for urban proliferation in north India. The city of Mathura was possibly an exception to that. Mathura was not situated in a very flourishing and fertile part. It did not grow profuse paddy. Mathura had actually one outstanding product of its own, i.e. *satika* (a garment, from which the term *sari* is derived). Mathura's prominence as an urban centre cannot be explained in terms of its agrarian hinterland or its diverse crafts. But its location at the convergence of several important overland routes enormously increased its importance. Its role as a nodal point in long-distance trade paved the way for its prosperity as an urban centre. The *Avasyakacurni* and the *Brihatkalpabhashya* clearly recognise that Mathura's prosperity was rooted not to agriculture but to trade. Many of the urban centres also functioned as major political centres. A recent survey of urban centres of ancient India suggests that several urban areas derived their prominence from being major religious centres. Those urban centres where converged many functions, i.e. political, economic, cultural, were more prominent than the centres which were known for a single function, for example long-distance trade or their administrative importance. The relatively less orthodox social and cultural life in urban centres cannot be missed. In the sculptures of the Gandhara and Mathura school a rich assemblage of diverse dress, decoration, ornaments, hairstyles can be seen. Bacchanalian scenes and depictions of drinking bouts were also not uncommon. Donors at the time of recording their gifts to Buddhist and Jaina monasteries rarely referred to their *varna* status, though *varna* assumes enormous importance in the *Dharmasastras* of Manu and Yajnavalkya. The donors usually recorded their respective occupations. The urban culture, thus, considered occupation as a more important determinant of social status than the orthodox criterion of birth. A marriage between the families of a jeweller and an ironmonger was hardly frowned upon in the urban context of Mathura. In the same city a courtesan could record her lavish donations to the Jaina establishment and also inform that her mother too was a courtesan. In this atmosphere of burgeoning cities it was possible for Caraka, the master physician, to declare that the physician's wealth did not consist merely of the goodwill generated by the relief to his patients, but also by the material wealth and patronage secured by him from kings (*isvara*) and wealthy persons (*vasumantah*).

8.5 SUMMARY

The period spanning from *c.* 600 BC to AD 300, covering nearly nine centuries, appears to have witnessed considerable commercial activities which often occurred at major urban centres. As towns and cities generally figure as centres of commerce, the study of early trade is connected with that of urban centres. These nine centuries certainly marked brisk trade both within the subcontinent and also beyond. Commercial ventures of merchants are known not only in north India, but also between north India and southern part of India. To this must be added the evidence of external contacts of north India from *c.* third century BC onwards and especially during the first three centuries of the Christian era. The external contacts of north India usually took place through the northwestern frontier areas, which was well connected by overland routes with Central and West Asia. During the first three centuries of the Christian era there was brisk trade between India and the Roman Empire; north India seems to have derived considerable advantage out of this trade. The deltas of the rivers Indus and the Ganga, respectively on western and eastern flanks of north India, provided important outlets to the sea. The flat plain of north India and the extensive Ganga valley, virtually without any natural barriers, were conducive to movement and communication both by overland and riverine routes. During the first three centuries AD one can observe unmistakable growth both in commercial activities and spurt of urban centres. Urbanisation, as the term suggests, is not merely listing or identifying cities and towns; but it looks into the process of how and why cities grew or declined. In our survey of urban centres from *c.* 600 BC to AD 300 we have taken into account the growing number of cities in north India and also offered explanations of the reason of the increase of urban centres, especially during the period from 200 BC to AD 300. From *c.* 600 BC onwards, north India and then gradually the greater parts of India experienced widespread sedentary settlements, territorial polities (mostly monarchical, some non-monarchical), writing of documents, coinage and prosperous city life, new enquiries in religion and philosophy. It signalled a new kind of society and culture which is termed as early historical. The early historical phase followed, but was different from, the pre and proto-historic phases of Indian history.

8.6 GLOSSARY

Achaeminid Empire

Achaeminid or Persian empire, founded by Cyrus the Great in 559 BC, was vastly expanded by Darius I, the greatest ruler of the Achaeminids. The Achaeminid empire covered modern Iran, Iraq, Turkey, Armenia, Israel, Egypt, Turkmenistan and Uzbekistan, and parts of the lower Indus valley. Persepolis, the capital of the empire, was founded by Darius I and destroyed by Alexander the Great.

Attic Tetradrachm

It is a Greek weight standard of 17.06g used by Indo-Greek rulers for issuing silver coins.

Avadana

In Buddhist tradition *Avadana* is a type of literature consisting of stories of the deeds of Buddhist personalities from the past. It is also known as *Apadana*.

Avasyakachurnni

A Jaina text

Bent Bar Coins	A bar like punch marked coin with its two ends bent-up (see illustration on page 89).
<i>Brihatkalpabhasya</i>	A Jaina text
Coin Hoard	A deposit of old coins buried beneath the soil, when discovered, is called a coin hoard.
Eastern Mediterranean Areas	The area broadly encompasses Egypt, Greece, Turkey, Israel, and Jordan.
Han China	The Hans were the contemporaries of the Romans. During the Han period China officially became the Confucian state. The Han ruling line was interrupted by Wan mang during the period from AD 9-23 and known as Hsien dynasty. On account of this interregnum the Han dynasty is divided into two parts Early (Western) Hans with capital at Ch'ang-an (present Xi'an) and Later (Eastern) Han with capital at Loyang. The Western Han rule lasted from BC 202-AD 9. The Eastern Han ruled from AD 25-220.
Herodotus	He was a Greek by birth. He is accredited with the distinction of being world's first historian. He wrote <i>The Histories</i> . In the book he has described the expansion of the Achaemenid empire under its kings Cyrus the Great, Cambyses and Darius I. It also contains excellent ethnographic descriptions of the people that the Persians had conquered.
<i>Jatakas</i>	A Pali text about the Buddha in his former births.
Karakoram	The Karakoram mountain ranges marked the Western end of the Greater Himalayas mountain chain and contain the greatest concentration of high peaks on earth as well as the largest expanse of glacial ice outside the polar regions. The winter snows from these mountains provide the meltwater for the mighty river Indus that cuts through the Karakoram from its source in Tibet. Karakoram pass lies on one of the highest trade routes in the world for Yarkand in Central Asia. The route begins from the Nurbra Valley in Ladakh over the Tulimpati La, and Siser La leading to the pass. The Karakoram Highway in Gilgit, Chilas, etc. have yielded considerable antiquities.
Kshatrapa	A Saka ruling house having two branches, one ruling from Mathura for sometime and the other ruling in western India till the 4th century AD.

Mahajanapadas

States flourished during the 6th century BC in north India. *Mahajanapadas* were traditionally 16 in number. Most *mahajanapadas* were monarchical, a few were non-monarchical (*ganarajyas*).

Mesopotamia

Here world's first civilization flourished. Mesopotamia means "the land between two rivers". The name was appropriated because ancient Mesopotamia was located between the Tigris and Euphrates rivers in the present day Middle Eastern country of Iraq.

Oman Peninsula

Surrounded by the Gulf of Oman, the area is 320 km wide. The Gulf of Oman connects Arabian Sea with the Persian Gulf. The north coast is flanked by Iran while the south coast is touched by Oman and in the west is United Arab Emirates.

Parthian Empire

The Parthians defeated Alexander the Great's successors, the Seleucids, conquered most of the Middle East and South-west Asia, and controlled the silk route. The Parthians at one time controlled the areas now in Iran, Iraq, Turkey, Armenia, Georgia, Azerbaidzhan, Turkmenistan, Afghanistan, Tajikistan, Pakistan, Syria, Lebanon, Jordan, Palestine, and Israel.

Rouletted Ware

A wheel turned pottery so named because of concentric rouletting in the middle of the dish/pot found in large numbers of sites close to the east coast of India.

Roman Empire

The mythical founder of Rome was Romulus who founded the city in BC 753. In the beginning the Roman empire was a republic. Julius Caesar (BC 44 d.) was one of the most important military commander of the republican era. Octavian Augustus' (BC 27) rule marks the end of the Roman republic. The Roman empire lasted till AD 312 when their last emperor Constantine got converted to Christianity. Then onwards the empire is known as Holy Roman Empire with Constantinople as its capital.

Scylax of Caryanda

Scylax was an ancient Greek explorer who was a pioneer in geography and the first European observer to give an account of India. Scylax of Caryanda (in Caria, the South West of Modern Turkey incorporated in c 545 B.C. in the ancient Archaeminid Empire as the Satrapy Karka) lived in the time of Darius Hystaspis (521-485 B.C.) who

commissioned him to explore the course of the Indus. He sailed West through the Indian Ocean to the Red Sea. Scylax wrote an account of his exploration referred to by Aristotle in his *Politics*.

Seleucus and Seleucid Empire Seleucus was the founder of the Seleucid empire (BC 312-65) who ruled over Asia Minor and Syria from BC 312-280. Seleucus accompanied Alexander the Great in his Eastern Campaigns. After Alexander's death he got the Babylonian Satrapy (modern Afghanistan, Iran, Iraq, Syria, Lebanon, and parts of Turkey, Armenia, Turkmenistan, Uzbekistan and Tajikistan) as his share. In 64 BC the Roman general Pompey the Great brought the Seleucid empire to an end.

Silk Road Traditionally a famous overland route stretching from China in the east to the eastern Mediterranean in the west though Asia and west Asia (see map3).

Stadia Ancient Greek units of length ranging in value from 607 to 738 feet.

Sumerian Civilisation The civilization flourished between BC 4000-3000 on the rivers Tigris and Euphrates. It is also known as Mesopotamian civilization. Ancient Sumerians invented wheel and created mathematical symbols. Sumerian civilization was the first to bring writing to the world called 'cuneiform'.

8.7 EXERCISES

- 1) On the basis of the Ashokan edicts and the information provided in the Buddhist sources try to map-out the trading activities during the Mauryan period.
- 2) Compare the ruins of Ataranjikhera with the description of the city of Mathura given in *Anguttara Nikaya*. In your view which city appeared more urban and why?
- 3) Enumerate the importance of the silk route during c. BC 600 to AD 300.
- 4) On the basis of the Sanchi/ Bharahut inscriptions examine the trading activities of the contemporary period.
- 5) Assess the economy of the contemporary period on the basis of the study of the coinage with special reference to the role of the state.

8.8 SUGGESTED READINGS

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UNIT 9 PATTERNS OF TRADE, URBANISATION AND LINKAGES: PENINSULAR INDIA (C. 300 BC TO AD 300)

Structure

- 9.1 Introduction: Early Historical Urbanism
- 9.2 The Deccan
- 9.3 Eastern Deccan – Andhra Pradesh
 - 9.3.1 Urbanization
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- 9.4 Tamilakam (including Kerala)
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 - 9.4.3 Inter-Regional Trade: Shifting Patterns
 - 9.4.4 Articles of Trade
- 9.5 The nature of Indo-Roman Trade
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9.1 INTRODUCTION: EARLY HISTORICAL URBANISM

Exchange networks in South India existed from the Proto-Historic, i.e., Megalithic period assignable to a period from the middle of the first millennium BC to the beginning of the Christian era i.e. the iron age. This is indicated by the archaeological material of the Megalithic sites excavated in various parts of south India with two diagnostic features viz., iron and the Black and Red Ware (BRW) pottery. The presence of objects identifiable as items of trade, especially in the form of precious and semi-precious objects, exotic items not known to the region concerned and also inscribed potsherds with names or graffiti point to the regional circuits within which exchange was carried out. However, a comparative study of the archaeological remains and associate finds like coins in the Megalithic context has not been systematically made and hence these exchange networks are not yet clearly definable. Yet the fact that these networks may have continued and developed into a regular exchange system in the early historical period i.e. third century BC to the third century AD, is well attested by different categories of evidence such as archaeological, epigraphic and numismatic, apart from the early accounts of foreign origin, like the Classical writings of the Greeks, Romans and Egyptians. The distribution of Ceramic industries would also provide evidence of local trade networks and their continuation in the early historical period. In the urban centres of the western Deccan and Andhra, the Northern Black Polished Ware (NBPW). BRW, Coarse Red Ware (CRW), Black Slipped Ware (BSW) and Black Ware (BW) occur marking an overland

network between the north and the Deccan with Gujarat forming an important part of the Deccan trading circuit. The Rouletted Ware (RW) of the Romans is generally more common on the east coast and north Srilanka. The Russet Coated Painted Ware (RCPW) is mainly found on the west coast (Malabar), with a concentration south of the Krishna. This points to yet another circuit, the Deccan remaining outside of it. The early historic exchange networks thus emerged out of the earlier sporadic exchanges of the Megalithic context and the systematic trade activities that developed from the Mauryan times linking the whole subcontinent through trade routes and communication channels marked by a large number of Buddhist centres and political administrative centres of the Mauryan and post-Mauryan polities of the Deccan, Andhra and Tamil regions. Trans-Oceanic trade with the western countries, especially the Mediterranean region, was a great impetus to this trade. The south Indian traders added another circuit to it, viz., the South-east Asian and Srilankan links.

The epicentre of what is called the second urbanisation in India was located in the Ganges valley, gradually spreading with the rippling effects of trade extending to the southern regions and establishing trade networks and craft and commercial centres leading to the emergence of major cities and ports. It opened up peninsular India to extensive trade links both with north India and with the outside world. The Deccan and Andhra regions thus became from the early historical period regions of intensive trade, major highways and feeder routes and commercial organisations and hence the early historic urban centres came up more often in areas of commercial importance and concentration of craft activities. For south India, however, this period represents the first urbanisation, the degree of Mauryan impact varying in different regions such as the western Deccan, eastern Deccan and the Tamil region including present Kerala. Hence it would be appropriate to look at this process in these regions separately, albeit with the larger perspectives in view.

For example, the Tamil region had less intensive inland commercial activity; while its commerce was fostered more due to maritime contacts and long distance trade in the early historical period. Markets and commercial centres were not oriented towards internal trade networks. The merchant and other commercial and craft organisations known to the Deccan and Andhra regions, especially along trade routes marked by Buddhist centres were much fewer and have not come up with such impressive urban architectural remains (Buddhist rock-cut and structural monuments) as in the Deccan and Andhra. Maritime trade seems to have been a major impetus to craft production and commercial ventures.

In the Deccan regions, north of Tamilakam (including Kerala), the degree of Mauryan political and economic influence was much greater and western, middle and eastern Deccan provide varying nature of commercial and craft production activities and also their links with the Mediterranean regions especially Roman, Egyptian and Arabian countries.

It is also important to note that the Gujarat coast played a more direct role in the regional circuits of trade in western Deccan and the Malabar coast, whereas eastern Deccan had closer links with the Bengal, Orissa and Tamil coastal trade and traffic down to Srilanka.

9.2 THE DECCAN

In the Deccan an earlier rudimentary exchange network existed which the Mauryas possibly exploited. The opening up of the peninsula may have started initially from the 6th century BC with the effects of changes in the Ganges valley trade expanding southwards.

From the Mauryan times this became more regular and intensive, both due to political and economic impact resulting in secondary state formation (i.e. the Satavahana state) and urbanisation. The spread of the Buddhist religion and ideology was a major component of this impact. Hence the routes which connected the Ganges valley with the Deccan may be identified as those passing through central India via Sanchi/Vidisa and Ujjain, which is indicated by the Baveru *Jataka* charting the route followed by a *vanija* from Varanasi to Prathishthana (Paithan) through central India. Pauni, south of Nagpur, one of the earliest Buddhist sites south of the Vindhya, may also have been on a major route as may be seen in the distribution of mid-Deccan sites (Telingana region) linking it to the Andhra sites of the Krishna-Godavari delta. Sannati could well have been another site (with Asokan edicts) marking the southern route to Karnataka. Hence, the rapid spread of Buddhism led to the emergence of Buddhist monastic establishments with *caityas* and *viharas* in almost all the sites with some centres as nodal points developing into big towns or cities such as Nasik, Sopara (port) in western Deccan and Amaravati and Nagarjunakonda in eastern Deccan (Andhra Pradesh). The proliferation of Buddhist sites in the Andhra region is an important indicator of this expansion of trade and exchange networks (nearly 400 sites are reported and major ones excavated). In fact trade was important for the monastic economies and the monetised exchange which developed during the Satavahana and post-Satavahana periods (2nd century BC to 3rd century AD). Excavation of huge rock-cut caves and building of monumental *stupas* and *caityas* in stone and brick, the provision for monastic estates by ruling families and merchant organisations, investments with guilds for regular income and cash transactions, especially purchase of necessities like cloth and sale of the produce of monastic estates made the trade network important for the monasteries. The Nasik inscriptions refer to the expenses for minor necessities and the Kanheri inscriptions (outskirts of Mumbai) record money endowments to ascetics (*pavajita*) and nuns (*pavatika*). The Kuda inscriptions record donations of both land and money for images, *vedika* and cisterns. This attests to the fact that the monks and nuns retained their worldly possessions after joining the *Sangha* order. The dichotomy between theory and practice is underlined by the fact that though the *Vinaya Pitaka* (*Cullavagga*) restrained the use of gold and silver by certain *samanas*, and the *Jatakas* denounced *bhikkhus* (monks) indulging in trade, in practice the monks did. *Buddhaghosha* expresses a liberal attitude saying that gold and silver are acceptable if the proceeds of the property and the transactions were administered by laymen i.e. a body of regular officials for administration. Apart from the monasteries the merchants themselves emerged as organised groups like the *Nigama* which led to organised trade and craft production in the Western Deccan and the Andhra region. Control and co-ordination of external exchange relations seems to have been exercised by political authority like that of the Satavahanas, through negotiations by gifts or presentation. The *Arthashastra* of Kautilya refers to state machinery (*panyadhyaksa*) fixing the prices of various commodities in what is described by Karl Polanyi as “administered trade”. The *Arthashastra* refers to the collection of *sulka* at the city gates and affording protection to the traders with caravans, when they stayed in villages. The *Jatakas* would, however, indicate only a marginal control over the economy by the state. The complex mechanism of trade, commercial transactions at different levels were to a large extent governed by the nature of the commodities handled, while the king could well have decided the price or value of the commodities he consumed.

The *Sarthavaha* or leader of merchants was the most influential of the traders and led his caravan through inhospitable regions like desert and forests probably with the help of guides and protected the merchandise with the help of mercenaries. The *sagara palagavas* mentioned in a Kanheri inscription are believed to be a community of traders. There were itinerant hawkers and peddlers. Literary texts distinguish between *vanija*, a

general merchant and the *setthi*, the financier and the *Sarthavaha*. The Satavahana inscriptions refer to the *setthi*, *vanij*, *negama* and *Sarthavaha*, the *negama* being a market town. The merchants obtained goods either at the ports or by mutual agreement with others living along the border. There were weekly markets and fairs, while regular shops existed in urban centres, as indicated by the *Jatakas* referring to the ivory workers' street, shops of perfumers and florists.

The crafts were also organised and had their own *srenis* or guilds of which the traditional number mentioned in the *Jatakas* is eighteen. References to the *senipamukha* (head of the guild), the distinction between the master craftsman (*karusasitr*) and *Jetthaka*, *Kamma jetthaka*, master garland maker and master mariner in the *Arthasastra* and the *Jatakas*, imply craft organisation with apprentices and masters. Inscriptions of the Deccan also record investments made with various guilds (*senis*) – such as *vasakara* (bamboo), *kasakara* (brazier), *havasa* (weaver), *kularika* (potter), *odayantrika* (dealers in water machines), oil millers (*Tila pisaka*). In Govardhana (Nasik), donations made by the guilds such as *dhanika seni* (corn dealers) and the bankers guild are recorded. Many more professionals are known by terms like *manikara* (jeweller), *suvarnakara* (goldsmith), *heranika* (gold worker), *lohavanij* (trader in iron goods), *sela vadhaki* (stone mason), *godhika* (perfumer) and so on. The craftsmen seem to have specialised their crafts in villages in the vicinity of towns/cities, some of whom worked on their own with a number of apprentices or else organised into guilds, which acted as banks.

The complexity of the exchange system and increased division of labour are indicators of economic growth. The development of guilds to organize and monitor complex commercial transactions are attested to by the Nasik inscriptions recording investment in two separate weavers' guilds at Govardhana, charging different rates of interest and referring to varying qualities of cloth and different kinds of textiles. Literary references also indicate a complexity of commercial transactions from the itinerant trader hawking his goods at the bottom of the scale to the guilds at the top. The *Jatakas* also speak of a combination of monetary transactions and barter in the economy, both in internal trade and in external trade.

The exploitation of the commercial network required a sound agricultural base and hence the proliferation of settlements in the fertile valleys of the western Deccan. Migrations and the development of new agricultural areas resulted in a weakening of the old social structure leading to the development of new networks of relationships. Monasteries stepped in at this juncture to fill the void and propagated the interdependence of monks and lay followers. Large donations were made by rulers to monasteries. Gift of villages to the *Bhikkhus* and the monasteries by the Satavahanas from the early 1st century BC show that monastic establishments acquired greater wealth; donations were increasingly made by rich citizens and prosperous workers. Money was invested with guilds, the interest from which was to be paid to the monasteries

The centrality of community patronage in Buddhism and to the Buddhist *Sangha* is marked by donations from various families and guilds of artisans and merchants, women donors, small-scale landowners (*gahapatis*) and others, replacing kinship networks of production and distribution (control over competition) by a network of a community identified by religious practice. From the perspective of the socio-political function of such a conversion and change (for identification with a community), there was an even more important association, that of the nexus between the ruling family, the Buddhist *Sangha*/order and the *Srenis*/guilds of artisans and traders. Donations from a member of the royal family to the *Sangha* (at Nasik) were deposited with the guild of weavers,

stipulating that the interest would go towards providing for the monks and other sundry expenses establish this nexus.

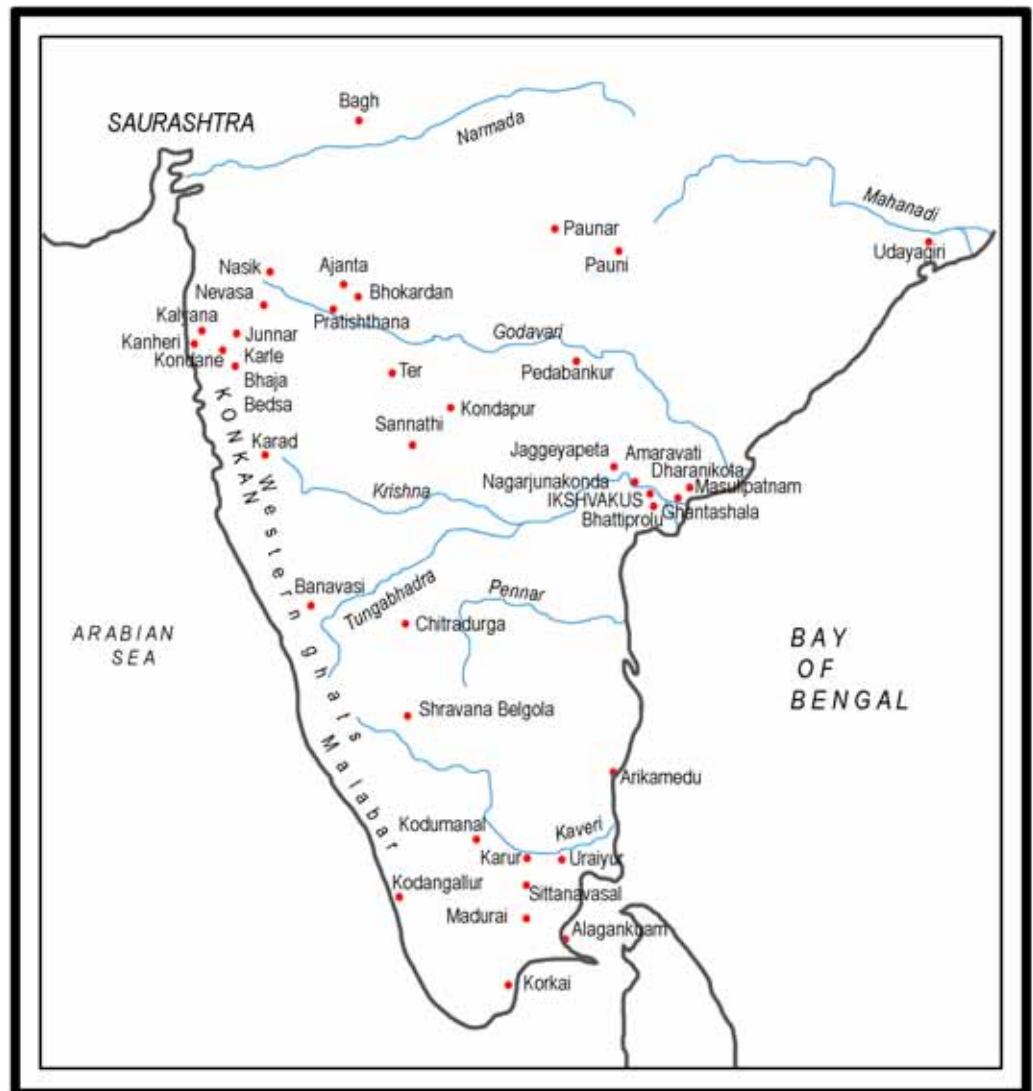
9.3 EASTERN DECCAN – ANDHRA PRADESH

The transition from the proto-historic Megalithic to the early historic culture is crucial in the developmental processes of the exchange networks, trade and urbanism. Evidence of the transition is found in a number of Andhra sites, from the pre-Satavahana levels and early historical layers of occupation. They mark the emergence of localities representing early historical sites and the transformation of society towards state societies enabling the emergence of the Satavahana state.

9.3.1 Urbanization

Internal developments and external impetus both in urbanisation and state society/structure are attested both in the form of interaction with north India, western and central Deccan, particularly the influence of the economic control of the Mauryan metropolitan state and the areas of mineral resources. The Andhra region provides equally important evidence on the expansion of trade and craft production in the pre-Satavahana period, which under the Satavahana and Ikshvaku (c. AD 227-306) rulers witnessed a transition from a clan based society to one organised on professional and occupational lines. It also marked the emergence of kingship and regional state formation as a secondary development due to Mauryan impact and commercial development, both due to inland trade and links with the other parts of Deccan and even north India in the Mauryan and post-Mauryan periods. There is evidence of an initial expansion of the agrarian base of the economy especially in the riverine plains and delta, craft specialisation and subsequently overseas trade. Some regions show a distinct pattern of crafts based on local resources, like iron and metals, which by itself provided the impetus to urbanisation and organised commerce and were hence drawn into the early historic urban processes, although they continued to be kin-based organisations, as for example, in Central Deccan, where several centres with mud fortifications and evidence of local chiefs or powerful elite groups exercised control over production. Three centres are of special significance due to systematic excavations, such as Peddabankur, Dhulikatta and Kotalingala where the transition from the proto-historic Megalithic culture to the early historic urban processes are recognisable in the archaeological material. The question of urbanisation is intrinsically related to this transition. The transition from the proto-historic to the early historic phases—i.e. the links in the excavated sites is significant, as they provide the regional perspectives, which are equally important for the broader peninsular and sub-continental developments. The antecedent cultures available in this region persist as “non-urban” forms in the early historical phase, which is when urbanisation is supposed to have reached its high watermark in the Deccan as a whole. Though several sites in different parts of the Deccan have been excavated, no integrated picture of the stages in the evolution of the second urbanisation in these parts, or the character of the individual settlements located there in, have been brought forth. At the same time considerable evidence for contact with Roman trade can be mustered and this external trade as an important variable for the stimulation and growth of Deccan urban centres cannot be denied. Nevertheless the question of stimulus from both the Mauryan intrusion and Roman contact at the micro-level needs to be understood. For in this region, evidence of the impact of the use of and distribution of iron technology over the well established Neolithic and Chalcolithic agrarian communities seems to be available. It has been observed that Andhra Pradesh is the ‘richest area so far as historical sites are concerned’ which are said to range from the 3rd century BC to early medieval times and further, that many of these are invariably noteworthy because

of Buddhist affiliation like *Stupa* complexes and *Viharas*. Other sites such as Dhulikatta, Chandavaram, Kotalingala, Satanikota, Kesaragutta and Peddabankur, have yielded common data, but coordination of the archaeological evidence from these sites is still awaited.



Map 1 : A General Map of Early Historical Peninsular India C 200 BC to AD 300
(After Romila Thapar, *Early India from the Origins to AD 1300*, Penguin, 2002, Map 8)

Inscriptions are more numerous for the early centuries AD and literary references from Indian and classical writings as also art and architectural remains are significant for the latter half of this period i.e. the early centuries of the Christian era. Hence primacy is to be given to archaeological sources which reveal earlier settlement patterns. For example in the middle parts of the Deccan (Telangana, which is a part of Andhra Pradesh), in the above three settlements (namely, Kotalingala, Dhulikatta and Peddabankur (and also Kondapur?), uniform structural remains, religious and secular, have been noticed, such as those of a political nature in the form of remnants of fortification walls, i.e. ramparts (Dhulikatta); religious structures like *stupa* and *vihara* complexes; and heterogenous structures like dwellings, shops, storage areas, working area, irrigation related structures, burial areas and so on. At Kotalingala remains of a mud fort (rampart of pre-Satavahana times); wharf (brick structure), a palace complex, residential quarters and granaries have been noticed. The most outstanding structural monument is the Buddhist *stupa* (with limestone carvings), probably of pre-Satavahana date, marking the beginnings of Buddhism in the mid-Godavari valley. Peddabankur has no fortification but is a substantial and well inhabited site with some industrial buildings (also found at Kondapur) apart from *Caityas* and other religious structures, all plain and simple “but quite efficient and skilful”.

Residential quarters and palace complex indicate the presence of a sort of ruling class or dominant group at Dhulikatta and Kotalingala. Coin finds also indicate politically powerful groups even from pre-Satavahana times, who may have been Andhra kings. Thus, a confederation of petty and tribal rulers and other kingdoms controlled by Andhra kings may be located at Kotalingala, some of the ruling clans belonging to powerful land-owning agricultural communities. Peddabankur and Kondapur appear to be Mint centres (pre-Satavahana?).

They had an independent political and economic existence and in view of the variety of coin types at these centres, the obvious conclusion would be that the regional economy was dependent on trade and commercial transactions of a certain magnitude. Craft production in particular was evidently one of the mechanisms through which local groups participated in spheres of economic activity like trade and commodity production. Iron and metallurgy were practised as home industry. In Peddabankur a terracotta forge unearthed in excavations points to the craft of iron forging. Trade was stimulated not so much by the export of an agricultural surplus but rather by the supply of iron objects and other related commodities. As centres of production Peddabankur, Kondapur and other sites have large number of coins of various types, terracotta, bead materials, evidence of working in precious and semi-precious stones and pottery making on a large scale. In the mid-Godavari complex the artisanal groups with strong kinship ties persisted in the organisation of their work. These sites were connected to Ter and beyond to Vidisa (near Bhopal, Madhya Pradesh) and Ujjain (Madhya Pradesh). Inland trade stimulated the growth of new areas of economic activity in a region not supported by a large and extensive agrarian base. Many such historical sites are found clustered together in the mid-Godavari valley, but not all of them were urban. Interdependence among these sites show that tribal/nomadic population was also integrated into the new economic system. Heterogeneity in the social structure emerged with the changing context and references to *gahapatis*, both agricultural and merchant groups, apart from artisans. Buddhist monks formed a recognized leading group of the population. Dominant social groups in the region maintained the networks of trade and production resulting in the growing strength of certain local elite. Political power in pre-Satavahana period was necessarily segmented, but under the new forces of social change, begun as a consequence of expanding agriculture and mercantile activities which enabled the well settled tribal communities to interact with each other efficiently, it became possible for the early Satavahanas to establish a larger network of political and economic control with the mid-Godavari valley as their nucleus.

Andhra is traditionally known for its “walled towns”, some of which may well have been of pre-Satavahana date with local chiefs or powerful elite. Several such clans are known from the inscriptions of Amaravati (Dharanikota-Dhanyakataka) and Nagarjunakonda (Vijayapuri), two major urban centres of the early historical period, which were also politically important centres of the Satavahanas and Ikshvakus. Names like Dhanaka (Nagarjunakonda), Kubiraka (Bhattiprolu) and clan chiefs like the Mahatalavaras of Andhra and the Maharathis of western Deccan (Rathikas and Bhojas) may also be of similar lineage groups who later came to be subordinated by the Satavahana and Ikshvaku rulers. Frequent references to *gahapati* (important householder), *heranika* (goldsmith or dealer in gold) and *vaniya*, *sethi* (merchants of different status) as also the *Sarthvaha* (long-distance caravan trader) in the Andhra inscriptions point to the changing social context and economic organisation, i.e. from clan affiliations to organised economic groups and their professional and occupational basis. Community patronage was crucial to the development of the Buddhist *Sangha* with their *stupas* and *viharas*. Collective donations giving place to individual ones indicate the emergence of private property. Amaravati, a major nodal point in this network, with its *mahacaitya* was more

commercially oriented with the predominance of *sethis* or bankers, while Nagrajunakonda (with its Buddhist and Brahmanical structures and secular remains) had greater dependence on its agrarian base.

External trade was a second major factor in the processes of change and the western trade i.e. with Rome and the eastern Mediterranean assumed great significance for the region's urban development. Just as Sopara for western Deccan in the 2nd-1st centuries BC, the eastern Deccan ports played a more important role in the 1st and 2nd centuries in the Indo- Roman trade and continued to do so in the 3rd-4th centuries for the south east Asian trade also. Claudius Ptolemy (c. 150 AD) refers to the ports of Kontakosyla (Ghantasala), Kodura and Allosygne. Apheterion meaning point of departure was another port in the Maisolia region (Krishna delta). Other sites of commercial importance are Alluru, Adduru, Garikapada, Gudivada, Gummadidduru, Jaggayyapeta, most of which have Buddhist associations, the main centres of nodal importance being Amaravati and Nagarjunakonda. These two cities have come up with evidence of urban spaces, structures of political and religious significance, apart from inscriptions and silver Punch Marked coins, Roman gold coins, Satavahana coins, Black and Red Ware and Rouletted Ware and inscribed ivory seal among the many archaeological material remains.

9.3.2 Maritime Trade

The importance of sea trade carried on both by Indian merchants and by foreign merchants i.e., Arabian and Mediterranean merchants, in the early urbanisation process has been recognised and the Classical accounts by Greek and Egyptian geographers and travellers have proved to be of immense value as they contain details of the items of export and import as also the ports from where they were shipped or collected. The major destination of the export commodities was the Roman world, while the Persian Gulf and the Red Sea were both a destination and transit zone. From southern Arabia and Cape Gaurdafui (in modern Somalia) raw materials like iron, copper and silk were reworked and sold as finished products. To Alexandria and the Roman market, apart from timber from Bharuch, ebony, bamboo etc. were exported. Alexandria was also an important centre for the manufacture of different kinds of metal work, glassware, perfumes, unguents, and other aromatic products. Indian merchants moved between India and Alexandria. The Red Sea (Coptus, in particular) trade was important and the trading centres and ports on the Red Sea were well guarded under Roman authority. Till 297 AD Palmyra (in modern Syria) was the best documented centre of Rome's eastern frontier. (See Unit 8, Maps 4 & 5 for this trading network)

The *Periplus of the Erythrean Sea* provides evidence of the nature of commodities both of import and export. From Barygaza (Barukaccha) were exported agricultural products in exchange for frankincense, tortoise shell and rhinoceros horn. The majority of export items was in the form of raw materials and was exported through the west coast in the early phase of this inter-regional and long distance trade apart from bulk items like ebony, teak, blackwood, sandal wood, bamboo, tusks of ivory and iron, apart from aromatics—spikenard, bdellium, costus, lycium and saffron, which were easily portable; Spices like long pepper, malabathrum, and cinnabar were of medicinal value and sesame for oil and spice. Dyes such as indigo and lac, semi-precious stones like agate, red jasper, carnelian, and onyx and exotic bird are also mentioned by the *Periplus*. Manufactured items included textiles, broader Indian cloth called *monakhe*, *sagmatogenai*, garments called *gaunukai* (which appear to be Greek corruption of Indian names), mallow cloth and some muslin

these resources—both money and transportation for their procurement—were obtained. All the woods exported (ebony, blackwood, sandalwood and bamboo) are indigenous to the peninsula. Teak came from the Satpura range, blackwood from north Konkan and central India, Western Ghats, ebony and sandalwood from the Malabar coast, Bharuch being the entrepot for wood from Malabar and Indonesia.

Aromatics, a major item of export consisted of bdellium from the Tapti basin, Sind and Kathiawar; semi-precious stones—agate, red jasper and onyx—from the Deccan; muslins and mallow cloth from Ter in Deccan, a cotton growing area, (textile manufacturing attested by dyeing vats from excavations); indigo from western India; spikenard from the Himalayas and also Ujjain?; costus from Kashmir; malabathrum from the southern slopes of the Himalayas and also the north Kanara district. According to Pliny (*Natural History*), lycium was sent to Rome in rhinoceros and camel skins by Indians. Raw cotton from India reached Alexandria and cotton fabrics of India were sent from many regions of the north and south, those of the Deccan and Tamil regions in the south being of considerable variety and fine texture. Silk also a major export item, was a part of the transit trade, as the Central Asian Silk route came to be abandoned due to constant movements and hostility of the Central Asian tribes in the early centuries before and after the Christian era. Indian iron, according to the *Periplus*, was an important export item. Iron smelting has been located in several excavations, Vidarbha—Maikund and Kodumanal in Tamilnadu located near the iron ores of Salem, being a major source.

The nature of imports varied as it included both essential and luxury items. The *Periplus* refers to frankincense and tortoise shell in exchange for grains. Other items were wine, dates, glass, tin, lead, copper or antimony, realgar, coral, gold, and silver coins, vessels of silver, singing boys and maidens, beads, rings, lamps, parts of wine jugs in excavations (as at Ter), carved alabaster (Junnar), lapis lazuli (Bhokardan), a tiny fig of lapis lazuli at Brahmapuri (south Karnataka), lamps manufactured by Yavanas, Brahmi inscriptions from Alluru, Krishna district, recording gifts of such lamps. Varieties of glass beads include blue glass beads; faience and kaolin were used as raw materials for pottery, mirror handles and necks of unguent bottles. Kaolin also led to development of sculpture in western Deccan. In the western Deccan sites are found shell bangles (Nevasa, Maheshwar, Bhokardan), ivory seal matrix (Kondapur), ivory statuette (Ter), which could well be manufactured items from both indigenous and foreign sources. Similarly, metal—iron and copper—for tools and implements and also for utensils, etc. (Pitalkhora, Bhokardan, Kaundinyapura (sites in western Deccan with Buddhist associations) may be of both local and foreign sources, while antimony rods and silver found occasionally in excavations (Nevasa) seem to have been imported. Demand from Indian markets was for lead, tin, coral, glass, and wine and specific products from some areas. Ceramics from the Mediterranean or bronzes made in Campania (in modern Italy) are more likely to have come via the frequently used Red Sea route than to have tangled with Parthian hostility.

9.3.3 Transport

The *Periplus* says that goods were carried by wagon between Paithan and Ter in the Deccan and Bharuch, a distance of 150 km. The inland routes have already been mentioned, on which plied the bullock carts and wagons of the traders. The sea routes to the west lay through the Persian Gulf to the Red Sea. Indian ships sailed on a coastal route, a regular traffic for collecting and distributing goods, connecting the western ports on the one side and Arabian ships from the Persian Gulf sailed between the western coast and southern Arabia, Somalia, Axum (in modern Ethiopia) and Egypt on the other side. The major ports lay on the west coast such as Bharuch, Kalyan and Sopara on the Gujarat

and Konkan coast, Nelkunda-Kottayam, and Bakare (Vaikkarai) and Muciri (Muziris) on the Kerala coast. (See Unit 8, Map 5 for this coastal network)

9.3.4 Ships

The bulk of the cargo was shipped in Greek and Roman vessels, which were built with close set mortise and tenon joints and nails. Arab vessels were made of planks of wood fastened together and to the keel by means of coir or palm fibre threads. Indian ships followed a similar technique, the planks being stitched together by means of ropes and were also fastened by wooden dowels.

The *Periplus* refers to foreign vessels called *kotumba* and *trappaga*, Indian trading vessels called *sangara* and *kolandiphonta*. *Sangadam* in Tamil was a double canoe meant only for river traffic. *Kolandiphonta* were large vessels meant for overseas voyages to Malaysia. They were probably two masted vessels with stout outriggers (?) and were the counterparts of present day Sinhalese *yatra oruwa*.

Textual references to ships even with three masts are made in the *Jatakas* and the *Amarakosa* of Amarsimha. Satavahana coins of Yajna Sri Satakarni (AD 167-196) show a double masted ship with sail and pennant. Along the Konkan coast Arab vessels plied with the south west monsoon and their halt at Indian ports was of short duration. The voyage to India involved high risk and hence the visits had to be well planned. Possibly there was a well organised chain of brokers even in this period as later in the 17th century AD.

The main carriers of goods were the Yavana ships, particularly Greek. The *Periplus* refers to small types of vessels used by natives for coastal traffic. Tamil terms like *kalam*, *vangam* and *navay* refer to large boats and *pahri* to small ones (Puhar). However that Indian traders traded as far as the Red Sea is now known from the Quseir-al Qadim (port on the Red Sea coast) inscription on pottery with Tamil names and later early medieval sources indicate the use of their own ships to the south east Asian region by the Tamils with their captains, just as the Malaysian traders did in the early centuries of the Christian era. The Tamil texts make unambiguous references to the sea faring instincts of the Tamils and their chiefs and their knowledge of ship building.

9.4 TAMILAKAM (INCLUDING KERALA)

Inter-regional trade, overland and coastal, between the Ganges valley, Andhra and Tamil regions and between the Gujarat and Kerala coasts seems to have started even from pre-Mauryan times but is clearly attested from the Mauryan times. However the degree and nature of Mauryan influence varied from region to region and in Tamil Nadu it was minimal. It was the sea trade that led to the transition from the Megalithic to early historical periods, which marks the end phases of the Megalithic and the beginnings of urban processes.

9.4.1 Urbanization

Urbanism in Tamilakam was a secondary development. The Sangam rulers, both the Vendar, who were powerful chiefs and the Velir, who were minor chiefs, had a distinct concern with maritime trade and its control, either as active participants in it or as major consumers of luxury goods, developing ports of trade, levying tolls, and issuing coins. From Maritime trade, which appears as the crucial and determinant factor, the much needed luxury items as resources for socio-political dominance and patronage reached

the centres of the major ruling lineages like the Cheras, Cholas and Pandyas (the Vendar), who sought control over the coastal regions adjacent to their mainlands and to regulate long distance trade. In fact there existed dual centres of power for each of these ruling families. Both the three Vendar and minor chiefs like the Tiraiyar had a political centre in the interior and a port on the adjacent coast. Urbanism was thus restricted to the *marutam* (riverine plains) and *neital* (littoral) *tinai*s or eco-zones which they controlled. Craft-production (iron, other metal and gem production) developed in areas rich in mineral resources and raw materials as in the Kongu region. Weaving as a major craft may be located also in Uraiyur (Chola capital), Madurai (the Pandya capital) and Kacci, the seat of the Tiraiyar, the later Kancipuram. Excavated remains like dyeing vats in Arikamedu and Uraiyur provide additional evidence of the manufacture of textiles and the weavers' craft and its importance.

A major source of evidence, i.e., the Tamil Sangam literature, not known to the Deccan regions, is available for the early period, which provides interesting details of the trade with the western (Mediterranean) and eastern regions (south east Asia), which is supplemented to a large extent by the early Tamil Brahmi inscriptions and the Greek and Latin works. This corpus is of great value to an understanding of the region's socio-economic organisation and the impact of the western trade. The *tinai*, a dominant concept in these works of heroic poetry, is basic to understanding the uneven nature in the socio-economic milieu, the basic tribal character of society and its kin-based production relations. Social differentiation, the nub of the problem of urbanization, is hardly attested except in the eco-zones—*marutam* and *neital*—pointing to a non-stratified, clan or kinship based organisation with ranking only among the chiefs and ruling lineages. Redistribution was through gift of two kinds, one of subsistence level goods and the other of prestigious goods by ruling lineages to the *panar* (bards who sang the praise of their patrons) and *pulavar* (poets acknowledged for their scholarly pursuits and often at the court of the rulers). Gift (*kodai*) was an important component of the ideology of this heroic age and was made at three levels the Vendar, Velir and Kilar for their ideo-technic or socio-technic value. Resources controlled by the different chiefs were coveted by one another as a means of enhancing their power and hegemonic status through gifts. Plunder and loot of such resources and other items from trade were common and thus the items looted or traded in entered the gift exchange.

The impact of the Mauryan political structures was minimal in Tamilakam, in which the early lineages of the Cheras, Cholas and Pandyas are regarded by the Asokan edicts as neighbouring or border peoples/chiefs. The nature of patronage extended by the Deccan rulers like the Satavahanas to Buddhism, which was the dominant ideology of the early historical period and which brought about a symbiotic relationship among the political structure, commercial groups and the Buddhist monastic orders, did not exist in Tamilakam. The difference in Tamilakam is marked by the absence of Buddhist monuments of stupendous dimensions like the *stupas* and *viharas* of the Deccan, both in the rock-cut and structural modes. Institutions like the Buddhist monastery and cohesive guild organisation are also not known to Tamilakam, where merchant organisations are not visible in the inscriptional records except the *Nigama* in a single instance. Buddhism and Jainism are better attested in the post-Sangam epics, *Silappatikaram* and *Manimekalai*, in politico-commercial centres as influential ideologies. While the Tamil Brahmi inscriptions mark the presence of more numerous Jaina ascetics on the inland trade routes, Buddhism has a visible presence in the coastal sites as known from excavations. Further, the difference between the Deccan and Andhra inscriptions (Prakrit) and the Tamil Brahmi inscriptions is also significant in that the latter do not refer to *gahapatis* or householders similar to those of the Deccan. Perhaps the *kilan* or *kilavan* of the Tamil poems and

antai of the inscriptions refer to such householders, who were also patrons. However the way in which the community of Buddhists evolved in the north and the Deccan is not a part of the processes of the social transformation that was taking place elsewhere. The spread of Buddhism and Jainism in Tamilakam coincided with the increase in trade and commercial activity and led to heterogeneity in the urban centres, both interior and coastal.

9.4.2 Different Levels of Exchange

The exchange system consisted of different levels, barter (*notuttal*) and loan of goods in local exchanges (*kuri etirppai*), no concept of profit motivating such exchanges, as, for example, for items of daily consumption such as honey, fish, meat and toddy apart from grains; paddy and salt entered the larger exchange network, in which items like pepper, pearls, precious stones, (beryl, gems, etc.), aromatic wood, cotton textiles were meant for overseas exchange markets. There were more raw materials and few manufactured items for export. The Tamil region's resources passed through inter-*tinai* exchange i.e., from one eco-zone to another, either for consumption or to enter into long distance trade through the major ports. The chiefs may also have obtained them by plunder for onward transit in return for their items of import or high value goods. Money was only one category of valuables. Two distinct levels of exchange seem to have existed i.e., regular economic interaction within Tamilakam and external exchange and their inter-relationship.

Numismatic evidence also points to two levels of exchange. Goods for goods and goods for coins were exchanged at the big emporia of trade, while barter remained the main form of exchange at the local levels and day to day exchange activities i.e. purely localised subsistence exchange. The distribution of Punch-Marked coins and Roman coins shows a pattern of occurrence in hoards along the major trade routes pointing to high level exchange or major transactions with large outlays and monetisation.

The several terms occurring in the Sangam works referring to different kinds of traders are significant pointers to the prevalence of hawking, peddling and higher level of exchange systems. These are *Vilainar* (seller), *pakarnar* (hawker), *Vambalar* (way farer or itinerant new comer), *vanikar* (regular trader/merchant). The *Paratavar* were the most distinctive of such merchants in the *neital* or littoral/coastal area, where fisherman called *Paratavar*, started trade in fish and also became pearl fishers on the southern coast, gradually improving their status by directly entering into exchange with foreign merchants. Their residences in the port of Nirppeyarru, as described by the *Perumpanarruppatai* (one of the late Sangam texts, a guide to the bards seeking patronage of the chiefs), are suggestive of a prosperous community of fishers and traders, who became economically important in the 1st and 2nd centuries AD due to the increasing involvement of the east coast in the Roman and south east Asian trade. *Umanar* were salt manufacturers and sellers who traded salt for grain from the interior and moved in caravans (*Umana-c-cattu*) when necessary. There were caravans of others like the *Vambalar cattu*, who moved with their goods, protecting their merchandise with mercenary fighters. The *uppu-vanikan*, *panita vanikan*, *kolu vanikan*, *aruvai-vanikan* and *maniy-vannkkan* are specialists in trade of specific commodities and their names with place names as prefixes and items of trade as part of their identity would show that the nature of merchandise was stated clearly both in literary texts and epigraphic records. (Tamil-Brahmi inscriptions). In Madurai there were several kinds of sellers ranging from the hawker to the merchant who was part of the caravans and who traded with the foreign merchants. The Madurai streets as described in the *Maduraikkanci* and *Nedunalvadai* indicate a busy trading centre with all kinds of shops ranging from gem and jewels to every day consumption goods as also the presence of traders from outside. In the epics trade is glorified as an 'esteemed pursuit'. Except for the occasional caravans of itinerant traders who carried

goods to the hinterlands from the ports and perhaps also returned with goods to be shipped from such ports, evidence on guild organisation is tenuous, *Nigama* (merchant guild), being mentioned in a single inscription and not comparable to that of the Deccan. The story of *Silappadikaram* centres around the son of a Masattuvan, a great caravan leader.

Markets of the day (*nalangadi*) and of the night (*allangadi*) were common in major urban centres. In Puhar, the city was divided into the residential area i.e., *Maruvurpakkam* and the port area i.e., *Pattinappakkam*. The volume of trade in the ports was impressive as indicated by the reference to “the valuable merchandise stored in million bundles” in the *Pattinappalai* and *Maduraikkanci*. Puhar had a well guarded market, the Cholas controlling and promoting ports. This port would fit in with the description of a “Gateway City”, as the major inlet for all the goods from the western and eastern trade to enter the south Indian market as also the outlet for the resources which were in demand in the Mediterranean world.

As a market system and a definable power structure were essential for an inner growth of urbanism and since these were absent in the region, the markets that existed were 'peripheral markets', which were economically important to those engaged in export and import. To foreign traders, however, they were not peripheral. The presence of Yavanas in such market centres and their settlements, archaeologically attested, would suggest their role as important entry points and outlets for the overseas trade.

9.4.3 Inter-Regional Trade: Shifting Patterns

In each region, as seen earlier, the pattern of trade varied according to the nature of exchange and local circuits of trade. In Tamil Nadu it was an expansion from Megalithic circuits to regular exchange networks in the early historical period. There were early circuits between south India and Srilanka and Bengal to the Tamil coast, probably with Srilanka as the terminal point. This regular traffic on the east coast and Srilanka is attested to by the early Brahmi inscriptions with Tamil names of Velir and merchants in Srilanka and Srilankan presence in the Tamil coastal towns and Andhra Buddhist centres, perhaps even from the Mauryan period. Into this entered Roman trade with Srilanka becoming the major entrepot for the wider network of trade including south east Asian countries in the early centuries of the Christian era, the links with south east Asia being yet another circuit continuing upto the 4th-5th centuries AD and into the early medieval period even after the decline of the Roman trade. The two Tamil epics provide evidence of this expansion linking Kanci with Java, Sumatra and Srilanka, Thailand (Klong Thom inscription of the 4th-5th centuries AD and the Laos inscription mentioning a Pandya). The Andhra Buddhist sites and their links with China and Indo china are reflected in the art of Champa being considerably influenced by that of Amaravati. In the Tamil sites also are noticed small art objects like rings and seals with intaglio, recalling the style of the Amaravati art. These shifts led to the wider exchange network of terminal and transit trade and influenced intra- regional trade in Tamilakam, i.e., the inter-*tinai* exchange for procuring the resources of different eco-zones.

It has already been stated that Roman trade was spread over a long period with a large geographical reach. But it was not uniform in all regions at all times. Initially it concentrated on the west coast from Gujarat to the Kerala and Tamil coast with an overland link to the east. Direct sailing with monsoon winds (Hippalus) from the Red Sea to the west coast as also circumnavigation of the Cape, gradually shifted its movement more towards the east coast and Srilanka and from there to the Andhra and Bengal coast. Srilanka was a major entrepot in it. It was an early terminal point and picked up items from south east Asia brought to the south Indian ports by both Indian and eastern merchants. From the

Tamil coast the trade came to be more and more directed to the eastern coast i.e., to Andhra, Orissa and Bengal coasts in the centuries after the beginning of the Christian era, while ports on the west coast like Muziris did not lose their earlier status as major ports of trade.

The ports and coastal towns which were directly involved in this trade also show the nature of shifts in the trading circuits and their links with long distance western trade. The distribution of Roman republican coins and imperial issues also confirms the direction of change towards the eastern coast especially Tamil region and Andhra. The Greek and Latin texts have clear evidence of the periodical changes in the major port of entry and the coastal routes and circuits. The *Periplus of the Erythraean Sea* dated to the first century AD refers to Naura and Tyndis after the ports of the Konkan or Bombay and north Kanara coasts, Naura (Nitira of Ptolemy) identified with Cannanore or Mangalore and Tyndis with the Tondi of the Chera coast. This is followed by Nelcynda (Nelkunda of Ptolemy—present Kottayam, an Ay Velir centre under the Pandyas) and Bacare or Porakad (on the Minachilar) all on the west coast and beyond them the region called Paraliya, where Balita or Varkalai, Comari or Cape Comorin (Kanya Kumari) are located. and to the ports of Camara (Puhar) and Poduca (Arikamedu = Virai = Pondichery) and Sopatma (Marakkanam) on the east coast. Ptolemy in his *Geographia* of the 2nd century AD adds emporia of trade such as Muziris (Muciri = Kodungallur the major port of export and import throughout), Kolkhoi or Korkai of the Pandya coast on the east, Khabaris (Kaverippumpattinam or Puhar), Sabouras (Cuddalore), Podouke, Melange (Mamallapuram) and Manarpha (Mayilappur in Madras?). The importance of Puhar as a major entry point to south India is also attested by the Tamil work *Pattinappalai*, which describes the two main parts of the city, the Pattinappakkam and Maruvurpakkam, promoted by the Cholas who built the harbour, the quay and warehouses with officers for tax collection allowing foreigners to settle down in separate quarters. With circumnavigation making the approach to the eastern coast easier, the eastern ports and towns gained special importance in this trade in the 1st-2nd centuries AD. Hence if the Chera port of Muziris was the earliest port of call and functioned as the major port in the 2nd and 1st centuries BC, it continued to be so but with the addition of the eastern ports like Puhar and Korkai becoming both major ports and emporia of trade and drawing the south eastern circuit into the western trade.

The Gulf of Mannar, between south India and Srilanka with its pearl rich coastal and island centres like Epidioros (in modern Greece) and Kory or Dhanushkoti (a few miles from Rameswaram, at the edge of the Palk Straits) and the Srilankan island called Palaesimundus and Taprobane described as the land of elephants, gold, and pearls, precious stones and marble resembling tortoise shell, became more accessible and important in the western trade in the 1st to 3rd centuries AD. The place called Argaru, often identified with Uraiyur, the Chola capital on the Kaveri, as the centre of the manufacture of the cloth called Argaritic, is now believed to be located in the region near the Pandyan coast, but the picture is hazy in so far as its correct location is concerned. The unique fine cloth resembling vapour (*tuhil*) is associated with the Tamil region and was exported to the Roman world where it had great demand.

The urban centres that developed as a result of inter-*tinai* exchange and politically powerful chiefs like the Cheras, Cholas and Pandyas participating in the trade as the major consumers and patrons and by issuing dynastic coins, in addition to using Roman gold and silver coins both as prestige items of gift and for large transactions, are represented by dual centres of power. For example, the Cheras had Vanci or Karuvur (Koroura) and Muciri as their internal and coastal centres, the Cholas had Uraiyur and Kaverippumpattinam (Puhar) and the Pandyas developed Korkai in addition to Madurai

as their centres. Minor chiefs like the Tiraiyar of northern Tamil Nadu had Kacci (later Kancipuram) and Nirppeyarru (Mamallapuram? or Vasvasamudram?) as their dual centres of power and commercial importance. Other east coast centres which have come up with substantial evidence of the western- Roman trade are Alagankulam (Marungur Pattinam in *Akananauru* and Saliyur and Nellin ur), which had direct access to Srilankan coast and Arikamedu (Poduca of *Periplus* and Podouke of Ptolemy and the Virai of Tamil literature and centre of a Velir chief.), which is a major excavated site with Roman artefacts (Rouletted Ware and Arretine Ware) and other structural remains apart from a Yavana settlement, often called a Roman trading station. A large craft centre developed in Kodumanal near the Chera capital Karur and located in the Kongu region i.e. Coimbatore region. It was a gem and jewel manufacturing centre, with Padiyur and its beryl mines nearby and iron industry with iron ores located in the area (modern Salem–Erode). Roman coin hoards are found in their greatest concentration in this region and on the highway linking the west coast with the east and even the Karnataka–Tamil overland route. The excavations at this centre have been one of the most fruitful in terms of the transition from the Megalithic iron age burial and habitational settlements to the early historic commercial and craft production areas in south India. It also had close links with the Andhra sites of Amaravati as seen in the style of the intaglio on rings and ornaments found in this centre, together with the presence of the Deccan merchants with Prakrit names interacting with the local Tamil merchants.

Tirukkoyilur in the south Arcot district, yet another chiefly centre of the Malaiyamans, where an early Tamil Brahmi inscription (in a place called Jambai) mentioning the Satiyaputra or Atiyaman has been found, is also important for the Roman connections as a large hoard of Roman aurei datable to the 1st–2nd centuries AD has been unearthed in the region.

9.4.4 Articles of Trade

The *Pattuppattu* refers to long distance trade in pearls, chank, bangles, tamarind, fish, gems and horses, though specific items of export and import (as also those in transit and terminal trade) are not always clearly distinguished. The transit goods- en route to the Roman empire, some of which also entered the internal exchange of Tamilakam, were spikenard from the Ganga region; silk from China, tortoise shell from south east Asia and the islands near the Kerala coast. The Tamil anthology *Pattuppattu* (An anthology of Sangam works “*The Ten Songs*”) mentions most of the items of transit and terminal trade. When the transcontinental silk route linking China with the west became inoperative due to the disturbance caused by Parthian movements in Central Asia (see Unit 8), around the first century BC, many of the goods including silk were being deflected, along with ports on the western coast (see Maps 3, 4 & 5, Unit 8) to the Coromandel through the south east Asian ports. For this the Indian and Malay vessels must have been used to transport the merchandise from the Malacca straits to the Coromandel coast, from where the Greek ships collected them. The source and direction from which these articles came are not often known or mentioned in the Tamil texts. Silk came from China (*Periplus*) through several routes. One brought it to the Ganges valley, from where it may have reached Tamilakam and entered the internal circuit of exchange and as gifts to *panar* and *pulavar*.

Spices, a major item of export had their source in the western hills–Kerala, Kuttanadu–but increasing demand necessitated their import from south east Asia, to be shipped to the west from the Coromandel coast. Fragrant woods, though available indigenously (hilly regions of south India), were also a part of the transit trade (south east Asia). Argaritic muslins, as said earlier, were in demand in the Roman world. Due to increasing

demand Tamilakam imported *kalagam* and *kalingam* (varieties of cotton cloth) from Burma (?) and Orissa respectively. Cotton fabric from Madurai (known to the *Arthasastra*), muslins from Uraiyur (?), (*Tuhil*—fine cotton cloth, resembling steam or vapour), 32 varieties of cotton fabrics (mentioned in the *Silappatikaram*) (excavations revealing dyeing vats and spindle whorls) point to the importance of textiles as an item of export, apart from indigenous consumption.

Pearls and pepper, two other major items of export, came mainly from south India. *Muttu* (pearl) heads the categories of gems exported, the pearl rich Pandya coast (Gulf of Mannar) being the major source. *Mani*, meaning gem, was a generic term. Carnelian and agate and other gems from the Kongu region where the beryl mines in Padiyur and Vaniyambadi (*vaidurya*—*Arthasastra*) (in modern Coimbatore region) are located; diamonds, sapphires, rubies from Srilanka and Cuddapah and Kurnool regions and even from Gujarat were exported from the south Indian ports especially Muciri. The craft of jewel making, as said earlier, was next in importance only to textiles, for jewels were an important item of export.

Tamil merchants seem to have faced competition from northern merchants in this trade. Srilanka gained greater importance by the 3rd century AD as an important entrepot for which evidence comes from a Greek merchant from Alexandria, Cosmos Indicopleustus, of the 6th century AD. Tamils acted as middlemen for the Srilankan articles in the early centuries.

Spices (*kari*), was a major item of export, of which pepper was perhaps the most important, three-fourths of the total bulk of the average Rome bound cargo being spices. The *Periplus* points to the Malabar Coast – Kuttanadu – as the main source of pepper exported from Kottayam and Muciri. Sacks of black pepper at the Chola port of Puhar are mentioned in the *Pattinappalai*. Cardamom from the Travancore region inferior to that from China and south east Asia was yet another of these exports. Malabathrum from the interior (Himalayan region?); Nard—lemon grass (from the Ganga valley) called Narantam in Tamil, entered the southern ports for export. Aromatic woods from Karnataka, Malabar and Coimbatore region (sandal, teak, ebony and eaglewood) were in great demand and the indigenous sources were supplemented by those from south east Asia in the centuries after the Christian era.

Imports to south India were, according to the *Periplus*, coin, topaz, coral, thin clothing and figured linen, antimony, copper, tin, lead, wine, realgar, and orpiment apart from wheat for the Graeco-Romans in the Tamil ports. Roman wine was the most sought after item of consumption by the ruling and urban elite as stated in the *Purananuru*. The Yavana lamp was a favoured item. Needless to point out that Roman coins also came in large quantities. Tamil Nadu, though it had access to the gold mines in Karnataka, seems to have used Roman gold both as bullion and for ornaments. Horses, imported from the Arab countries, reached the Tamil ports and the description in the *Perumbanarruppatai* to the pure white horses coming into the harbour of Nirppeyarru is significant, as the trade in horses was not confined to the western ports.

9.5 THE NATURE OF INDO-ROMAN TRADE

Although Roman trade intervened in many circuits and networks of exchange and dominated some, it did not disrupt these or replace them. The pattern was one of using and intensifying the existing networks. There was no change from private entrepreneurs to state-supported trading companies or for that matter the acquisition of territory, the imposition of political authority and the re-ordering of Indian economies, as happened in the colonies of our times.

The more spectacular maritime trade was occasional, but in its interstices there was a steady small-scale contact, often coastal, which involved transporting essential supplies quite apart from luxury items. Fernand Braudel, the great French historian, talks of ships which tramped from port to port and were travelling bazaars, largely covering the more confined circuits. Links between Red Sea and India existed from early times as mentioned in Greek and Latin texts, which also attest to a spurt from the 1st cent BC to the mid-first cent AD. Tamil literature (the Sangam anthologies) and Prakrit inscriptions, and increasingly numismatics and archaeology provide evidence of this trade. Excavations are important also for examining the ecological locations and the gathering and distribution of goods. For example, domesticated pepper, the mining of chalcedonies and beryls and their manufacture into items, and the varieties of textiles can be located with the contextualisation of archaeological data.

In the context of Indian the history the Indo-Roman maritime trade has a specific meaning. It refers to the Roman demand, in particular, for pepper, pearls, semi-precious stones and textiles, all imported from South Asia and most of which were exchanged for high value coins. The term “Roman” refers to the eventual destination of the items as well as broadly to the Mediterranean participation in the trade part of the activities within the Roman empire. The Roman state does not appear to have participated in this trade, but it did exercise control by collecting substantial taxes on the cargo and protecting the routes from the Red Sea ports to Alexandria, with forts, garrisons and military camps and to establish watering places along the routes. The varied Indian systems exploited the Roman trade to their own advantage.

It has been argued that by speaking of it as Roman trade, the Indian component in this trade is under emphasised. On the contrary, we are told, the Roman and eastern Mediterranean component of this trade did not play a dominant role in the south Asian trade, for it was only a more visible pattern among the many. It has, however, gained validity due to extensive mention in the Greek and Latin texts. In Indian sources the term Yavanas refers not only to those coming from the Red sea but others from the north west and from the Gulf. Though the importance of the Roman trade cannot be minimised, it should be treated as one among the many trading patterns. Hence, it is argued that to link a general decline in urbanism in India, which is in any case controversial, to a decline in Indo-Roman trade, can hardly be taken as a causal factor, in either urban growth or decline on a generalised scale for the subcontinent. However, since the pattern varied from region to region, the impetus that the Roman trade and its intrusion into the local circuits were of varying degrees and it is precisely for this reason that its decline affected the regions of Deccan and Tamilakam in different ways, Tamilakam showing a more direct impact of the decline in this trade than any other region.

The trade was conducted largely by the merchants of Egypt and the eastern Mediterranean, but this did not preclude merchants from other parts of the Mediterranean. That the south Indian traders participated in this trade on an equal footing is clearly established by the recent discovery of a papyrus document in Vienna, recording an agreement between an Alexandrian Greek and a Tamil merchant for a large cargo of Indian goods to be shipped from Muziris and the terms of exchange. The ultimate destination was Rome.

Roman trade in the Indian context was for limited periods, with the Indian circuits affected by the trade shifting over time. When substantial, it was a long distance maritime trade, including more than one local circuit in the network of its activities and touched on others.

Not all changes in the patterns of trade were concerned solely with navigational and technical matters. Shifts and new circuits were occasioned by the availability of and demand for particular items. On the Roman side this trade was in the hands of Greek and Jewish merchants of Egypt and of the Palmyrene (modern Syria) and Levantine merchants from the Hellenistic world. Large fleets of ships plied each year according to Pliny. The ships were armed with archers as a protection against piracy (attested by Tamil sources) with mercenaries employed by the merchants or ship captains.

Detailed discussion on trade are available in Strabo's *Geography*, the *Periplus Maris Erythraei*, a manual for traders containing information on itineraries, harbours, navigation and cargoes, all relating to the ports of the Arabian Sea and their hinterlands, Pliny's *Natural History*, the *Periplus of the Erythraean Sea*, 1st cent BC-1st Century AD, and Ptolemy's *Geography* (2nd centuries AD). Pliny's comments on this trade give a different perspective. He condemns it as an agency of financial drain which he perceives offering the Roman economy, i.e., Roman empire's gold resources which threw the Roman monetary system into a crisis. Roman concern with the problem dates from the pre-*Periplus* period. Ptolemy's *Geography* is of a later date and is a compendium of existing information in the tradition of Greek Geographies, with fuller descriptions of the eastern coast of India and the Ganges Delta than the *Periplus*. Greek and Latin texts are more detailed than the Prakrit inscriptions and Tamil sources. In western Deccan, votive inscriptions recording donations by Yavanas mark the presence of eastern Mediterranean traders, while such inscriptions are not known from the Tamil region.

A re-ordering of the historiography of this trade and a re-consideration of its varied patterns in relation to other categories of trade and exchange is required, as there has been large inputs from a variety of new sources as well as our improved understanding of trade and exchange generally in South Asia.

It would be unrealistic to treat this trade (due to its geographical reach), as a uniformly active trade for all places in the Indian subcontinent and over the early centuries AD. There were smaller localised circuits with a relatively more evenly balanced continuity. There the Roman trade entered when it could use a particular circuit to advantage. Initially it was from the Red Sea to the west coast i.e., Malabar and its hinterland, in swift movements, entering the local circuits on the west coast where the availability of resources was well known. The Romans were already familiar with aromatics and spices, perhaps brought by Indian and Arab traders in smaller quantities to the south Arabian ports and trans-shipped to the Red Sea. The distribution of items does not support a uniformity of trading patterns. Barygaza was special in that. It combined both categories (local and distant products), whereas the ports of south India were, in the main, exporting items derived from local resources. The Roman demand increased the volume of productive and other activities but did not require a major re-orientation of the local economies. The discovery of the monsoon (Hippalus—the name of a wind and not the navigator) and references to navigation indicate additional facilities to this trade.

It is not easy to answer the question why the Roman input into this trade declined after the 2nd cent AD? Was it due to a greater participation of Indian traders who may have gradually edged out the earlier traders in supplying pepper and textiles to Alexandria? Or the Indian involvement in the trade with central Asia and south east Asia may have led to the tapping of new resources and products different from the earlier ones and the supply of these to Central Asia and south east Asia would have diverted attention from the Roman trade. Or did Roman objects in India become a passing fancy?

The period is marked by brisk trading activities on the western and eastern coasts with the outside world. This is particularly borne out by the availability of immense number of foreign coin hoards across the peninsula, with earlier concentration in western Tamil Nadu-Kerala border and later concentration in Andhra.

9.6.1 Roman Coins: Their Distribution in Space and Time

Roman coins are found all over south India but with a greater concentration in Tamil Nadu and next in Andhra Pradesh. Those of Augustus (c. 27 BC-14 AD), Nero (AD 54-68), Septimus Severus (AD 193-211) are more numerous in the Bijapur, Cuddapah, Guntur, Krishna, Nalgonda and Visakhapatnam districts. The paucity of Roman coins in western Deccan is attributed to direct trade contact being confined to short periods. There is a concentration in the Coimbatore region of Augustus and Tiberius coins (*denarii*) of the 1st cent BC and 1st cent AD. This region's importance as a gem and craft centre on the trade route from western coast to the east is seen in the occurrence of beryl mines in Padiyur and crafts in Kodumanal. The post-Nero debasement of Roman currency is also said to have affected the nature of the distribution. Shortage of Roman coins were supplemented by imitations. The purpose of the countermarks on Roman with symbols similar to those found on Punch Marked coins is also not clearly understood.

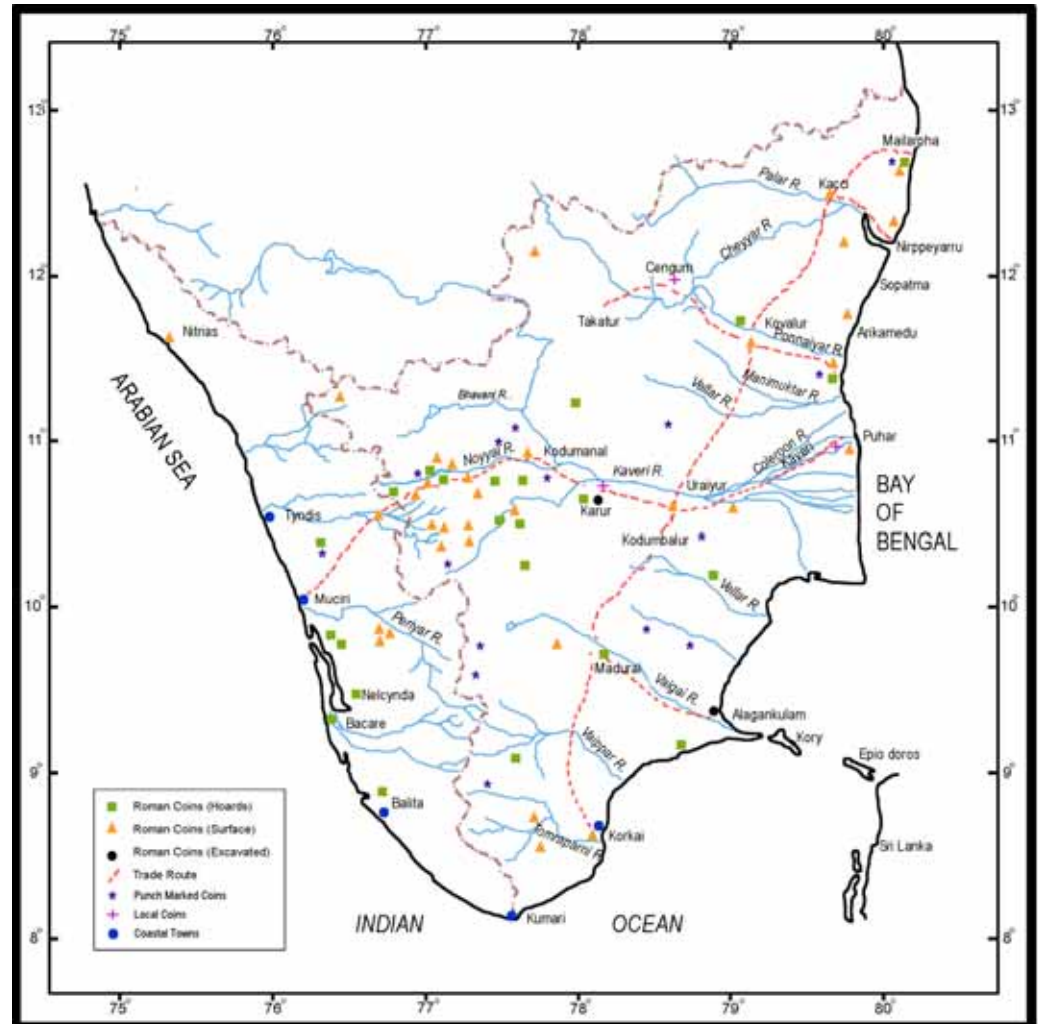
Inscriptions at Nagarjunakonda and other eastern sites recording donations of *denarii*, together with their investment with different guilds, would suggest that eastern Deccan witnessed continuous flow of Roman coins, while there was a relative dearth of coins in western Deccan. Since the duration of halts at western ports by foreign ships was short, the cargo imported by foreign ships halting at western ports was probably negotiated and bought by Indian merchants at the ports itself and foreign merchants may not have been allowed to enter into local trade transactions. Roman gold and silver may have been used as high-value coins for procurement of commodities and in local transactions.

As mentioned already, high value early imperial coins, the aurei and *denarii* of Augustus and Tiberius (AD 14-37), found in hoards in south India coincide with Roman demand for oriental luxuries and with complaints about the paucity of such coins in the empire. In the early 2nd cent AD the number of hoards increases, as do the numbers of aurei in Kerala and Andhra Pradesh, with many imitations. Later there is a slight decline and again a recurrence in Andhra Pradesh. Roman bronze coins of the late 3rd-4th centuries AD are found in Tamil Nadu.

The use of Roman coins has been the subject of an inconclusive debate. They appear to have been of limited circulation, used as jewellery mainly in the Tamil region where evidence is quite strong. They seem to have had more than a single function; as protection money to ensure the safe passage of goods, when large monetary outlays were involved for large merchandise; as deposits or sureties; the *denarii* as gift (presentation) or as prestige item (gifts to poets and others in Tamilakam). The Roman Republican issues of the 1st century BC are found mainly in Kerala, the later 1st and 2nd century coins on the east coast of Tamil Nadu and Andhra; and the 4th-5th century Byzantine coins in Tamil Nadu and Srilanka, while Roman Rouletted ware was more widespread and particularly so along the coast and riverine sites, etc.

The question why so many coins were hoarded in specific areas as bullion, or made into jewellery and ornaments; or used as protection money for the safe passage of goods; as capital by local suppliers for further transactions, as gift exchange among chiefs is difficult

to answer, unless it is assumed that the coins played a dual role—as high value currency in the trading markets but as prestige items in the hinterlands of the markets, i.e., prestige wealth necessary to both political and marital alliances. Where the imported coins were used as high value currency, there presumably a more sophisticated trade should be registered with a greater incidence of formal trade based on monetised commodity exchange and involving markets, although the simpler forms of barter and gift exchange as an additional activity need not be absent.



Map 2 : Tamilakam : Early Historical Urban Centres
(After R. Champakalakshmi, *Trade Ideology and Urbanization South India 300 BC to AD 1300*, Delhi, OUP, 1996, p.156)

9.6.2 Other Coins in the Deccan

Uninscribed cast copper coins in excavated contexts over a wide region were of pre-Satavahana origin. Clay imitations of Roman coins are also known. The use of flimsy materials for coinage is attested by 5th century evidence of coins which were made of not only bits of bamboo and palm-leaf but also of lac and gum, as also Satavahana coinage of lead, copper, and potin— an alloy of copper zinc, lead and tin. Their silver coins are primarily portrait coins. Inscriptions at cave sites in the Deccan (e.g., gift of 70000 *karsapanas* (silver coins of Satavahanas) and 2000 *suvarnas* – Nasik inscription of Usavadata) record investments of several thousands of Karsapanas. *Suvarna*, probably gold coins of Kusanas were also known and used. Silver must have been imported, as there are no pure silver ores in India State control over coin issue appears doubtful. For the silver Punch Marked coins were private issues of Guilds (*negama*) which continued in use even after the ascendancy of the Satavahanas. The duty of the State was merely to

assay all bullion brought to the mint for coinage and to return the value of the bullion in money. The famous Jogalthembi hoard (near Nasik) of silver coins (13250 in number minus the ones already melted) of which a majority were of Nahapana's (Kshatrapa ruler, c. 105-124 AD), was counter marked by Gautamiputra Satakarni and some perforated. The hoard appears to be a mercantile hoard as all the counter struck issues have a uniform set of symbols—*caitya* on the obverse and the Ujjain symbol on the reverse. Several dies were used. The recovery of mercantile hoards indicate that the essential nature of the trade necessitated the extensive use of copper, lead and potin coins in commercial transactions and the continuity of a single coin type during the reigns of several successive rulers.

9.6.3 Local Coinage in Tamilakam

Dynastic issues are known of the Cheras and Pandyas, the former with portarits and legends (Makkotai, Kuttuvan Kotai and Kollippurai with the Chera symbols of the bow and arrow, along with the double fish and tiger) and the latter with legends (Valuti along with the double fish and elephant symbols), apart from those of the minor chiefs like Nannan of Cengam (Andippatti), whose issues have legends with the name of the chief mentioned in the *Malaipadukadam*. The references in the Tamil poems to *kasu*, *panam* and *kanam* seem to refer to gold in general and to coins also. The occurrence of Punch Marked coins significantly along the trade routes and the use of the double carp and other symbols on the coins of the Bodinaickanur hoard near Madurai would suggest the prevalence of *janapada* type of coins and their use as currency.

9.7 YAVANAS AND THEIR SETTLEMENTS IN SOUTH INDIA

The presence of Yavanas does not connote the kinds of Roman townships familiar from the Mediterranean world and Europe. In India they are generally pre-existing settlements where, as in Arikamedu, some Yavana traders established a base to facilitate both the manufacture and acquisition of items required in the trade, whereas others were centres of exchange which were doubtlessly visited by Yavana traders, as they were by local traders, agents and suppliers, involved in this and other trade. More significant were, apart from coins, amphorae sherds, terra sigillata and a variety of bronze objects and also what are described by Mac Dowall as Roman and sub-Roman artefacts, available in large numbers in the south. In the Deccan inscriptions, mention is made of the places from where the Yavanas come. Most frequent is the reference to Dhenukataka with a *vaniya grama* from where they came. The degree of Indianisation of Yavanas in north

Roman and Byzantine Coins in South India



India and the Deccan is striking, most of them bearing Buddhist names, having become Buddhists.

The Indian perception of the Yavanas was not uniform. Brahmanical reaction could be severe and hostile. But respect for and borrowing from the Hellenistic theories of astronomy and astrology is reflected (*Yavana Jataka*—based on a Greek original). The Tamil Sangam poems provide a different perspective. Here the Yavanas are aliens, although some of their cargoes such as wine and gold are welcomed. Later texts show admiration for the Yavanas. That they had their homes in Kaverippumpattinam is established by the later epic *Silappadikaram* and the occurrence of the Rouletted ware and Amphora, which occur together in coastal Tamil Nadu as evidence of the use of olive oil and garum by the Yavanas. References are made to the Yavana soldiers guarding the gates of Madurai town. The Sangam texts show an ambivalent attitude to Yavanas and unlike the Yavanas of the Deccan who were Indianised and adopted Sanskritised names, the Yavanas of the Tamil region were often admired for their valour and bravery and hence used as guards at the city gates and palaces, but treated as fierce looking, distinctly alien and barbarous as they spoke a harsh tongue and are even characterised as *milecca*. They may have lived as a segregated group. The Chera's hostile attitude to a group of Yavanas is pointed out in the episode of his taking them with tied hands and pouring ghee on them. The episode is mentioned in one of the Sangam works i.e. the *Patirrupattu* (an anthology called the “*Ten Tens*”).

9.8 SUMMARY

Urbanisation in the South was comparatively a latecomer. It entered the region when North India had already entered into the second phase of its urbanisation. The beginning of urbanisation in South India coincides with the Mauryan period. Though exchange networks existed even much before the Mauryan period, from Mauryan period onwards they became more regular and frequent. While the impact of the Mauryas was distinctly visible in the Deccan, in Tamilnadu it appeared to be minimal. In Tamilkarnam, urbanisation was largely the result of her sea trade. Rome and the eastern Mediterranean occupied an important place in the entire process. Konkan and Malabar coasts and Coromandel and Andhra coasts were active partners in the Roman trade. As a result of Roman contacts, in the years to come several Yavana settlements became visible in peninsular India. Initially, these settlers were applauded as brave but looked down upon as aliens. In the Deccan they got assimilated into Indian cultural tradition to the extent that they appropriated Sanskritized names.

9.9 GLOSSARY

Arretine Ware	Roman pottery using a special technique.
Ideo-technic or Socio-technic value of goods/ items of trade	Possession of such items and gifting them to others meant a higher social and/or political status to the grantor.
Kongu Region	Region of ancient Tamil Nadu in South India. It comprises of the present Coimbatore, Erode, Salem, Karur and a part of Dindigul districts of Tamil Nadu.

Kotalingala, Dhulikatta and Peddabankur, Kondapur	Excavated sites located in central Deccan and Andhra with evidence of craft production and trade links and mainly Buddhist remains.
Levantine Merchants	Levant is an area roughly bounded by the Mediterranean Sea in the west and the Zagros Mountains in the east. The area stretched from Suez to the Taurus Mountains, including present-day Israel, Lebanon, western Jordan, the Sinai in Egypt, and parts of Syria. The term Levantine is used for Italian (Venetian and Genoese), French and merchants of other Mediterranean origin.
<i>Maduraikkanci and Nedunalvada</i>	Sangam texts dealing with the Pandyas, Madurai city and the Pandya country in general.
Megalithic Culture	Megaliths were burials made of large stones hence the name Mega-lith (mega means big/huge; litho means stone in Greek). The culture flourished in the first millennium BC and early centuries AD in peninsular India, particularly in Andhra Pradesh, Karnataka, Tamil Nadu and Kerala.
<i>Panar and Pulavar</i>	Tamil poets and bards of the Sangam or Early Historical period.
<i>Pattuppattu</i>	An anthology of Sangam poems called the “Ten Songs”.
<i>Perumpanarruppatai</i>	Tamil text of the Sangam or Early Historical period.
Rouletted Ware	A wheel turned pottery so named because of concentric rouletting in the middle of the dish/pot found in large numbers sites close to the east coast of India.
Russet Coated Painted Ware (RCPW)	A pottery found in the Megalithic and post-Megalithic contexts in South India.
<i>Silappatikaram and Manimekalai</i>	Classical Tamil texts. Known as the twin epics. The <i>Silappatikaram</i> was written by a Jaina teacher called Ilanko Atikal and <i>Manimekalai</i> by a Buddhist called Cattamar.
Vendar, Velir and Kilar	Rulers and chiefs and village chiefs of the Sangam period.
<i>Vinaya Pitaka (Cullavagga)</i>	Buddhist Pali Canon; It is first of the <i>Tripitikas</i> . It contains rules and regulations for the <i>sangha</i> (monastic order).

9.10 EXERCISES

- 1) Analyse the process of early urbanization in the Deccan.
- 2) Critically examine the nature of foreign trade during 300BC to 300 AD. In what ways did the pattern of trade differ between the Deccan and the Tamilakam.
- 3) Give a brief account of the means of exchange.
- 4) Discuss the nature of Roman trade in India. What was its long term impact?
- 5) Describe the state of coinage in the Deccan and South India during 3rd century BC to 3rd Century AD. Analyse the presence of Roman coins in the region.

9.11 SUGGESTED READINGS

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M.A. History

List of Courses

Course Code.	Title of the Course	Credits
MHI-01	Ancient and Medieval Societies	8
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Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
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UNIT 10 THE FEUDALISM DEBATE IN INDIAN HISTORY

Structure

- 10.1 Introduction
- 10.2 Indian Feudalism: Various Approaches
- 10.3 Was there Feudalism in India?
- 10.4 Feudalism Reconsidered
- 10.5 Feudalism, Trade and Urbanisation
- 10.6 Problems
- 10.7 Summary
- 10.8 Glossary
- 10.9 Exercises
- 10.10 Suggested Readings

10.1 INTRODUCTION

The notion of feudalism has European origins. Indeed, in Europe too its history is rather recent, going back at the most to the seventeenth century, long after the phenomenon characterised as feudalism had been dead and gone. From here it, along with many other concepts, spread out to the rest of the world in the wake of European expansion. Understandably then, as the concept evolved and changed in European historiography, its shape in the world's other regions too changed accordingly.

Initially, European feudalism was perceived entirely in the customary law binding the lord and the vassal. It was also seen as a backward, rigid, and slow moving system. The view was somewhat expanded to equate feudalism with a system of government where power was highly decentralised, resting in the hands of feudal lords even as a nominal ruler was publicly acknowledged as a sovereign.

It was not for too long that the concept of feudalism remained confined to the lord-vassal relationship. Gradually, other aspects of study began to evolve. Marxism in particular brought to attention the question of production, i.e. the relationship between land and labour. From lord-vassal relationship, the perspective shifted to the lord-peasant relationship. Economy also brought into focus questions of technology, trade, money, etc.

Historiography of the *Annales* School opened up areas of the history of the family, gender relations, ideas and mentalities.

10.2 INDIAN FEUDALISM: VARIOUS APPROACHES

The first assimilation of 'feudalism' in the Indian context occurred at the hands of Col. James Tod, the celebrated compiler of the annals of Rajasthan's history in the early part of the nineteenth century. For Tod, as for most European historians of his time in Europe, lord-vassal relationship constituted the core of feudalism. The lord

in medieval Europe looked after the security and subsistence of his vassals and they in turn rendered military and other services to the lord. A sense of loyalty also tied the vassal to the lord in perpetuity. Tod found the institution and the pattern replicated in the Rajasthan of his day in good measure.

The term feudalism continued to figure off and on in works of history in India, often with rather vague meanings attached to it. It was with the growing Marxist influence on Indian history writing between the mid-1950s and the mid-60s that the term came to be disassociated from its moorings in lord-vassal relationship and acquired an economic meaning, or rather a meaning in the context of the evolution of Indian class structure. One of the major imperatives of the formulation of an Indian feudalism was, paradoxically, the dissatisfaction of Marxist historians with Marx's own placement of pre-colonial Indian history in the category of the Asiatic Mode of Production. Even though Marx had created this category himself, much of the substance that had gone into its making was commonplace among Western thinkers of the eighteenth and the nineteenth centuries. Marx had perceived the Asiatic Mode of Production as an 'exception' to the general dynamic of history through the medium of class struggle. In Asia, he, along with numerous other thinkers, assumed there were no classes because all property belonged either to the king or to the community; hence there was no class struggle and no change over time. He shared this notion of the changeless Orient with such eminent thinkers as Baron de Montesquieu, James Mill, Friedrich Hegel and others. Real dynamism, according to them, came only with the establishment of colonial regimes which brought concepts and ideas of change from Europe to the Orient. Indian Marxist historians of the 1950s and 60s were unwilling to accept that such a large chunk of humanity as India, or indeed the whole of Asia, should remain changeless over such large segments of time. They expressed their dissatisfaction with the notion of the Asiatic Mode of Production early on. In its place some of them adopted the concept of feudalism and applied it to India. Irfan Habib, the leading Marxist historian of the period, however, put on record his distance from 'Indian feudalism' even as he vehemently criticised the Asiatic Mode of Production.

D. D. Kosambi gave feudalism a significant place in the context of socio-economic history. He conceptualised the growth of feudalism in Indian history as a two-way process: from above and from below in his landmark book, *An Introduction to the Study of Indian History*, first published in 1956. From above the feudal structure was created by the state granting land and rights to officials and Brahmins; from below many individuals and small groups rose from the village levels of power to become landlords and vassals of the kings.

Kosambi, in his characteristic mode, formulated the notion of feudalism in the shape of a formula rather than in a detailed empirical study. This major task was taken up by Professor R. S. Sharma in his *Indian Feudalism*, 1965. However, R. S. Sharma did not follow the Kosambian formula of feudalism from below and from above; instead, he envisioned the rise of feudalism in Indian history entirely as the consequence of state action, i.e. from above. It is only lately that he has turned his attention to the other phenomenon.

R. S. Sharma essentially emulated the model of the rise and decline of feudalism in Europe formulated in great detail by the Belgian historian of the 1920s and 30s, Henri Pirenne. Pirenne had displaced the dominant stereotype of European feudalism as lord-vassal relationship and substituted in its place one that had much wider and deeper range of consequences for society. He postulated that 'grand trade', i.e.

long distance trade in Europe across the Mediterranean, had allowed European economy, society and civilisation to flourish in Antiquity until its disruption by the Arab invasions of Europe in the seventh century. Disruption of trade led to the economy's 'ruralisation', which made it inward, rather than outward looking. It also resulted in what Pirenne called 'the closed estate economy'. The closed estate signified the unit of land held as estate by the lord [10,000 acres on an average] and cultivated by the peasant, where trade was minimal and almost everything the inhabitants of the estate required was produced within. These estates, in other words, were economically 'self-sufficient' units. The picture changed again from the eleventh century when the Crusades threw the Arabs back to the Near East; this led to the revival of trade and cities and the decline of feudalism. Pirenne thus posited an irreconcilable opposition between trade and urbanisation on one hand and feudalism on the other.

R S Sharma copied this model in almost every detail, often including its terminology, on to the Indian historical landscape. He visualised the decline of India's long distance trade with various parts of the world after the fall of the Guptas; urbanisation also suffered in consequence, resulting in the economy's ruralisation. A scenario thus arose in which economic resources were not scarce but currency was. Since coins were not available, the state started handing out land in payment to its employees and grantees like the Brahmins. Along with land, the state also gave away more and more rights over the cultivating peasants to this new class of 'intermediaries'. The increasing subjection of the peasants to the intermediaries reduced them to the level of serfs, their counterparts in medieval Europe. The rise of the class of intermediaries through the state action of giving grants to them is the crucial element in R S Sharma's construction of Indian feudalism. Later on in his writings, he built other edifices too upon this structure, like the growth of the class of scribes, to be consolidated into the caste of Kayasthas, because state grants needed to be recorded. The crucial process of land grants to intermediaries lasted until about the eleventh century when the revival of trade reopened the process of urbanisation. The decline of feudalism is suggested in this revival, although R S Sharma does not go into this aspect in as much detail. The one element that was missing in this picture was the Indian counterpart of the Arab invasion of Europe; however, Professor B N S Yadava, another eminent proponent of the Indian feudalism thesis, drew attention to the Hun invasions of India which almost coincided with the beginning of the rise of feudalism here. The oppressive feudal system in Europe had resulted in massive rebellions of the peasantry in Europe; in India R S Sharma looked for evidence of similar uprising but found only one example of Kaivartas – who were essentially boatmen in eastern Bengal but also engaged part time in cultivation – having revolted in the eleventh century.

The thesis propounded in its fully-fledged form in 1965 has had a great deal of influence on subsequent history writing on the period in India. Other scholars supported the thesis with some more details on one point or another, although practically no one explored any other aspect of the theme of feudalism, such as social or cultural aspect for long afterwards. B N S Yadava and D N Jha stood firmly by the feudalism thesis. The theme found echoes in south Indian historiography too, with highly acclaimed historians like MGS Narayanan and Noburu Karashima abiding by it. There was criticism too in some extremely learned quarters; the most eminent among critics was D C Sircar. There was too a fairly clear ideological divide which characterised history writing in India in the 1960s and 70s: D D Kosambi, R S Sharma, B N S Yadava and D N Jha were firmly committed Marxists;

D C Sircar stood on the other side of the Marxist fence. However, neither support nor opposition to the notion of feudalism opened up the notion's basic structure to further exploration until the end of the 1970s. The opening up came from within the Marxist historiographical school. We shall return to it in a little while.

In 1946 one of the most renowned Marxist economists of Cambridge University, UK, Maurice Dobb, published his book, *Studies in the Development of Capitalism* in which he first seriously questioned the Pirennean opposition between trade and feudalism and following Engels' insights drew attention to the fact that the revival of trade in Eastern Europe had brought about the 'second serfdom', i.e., feudalism. He thus posited the view that feudalism did not decline even in Western Europe due to the revival of trade but due to the flight of the peasants to cities from excessive and increasing exploitation by the lords in the countryside. This thesis led to an international debate in the early 1950s among Marxist economists and historians. The debate was still chiefly confined to the question whether feudalism and trade were mutually incompatible. Simultaneously, in other regions of the intellectual landscape, especially in France, where an alternative paradigm of history writing, known as the *Annales* paradigm, was evolving, newer questions were being asked and newer dimensions of the problem being explored. Some of these questions had travelled to India as well.

10.3 WAS THERE FEUDALISM IN INDIA?

It was thus that in 1979 a Presidential Address to the Medieval India Section of the Indian History Congress's fortieth session was entitled 'Was There Feudalism in Indian History?' Harbans Mukhia, its author, a committed practitioner of Marxist history writing, questioned the Indian feudalism thesis at the theoretical plane and then at the empirical level by comparing the medieval Indian scenario with medieval Europe.

The theoretical problem was concerned with the issue whether feudalism could at all be conceived of as a universal system. If the driving force of profit maximisation had led capitalism on to ever rising scale of production and ever expanding market until it encompassed the whole world under its dominance, something we are witnessing right before our eyes, and if this was a characteristic of capitalism to thus establish a world system under the hegemony of a single system of production, logically it would be beyond the reach of any pre-capitalist system to expand itself to a world scale, i.e. to turn into a world system. For, the force of consumption rather than profit maximisation drove pre-capitalist economic systems, and this limited their capacity for expansion beyond the local or the regional level. Feudalism thus could only be a regional system rather than a world system. The problem is hard to resolve by positing different variations of feudalism: the European, the Chinese, the Japanese and the Indian, etc., although this has often been attempted by historians. For, then either the definition of feudalism turns so loose as to become synonymous with every pre-capitalist system and therefore fails to demarcate feudalism from the others and is thus rendered useless; or, if the definition is precise, as it should be to remain functional, the 'variations' become so wide as to render it useless. Indeed, even within the same region, the variations are so numerous that some of the most respected historians of medieval Europe in recent years, such as Georges Duby and Jacques Le Goff, tend to avoid the use of the term feudalism altogether; so sceptical they have become of almost any definition of feudalism.

The empirical basis of the questioning of Indian feudalism in the 1979 Presidential Address lay in a comparison between the histories of medieval Western Europe and medieval India, pursued at three levels: the ecological conditions, the technology available and the social organisation of forms of labour use in agriculture in the two regions. With this intervention, the debate was no longer confined to feudalism/trade dichotomy which in any case had been demonstrated to be questionable in its own homeland.

The empirical argument followed the perspective that the ecology of Western Europe gave it four months of sunshine in a year; all agricultural operations from tilling the field to sowing, tending the crop, harvesting and storing therefore must be completed within this period. Besides, the technology that was used was extremely labour intensive and productivity of both land and labour was pegged at the dismal seed:yield ratio of 1:2.5 at the most. Consequently the demand for labour during the four months was intense. Even a day's labour lost would cut into production. The solution was found in tying of labour to the land, or serfdom. This generated enormous tension between the lord and the serf in the very process of production; the lord would seek to control the peasant labour more intensively; the peasant would, even while appearing to be very docile, try to steal the lord's time to cultivate his own land. The struggle, which was quiet but intense, led to technological improvement, rise in productivity to 1:4 by the twelfth century, substantial rise in population and therefore untying of labour from land, expansion of agriculture and a spurt to trade and urbanisation. The process was, however, upset by the Black Death in 1348-51 which wiped out a quarter of the population leading to labour scarcity again. The lords sought to return to the old structures of tied labour; the peasants, however, who had tasted better days in the 11th and 12th centuries, flew into rebellions all over Europe especially during the 14th century. These rebellions were the work of the prosperous, rather than the poor peasants. By the end of the century, feudalism had been reduced to a debris.

Indian ecology, on the other hand, was marked by almost ten months of sunshine where agricultural processes could be spread out. Because of the intense heat, followed by rainfall, the upper crust of the soil was the bed of fertility; it therefore did not require deep, labour intensive digging. The hump on the Indian bull allowed the Indian peasant to use the bull's drought power to the maximum, for it allowed the plough to be placed on the bull's shoulder; the plain back on his European counterpart would let the plough slip as he pulled it. It took centuries of technological improvement to facilitate full use of the bull's drawing power on medieval European fields. The productivity of land was also much higher in medieval India, pegged at 1:16. Besides, most Indian lands yielded two crops a year, something unheard of in Europe until the nineteenth century. The fundamental difference in conditions in India compared to Europe also made it imperative that the forms of labour use in agriculture should follow a different pattern. *Begar*, or tied labour, paid or unpaid, was seldom part of the process of production here; it was more used for non-productive purposes such as carrying the *zamindar's* loads by the peasants on their heads or supplying milk or oil, etc. to the *zamindars* and *jagirdars* on specified occasions. In other words tension between the peasant and the *zamindar* or the *jagirdar* was played out outside the process of production on the question of the quantum of revenue. We do not therefore witness the same levels of technological breakthroughs and transformation of the production processes in medieval India as we see in medieval Europe, although it must be emphasised that neither technology nor the process of agricultural production was static or unchanging in India.

The 1979 Address had characterised the medieval Indian system as one marked by free peasant economy. Free peasant was understood as distinct from the medieval European serf. Whereas the serf's labour for the purposes of agricultural production was set under the control of the lord, the labour of his Indian counterpart was under his own control; what was subject to the state's control was the amount of produce of the land in the form of revenue. A crucial difference here was that the resolution of tension over the control of labour resulted in transformation of the production system from feudal to capitalist in European agriculture from the twelfth century onwards; in India tension over revenue did not affect the production system as such and its transformation began to seep in only in the twentieth century under a different set of circumstances.

'Was There Feudalism in Indian History?' was reprinted in the pages of a British publication, *The Journal of Peasant Studies* in 1981. Within the next few years it had created so much interest in international circles that in 1985 a special double issue of the journal, centred on this paper, comprising eight articles from around the world and the original author's response to the eight, was published under the title *Feudalism and Non-European Societies*, jointly edited by T. J. Byres of the School of Oriental and African Studies, London University, editor of the journal, and the article's author. It was also simultaneously published as a book. The title was adopted keeping in view that the debate had spilled over the boundaries of Europe and India and had spread into China, Turkey, Arabia and Persia. The publication of the special issue, however, did not terminate the discussion; three other papers were subsequently published in the journal, the last in 1993. The discussion often came to be referred to as the 'Feudalism Debate'. A collection of concerned essays was published in New Delhi in 1999 under the title *The Feudalism Debate*.

10.4 FEUDALISM RECONSIDERED

While the debate critically examined the theoretical proposition of the universality of the concept of feudalism or otherwise – with each historian taking his own independent position – on the question of Indian historical evidence, R S Sharma, who was chiefly under attack, reconsidered some of his earlier positions and greatly refined his thesis of Indian feudalism, even as he defended it vigorously and elegantly in a paper, 'How Feudal was Indian Feudalism?' He had been criticised for looking at the rise of feudalism in India entirely as a consequence of state action in transferring land to the intermediaries; he modified it and expanded its scope to look at feudalism as an economic formation which evolved out of economic and social crises in society, signifying in the minds of the people the beginning of the *Kaliyuga*, rather than entirely as the consequence of state action. B N S Yadava also joined in with a detailed study of the notion of *Kaliyuga* in early medieval Indian literature and suggested that this notion had the characteristics of a crisis – the context for the transition of a society from one stage to another. All this considerably enriched the argument on behalf of Indian feudalism. R.S. Sharma was also able to trace several other instances of peasant resistance than the one he had unearthed in his 1965 book. This too has lent strength to the thesis. R S Sharma has lately turned his attention to the ideological and cultural aspects of the feudal society; in his latest collection of essays, published under the title *Early Medieval Indian Society: A Study in Feudalisation* in 2001 in New Delhi, he has revised several of his old arguments and included some new themes such as 'The Feudal Mind', where he explores such problems as the reflection of feudal hierarchies in art and architecture, the ideas of gratitude and loyalty as ideological props of feudal society, etc.

This venture of extension into the cultural sphere has been undertaken by several other historians as well who abide by the notion of feudalism. In a collection of sixteen essays, *The Feudal Order: State, Society and Ideology in Early Medieval India*, 1987 and 2000, its editor D.N.Jha has taken care to include papers exploring the cultural and ideological dimensions of what he calls the feudal order, itself a comprehensive term. One of the major dimensions so explored is that of religion, especially popular religion or Bhakti, both in north and south India and the growth of India's regional cultures and languages. Even as most scholars have seen the rise of the Bhakti cults as a popular protest against the domination of Brahmanical orthodoxy, the proponents of feudalism see these as buttresses of Brahmanical domination by virtue of the ideology of total surrender, subjection and loyalty to a deity. This surrender and loyalty could easily be transferred on to the feudal lord and master.

There have been certain differences of opinion among the historians of the Indian feudalism school too. D N Jha for example had found inconsistency between the locale of the evidence of the notion of *Kaliyuga* and site of the 'crisis' which the *kaliyuga* indicated: the evidence came from peninsular India, but the crisis was expected in Brahmanical north. B P Sahu too had cast doubt on the validity of the evidence of a *kaliyuga* as indicator of a crisis; instead, he had perceived it more as a redefinition of kingship and therefore a reassertion of Brahmanical ideology rather than a crisis within it.

10.5 FEUDALISM, TRADE AND URBANISATION

However, the basic structure of the Indian feudalism thesis, i.e. antagonism between trade and urbanisation on one hand and feudalism on the other remains untouched. And that has not been without problems vis-à-vis recent trends in history writing. In European historiography itself there has been a sea change among historians on this problematic. If Henri Pirenne had posited an irresolvable dichotomy between urban/rural, trade/feudalism and natural or self-sufficient/money economy dichotomy in the 1930s, later historians tore it to pieces by demonstrating the perfect compatibility between the one and the other. The great French historian, Marc Bloch, even titled one of his papers as 'Natural Economy vs. Money Economy: A Pseudo-Dilemma', and another French historian, Guy Bois has in a recent work traced the development of feudal economic relationships in Western Europe around the year 1000 in those very areas where trade had greatly developed. In other words, he has established a direct causal relationship between trade and feudalism. The trade/feudalism dichotomy has thus been abandoned in the very place of its origin. The very notion of the existence of natural or self-sufficient economy has been fundamentally questioned both at the level of theory as well as empirical data almost everywhere. Clearly, even for one's daily needs at the lowest level of subsistence, some trade must take place whether for buying salt or clothes or utensils; the volume of buying things and the use of money for it rises as we go up the social ladder. Trade in some form or another also embedded in an agricultural economy, for the nature of the soil in different regions necessitates cultivation of different crops; hence they must exchange their produce in order to obtain necessities of subsistence.

Empirically, several historians have had problems with the notion of the decline of trade and scarcity of currency in the region and the period of Indian feudalism. D. N. Jha had criticised R S Sharma for relying too heavily on the absence of long distance external trade as the cause of the rise of feudalism in India. But more

substantively, trade has been demonstrated to have flourished in several regions of India long before the deadline set by feudalists for its revival around the year 1000, parallel to Europe. B D Chattopadhyay has shown that to have happened at least a century earlier. More recently Ranabir Chakravarti in two books, *Trade in Early India*, 2001 and *Trade and Traders in Early Indian Society*, 2002, has brought forward ample evidence of flourishing trade in the concerned period. (see also Unit 14 of the present Block) The monetary anaemia thesis, fundamental to the formulation of Indian feudalism, has also been put under severe strain by recent researches of B D Chattopadhyay and B N Mukherjee. John S Deyell too in his book, *Living Without Silver*, 1990, seriously undermined the assumption of the scarcity of money. One must also keep in mind that metals like gold, silver or copper are not the only forms of money in medieval societies. Marc Bloch had shown that in medieval Europe, almost anything could perform the functions of a medium of exchange, i.e., money: a certain measure of a certain kind of spice, a piece of cloth of a certain quality, a measure of a particular grain, whatever. In India too the tradition of cowries as a medium of exchange has recently attracted the attention of historians and the fact that procuring cowries actually involved long distance trade, for the cowry shells were obtained from the far off Maldives, highlights its significance.

10.6 PROBLEMS

There are some other methodological problems too. If the period between c. 300 and c. 1100 is the life span of Indian feudalism, how is one to characterise the succeeding era, 'medieval India' as it is normally called, prior to the establishment of the colonial regime? Besides, can one leave the long stretch of time under one single head with the implicit assumption that the whole stretch was a single unit which did not witness any major mutations? Marc Bloch had, for example, classified the period of feudalism in Europe into the First Feudal Age and the Second Feudal Age, with the dividing roughly drawn across the year 1000. So sharp was the change in his view that a person from one age would have found himself an alien in the other. The profound mutations within the structure of feudalism are by now conventional wisdom in European historiography, even if the terms used by different historians sometimes differ. Some historians prefer 'Low and High Middle Ages' to the 'First and the Second Feudal Age.' Also, there is consensus that feudalism in Europe was succeeded by the rise and consolidation of capitalism. Colonialism was one facet of the rise of capitalism.

What kind of changes can one visualise in Indian feudalism over the eight centuries of its existence? And, what was it that succeeded it after A.D. 1100 or so? Surely not capitalism. Adherents of feudalism have not seriously encountered these questions. D D Kosambi had extended feudalism to the 17th century almost as a intellectual diktat; this would only compound the problem further by extending its life by another six centuries and treating the entire stretch of nearly 1400 years as the same from one end to the other – an impossible plea for historians of today to entertain, for tracing change, even minute one over small periods, is their primary preoccupation.

h: The problems notwithstanding, 'The Feudalism Debate' has nevertheless traversed a long distance. The academic level of the debate has been nothing short of exhilarating; it never descended even one step below to personal animosity, something noted in a review by Susan Reynolds, herself an eminent medievalist of England, particularly lamenting such descent in academic circles in and near her own home. The debate has been most fertile because it led almost everyone to rethink one's

own position and to refine it and modify aspects of it, even while defending it. In the end no conclusive answers were found; but that's in the nature of the discipline, for, it constantly seeks to renew itself through self-questioning.

10.7 SUMMARY

The growth of Indian feudalism is characterised by D.D. Kosambi as two way process—feudalism from above and feudalism from below. However, for R.S. Sharma feudalism was the result of state action – i.e. from above. Sharma's arguments were further strengthened and developed by B.N.S. Yadava and D.N. Jha. In 1979, however, Harbans Mukhia questioned, 'Was there feudalism in Indian History?' Countering Mukhia R.S. Sharma in his essay 'How feudal was Indian Feudalism?' once again tried to emphasise the feudal character of Indian economy in a more subtle way. More recently, a new dimension – bhakti – is added to further explore the feudal character. Here Bhakti is seen embodying the lord-vassal relationship. However, of late the chief feature of Indian feudalism – declining trade and urbanisation – is seriously questioned by B.D. Chattopadhyaya, Ranabir Chakravarti, and John S. Deyell.

10.8 GLOSSARY

Annales

It was initially associated with a French journal co- founded by Marc Bloch and Lucien Febvre. Annales school of historians emphasise upon a study of long-term structures rather than events. Ferdinand Braudel and Marc Bloch were the most famous exponent of this school. They opened new areas like comparative history, history of attitudes/mentalities, quantitative history, etc. They challenged conventional history of narratives and periodization. They broke the barriers of disciplines and introduced interdisciplinary approaches in social sciences.

Asiatic Mode of Production

Essentially a concept developed by Karl Marx and Frederich Engels, it nevertheless incorporates several elements drawn from the widely prevalent European image of Asia as the anti-thesis of Europe. In this image, Europe was perceived to have been on a triumphant march of 'progress' owing to rationality, science and technology; Asia on the other hand was perceived as still, unchanging, lacking in 'history'. Marx ascribed this changelessness in Asia to the absence of private property; consequently there were no class struggles here, the motor, in his view, of progress. The Asiatic Mode of Production has come in for some sharp criticism especially at the hands of Marxist historians of China and India.

Crusades

Byzantine ruler Alexius Comnenus, ruling from Constantinople was troubled constantly by the

Turks. They often attacked Christian pilgrims on their way to and in Jerusalem, causing them great distress. Pope Urban II on that pretext declared a Holy crusade to reclaim the Holy Lands from the barbarian Turks. Thus the first Crusade began in AD. 1096. The centre of the conflict was Levant (modern Israel, parts of Syria, Lebanon, and south eastern Turkey). Crusades lasted for 250 years. Altogether there were six major crusades in a period of 176 years (1095-1271).

Jagirdar

Land revenue assignments given in lieu of cash were termed as *jagir* and its holder was called *jagirdar*. This should be borne in mind that it was not land but revenue from the land which was given to the jagirdars.

Serfs

A class of tenant cultivators in Medieval Europe. They were tied to the land they tilled. In return they rendered labour on the lord's land or paid a share of their produce, besides several other 'obligations' owed to the lord.

Zamindar

Literally means controller or holder of land. During the Mughal period it did not signify property right. Instead the term denote hereditary right over the peasant's produce. It was generally 1/10th of the land revenue demand.

10.9 EXERCISES

- 1) To what extent is European model of feudalism relevant in the Indian context.
- 2) Analyse recent developments in feudalism debate.

10.10 SUGGESTED READINGS

- Chakravarti, Ranabir (2002), *Trade and Traders in Early Indian Society*, New Delhi.
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- Jha D. N., (ed.) (2000), *The Feudal Order: State, Society and Ideology in Early Medieval India*, New Delhi.
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UNIT 11 ORGANISATION OF AGRICULTURAL AND CRAFT PRODUCTION: NORTH INDIA, C. AD 550 – C. AD 1300

Structure

- 11.1 Introduction
- 11.2 Extent and Expansion of Agriculture
- 11.3 Irrigation
- 11.4 Crops
- 11.5 Craft Production
- 11.6 Organisation of Craft Production
- 11.7 Summary
- 11.8 Exercises
- 11.9 Suggested Readings

11.1 INTRODUCTION

Studies in the agrarian history of early medieval north India have been dominated by various themes of *agrarian relations*; aspects of *agricultural production*, with which we are concerned in this Unit, have received relatively less attention. From early works such as U.N. Ghoshal's pioneering *Contributions to the History of Hindu Revenue System* to R.S. Sharma's *Indian Feudalism* and later, the focus of our thought has been the history of *agrarian relations*, relating to the ways in which agrarian surplus was extracted from the producers (e.g. as taxes) and distributed, as also to the various forms in which control over land and producers was claimed and/or exercised (e.g. landownership). No comparable interest has been shown in matters of agricultural production such as land and its productivity, crops, technologies of production, etc. Some important essays have no doubt been written, but there has been no full-fledged attempt at writing a *history* of agricultural production, as there has been of revenue system or feudal agrarian relations; there are indeed book-length discussions even of the debate whether these relations were feudal or not. The routine compilations of data on agricultural production that are commonly seen in the economic histories of the period lack in historical analysis.

The history of early medieval mineral and craft production, our second concern in this Unit, is in an even more sorry state, with a near complete domination of non-agrarian economic history by the twin themes of urbanism and commerce. In fact, there are very few independent studies of extra-agrarian production, which is often briefly treated as an adjunct to urban or trade history.

A good deal of the above trends in historical research may be understood in terms of the historians' preferences for certain themes, to the corresponding neglect of others. This is easily seen in the example of an historian of medieval India, Professor Irfan Habib, whose keen interest in the technologies of craft production in early medieval India is not really shared in a sustained manner by the specialist historians

of the period; contrariwise, Habib has shown little interest in the theme of agrarian expansion in the early medieval period, almost indispensable in the agenda of others.

Other factors than the historian's preference have also been at work. First, and perhaps foremost, is the nature of epigraphic sources, which remain much the most important basis of historical reconstruction. The inscriptions of the period, which are mostly what are called 'land-grant inscriptions', contain very irregular and sporadic references to agricultural and non-agricultural production. A small but significant set of inscriptions relates to distribution of produce in non-agrarian contexts, and these have been utilized for urban and mercantile histories, wherein are found, as indicated above, brief discussions of mineral and craft production.

The over-reliance on inscriptions, in turn, has been fed by two factors, one a reality, the other a (mistaken) belief. The reality is the extreme poverty of archaeological data, what with the negligible interest shown by most professionals in early medieval archaeology. And there appears to be a widespread belief, at times expressed in so many words, that the historians do not stand to gain much from literary sources, even that all that needs to be learnt from them has already been done, and that further knowledge must come from other sources, including the literary ones that have not yet been discovered. The facts seem to be otherwise. Only a fraction of the vast corpus of early medieval literary sources has been used in a systematic fashion for reconstructing socio-economic history, such as the *Rajatarangini*, Marco Polo's (13th century) itinerary, the accounts of Arab geographers (AD 851 onwards), etc. Even the much-used account of Xuan Zang has remained untapped for the most part, so far as the nature and extent of agricultural production in seventh-century India are concerned. Yet even the small amount of references from the wide range of literary sources that has been gathered by scholars like Abhay Kant Choudhary (*Early Medieval Village in North-Eastern India*) shows up the promise that these sources hold for the economic historian.

As you go through the following survey of our current knowledge of agricultural and craft production in early medieval north India, you will do well to bear in mind the above remarks and look upon the survey as providing but a few sign posts in an uncharted, exciting field of enquiry.

11.2 EXTENT AND EXPANSION OF AGRICULTURE

The agrarian landscape of India during the early medieval period is brought alive in an unprecedented manner by land-grant inscriptions, which, though known from the earlier centuries, really belong with this period. Hundreds of them have been found from across early medieval North India, although with significant variations in numbers and content over time and space. Indeed, historians have been so deeply impressed by these records as to almost equate them with agrarian history itself.

With so many villages appearing on the historical record for the first time, it is generally believed that they mark a much greater agrarian dynamism than seen in the preceding or succeeding period. Just as the Mauryan-period economy is noted for state control and initiative and the Kushana-period economy for commercial and urban prosperity, agrarian expansion by means of land-grants is seen as a key feature of early medieval economy: '...land grants served as an important means of bringing virgin soil under cultivation in Central India, Orissa and Eastern Bengal. The same was true of South India...' (Sharma, 1980); 'The granting of land gradually changed the political economy through conversion to peasant cultivation in new areas. Wasteland,

theoretically belonging to the state, included grassland and jungle, the intention being for the grantee to clear and settle it then introduce plough agriculture to yield a revenue.’ (Romila Thapar, 2002); ‘... the age in question [early medieval period] saw expansion and proliferation of agrarian society to an unprecedented degree.... Granting of land in favour of religious donees by the issuance of royal copper plate charters holds a crucial clue to the mechanism of the expansion of agriculture into hitherto uncultivated and uninhabited area’ (Ranabir Chakravarti, 1997).

By the same token, the agrarian history of the regions for which land-grant inscriptions are not available is neglected. In the case of the plains of the Punjab, the absence of land grants has led, along with other considerations, to the denial of the importance of agriculture in the region before the Sultanate period. It is stated: ‘The Punjab was not yet [till c. AD 1300] the bread basket it was to become later, but its attraction lay in its network of staging-points along routes linking the watershed and the Ganges Plain to the north-west and beyond’ (Thapar, 2002).

This view of land grants as the central agency of land reclamation in early medieval India is a deeply flawed one. It runs foul of the cardinal fact that much the largest majority of land grants consisted of villages already settled, of land already under cultivation. Agriculture had already been expanding, villages had been forming, for some thousands of years when land-grant inscriptions on durable material (stone, copper) begin to appear on the historical scene, giving us the names of some of them. The general evidence of the land-grant inscriptions thus shows, somewhat paradoxically, that land grants generally did not play any role in the process of agrarian expansion.

To be sure, we do possess examples that are exceptions to the general character of the land grants. There are very few cases – to be discussed presently – when the state sought to extend cultivation by making grant of an uncultivated plot or a deserted village, where the donee of necessity had to bring the land under the plough in order to enjoy the grant. More in number are the cases when grants by private individuals led to restoration of tillage on fallow land (*khila*) that had once been under cultivation. But all these add up to only a small fragment of the total number of the land grants. As already noted, the testimony of the vast majority of the land-grant inscriptions does not show up the donees as agents of land reclamation; in giving us details of the hundreds of settled villages that were given away, it demonstrates exactly the opposite case, i.e. the countryside had been opened up, forests pushed back, waste reclaimed without any role of the grantees.

A most helpful sketch of the agrarian map of early medieval India in the first half of the seventh century A.D. is provided by the Chinese pilgrim-traveller Xuan Zang. For the plains of the Punjab, for example, he notes the existence of a number of kingdoms with large territories, such as those of Takka, Chinapati, Jalandhara and Shatadru or Sutilej. References are made to the fertility of soil, food crops, fruit trees and suchlike for each of these kingdoms. All this would point to the Punjab having been a land of extensive cultivation during the seventh century, rather than one merely of a set of staging points on commercial routes straddling it (a view favoured, apart from Thapar, by Sharma too). In this way, a non-epigraphic source serves to correct an impression formed largely out of the negative evidence of land-grant inscriptions.

The account of Xuan Zang also furnishes a more complete picture of the extent of agricultural production than can be known by adding up the testimony of individual

inscriptions (of North India at all events). A large number of agrarian regions were already in place at the time of his visit: Eg. Takshashila and Kashmir in the north-west; Mathura, Sthanvishvara, Kanyakubja, Ayodhya, Kosambi, Shravasti and Varanasi in the north; Vaishali, Vriji, Magadha, Munger, Kajangala, Pundravardhana, Tamralipti, Karnasuvarna, and Kamarupa in the east and north-east; and Malwa, Jajhoti, Anandapura, Kheda, and Valabhi in central and western India. The very fact that an area was identified as a region would show that it was well-settled on a recognizable scale. In fact, for most of these regions Xuan Zang gives his estimate of their respective areas, bringing out their extensively settled character; the Jalandhar region, for instance, is stated to be 1000 *li* () east to west and 800 *li* north to south, and the Multan region about 4000 *li* in circuit. The basically agrarian character of these regions is noted in a variety of ways: The soil of some (e.g. Sthanvishvara and Multan) is stated to be rich and fertile, regular cultivation is reported for some others (e.g. Kanyakubja and Tamralipti), good or abundant crops for yet others, and so on.

There are good reasons to believe that Xuan Zang based his account on careful observation and generally refrained from making sweeping statements. He possessed a critical eye for detail of all kinds, not just agricultural one. Thus stretches of forest were as regularly noted, from their conspicuous presence to their dominance, whether within a region or beyond it. Trees were a notable feature of Jalandhar region in the plains of the Punjab, but landscape in Orissa was easily dominated by forest cover; there were regular forests within its Kongoda region, which was separated from the Kalinga region again by a forest. There were forests and hills also between Kalinga and Southern Koshala (Chhattisgarh area), the latter itself being a thickly wooded and marshy region. Konkan and Maharashtra too seem to have been dominated by forests, lengthy expanses of which are also stated to have intervened between Kosambi and Prayag, Varanasi and Kushinagara, and Magadha and Munger.

Then there were regions where agriculture was less important. Thus for a considerable stretch along the lower Indus valley, cattle pastoralism was 'exclusively' the source of livelihood. Poor agriculture is reported for some regions in Gujarat, and the importance of trade underlined. Significantly, no such statement is made for any of the regions in the Punjab. In areas such as Kapilavastu and Ramagrama which are described as desolate and sparsely inhabited, agriculture had apparently received a setback.

It is of this macroscopic survey of the discerning Chinese observer that the land-grant inscriptions provide microscopic glimpses. In other words, the bird's eye-view of Xuan Zang is complemented significantly by the close, ringside view from the epigraphs.

As already iterated, most of the time these epigraphs bear witness to agrarian expansion as an already accomplished act, prior to the grant, and not something to be undertaken subsequent to the grant. In a few instances, however, they do record grants of uncultivated land which the donees would have had to bring under the plough: In such cases, the land grants became the agency of land clearance. One such case is seen in the Tippera Copper Plate Inscription of Lokanatha from Bangladesh, mid-seventh century AD, when more than a hundred brahmanas were given away a large piece of forest land, 'having no distinction of natural and artificial, having a thick network of bush and creepers, where deer, buffaloes, bears, tigers, serpents, etc. enjoy, according to their will, all pleasures of home-life'. The brahmana donees must obviously have initiated agrarian expansion for this tract.

More numerous are instances of other type, mostly reported from Eastern India where the donee received a piece of fallow land, i.e. land that had once been under cultivation,

but where cultivation had ceased of late. Such pieces of land were called *khila*. The history of agriculture, in South Asia as well as elsewhere, has not always been a story of unchecked, continuous expansion. There have been phases of stagnation or regression as population failed to grow significantly or declined due to famine, epidemic or war. In the latter case, settlements would be abandoned and arable would fall into disuse, becoming *khila*. Each such *khila* land meant a loss of revenue to the state, which took control of it as state property, and would obviously be interested in the restoration of its cultivation by tax-paying peasant families. This kind of restoration must have been a routine, ongoing process, but there was little reason for inscribing such an act on stone or copper plates.

What we see in the inscriptions are special cases, when a private individual, in order to earn religious merit, requested the state officials to make a piece of *khila* land tax-free for a certain sum of money, which land he would then donate to a brahmana or some religious institution. The donee would naturally bring the land back under the plough, and enjoy its produce without having to pay any taxes to the state. These transactions therefore testify to a kind of agrarian dynamism that arose out of private initiative, with little active role by the state. Moreover, each such instance shows a contraction of the arable first and its expansion to the earlier level thereafter. On a graph these instances would represent not points on an upward curve but a complete V-shaped trough on a level line.

It is reasonable to suppose that there would have been in the settled villages not only such fallow land but also other types of culturable (i.e. cultivable) waste land within and on the borders of village, including land used for grazing animals and small patches of forests. That is to say, even among the settled villages there would have been some scope for land reclamation for a variety of reasons. The Kanker copper-plate inscription from Central India, dated AD 1213-14, records an increase in the revenue-yield of the village at the time it was being granted and also the fixation of its boundaries (*maryadikrtya*) on the same occasion; the increase in the revenue yield was apparently due to an increase in the cultivated area of the village, which also necessitated the boundary fixation. A similar increase was registered in this record for another village.

There are some indications (e.g. the right to cultivate land or get it cultivated, *krsatah karsayatah*) that the grantees of settled villages were given the right to reclaim or get reclaimed such waste or fallow pieces of land as might exist or come up in the village being granted. The donees would normally be interested in promoting such reclamation, for that would add to their income (waste land) or maintain it (fallow land). Unlike in the case of grant of uncultivated land, however, the grantees of settled villages were not required by the act of grant itself to undertake any reclamation.

11.3 IRRIGATION

If the land-grant inscriptions usually tell us nothing about the role of the state in the promotion of agricultural production, it does not mean that the state did not play any such role. A 12th century non-epigraphic source, the *Rajatarangini* by Kalhana, relates in some detail how the early medieval state could contribute to the cause of agriculture on a significant scale by other means than issuing grants on copper plates or stone of uncultivated land to religious personnel or institutions. During the eighth century AD, according to this source, king Lalitaditya Muktapida caused a 'diversion of the waters of the Vitasta (i.e. Jhelum) river' at a certain place and also distributed a large number of water-wheels (*araghattas*) among the villages. A far more consequential intervention by the state occurred in the next century with the ingenious flood-control measures, extensive land reclamation, and creation of a network of canals by the state official

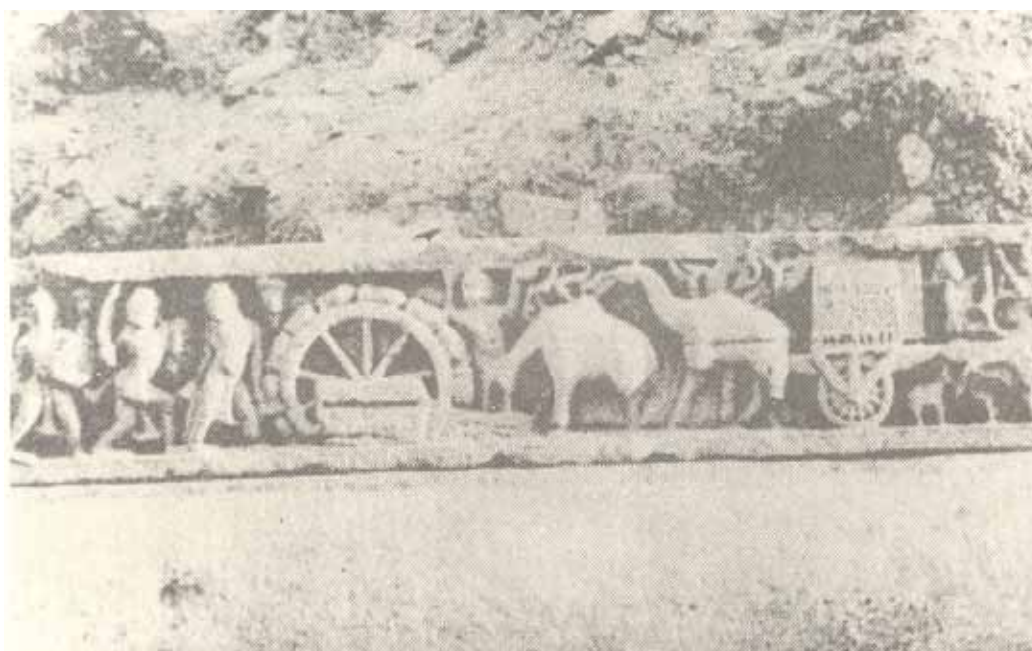
Suyya. The revolutionary impact of Suyya's measures was thus described by Kalhana: 'Where formerly during times of great abundance the purchase price of a *khari* of rice had been two hundred Dinnaras . . . , in that same realm of Kashmir since his times . . . , the purchase price of a *khari* of rice came to be thirty-six Dinnaras.'

Irrigation facilities are reported for the region of Sind also at the time of its conquest by the Arabs in the eighth century. These seem to have consisted of state-maintained canals as well as facilities under community or individual possession and operation such as water-wheels.

The allusion to *araghattas* in the *Rajatarangini*, mentioned above, occurs in the context of the diversion of river waters. There are also specific references to *araghattas* set up on wells elsewhere in the text (*Rajatarangini*, I.284, VI.48). These associations of the *araghatta* with surface water (river) and water at a depth (well) represent the first two stages of the three-stage history of the device that is generally called Persian wheel or *Rahat* in Hindi (derived from *araghatta* or *arahatta*). In the first stage pots were attached to the rim of a wheel that was set up on a source of surface water; as the wheel was rotated, the pots took in and poured out water in continuous succession. This was the first stage of the device that is called 'noria' in English.

In the second stage, the pots were not fixed to the rim of the wheel but to a long rope that was then used as a chain and hung, like a garland, over the wheel. This rope-chain with pots is appropriately called pot-garland. When the water-wheel was placed over a well at a suitable height, the pots at the bottom of the hanging pot-garland would be immersed in the water of the well. By rotating the wheel, it was thus now possible to use the well efficiently for irrigation and other purposes.

This second-stage in the history of *araghatta* is widely attested not only in the literature of early India (e.g. in the *Panchatantra*) but also in the early medieval inscriptions of South Rajasthan and Gujarat. These *araghattas* on wells were operated manually either by hand or by foot. When they came to be operated by animal power with the application of a gearing mechanism, the third stage of the water-wheel was reached. A vivid description of this is given in the *Babarnama*. A vague claim for the existence of this in the tenth-century India was rebutted by Habib, and the rebuttal has not been contested so far.



Araghatta: Detail from a relief on the north side of topmost terrace of shrine at Mandor (c. 1200AD) S.P. Verma, *India at Work in Sculpture and Painting*, Aligarh, 1994.

There are a fair number of references to wells and tanks in the inscriptions from various regions. From Gujarat in particular comes good epigraphic evidence of a special type of large wells with steps, called *vapi* or step-well. Not all these wells, tanks, etc. were used for irrigating crops, as historians often assume too readily without enquiry. All the *vapis* that occurs in the epigraphic records have thus been thought as meant for agriculture, *vapi* being even *translated* on occasion as ‘an irrigation well’, as in rendering an inscription of a Maitraka ruler of Gujarat (*Epigraphia Indica*, XI, p. 108), although *vapis* serving non-agrarian purposes are quite well known. Likewise, it is wrong to think that the great Bhojpur lake in Malwa was created for augmenting agricultural production.

In a great number of cases, however, the agrarian function of the water resources is clarified beyond reasonable doubt by the contextual analysis of the inscriptions. Thus in the above-mentioned Maitraka record, two *vapis* were granted along with two hundred forty measures of land as *brahmadeya* to two brahmanas and there is a further reference to the cultivation of the grant.

In semi-arid regions of Western India, these irrigation devices of course brought much-needed security to cultivation, but they could also make possible double-cropping, as they do in other parts of India: A seventh century inscription from Mewar refers to *araghattas* and tanks on the boundaries of arable fields, some of which are said to be producing two crops in a year.

Very interesting irrigation arrangements are seen in some early medieval inscriptions of Orissa, one of which refers to the grant of one *hala* or plough measure of land (i.e. land that could be ploughed by one plough in a day) ‘with the right to draw water from the tank Tungana until the crop ripened’. In another instance, a brahmana was granted a watercourse along with land, but was ‘asked to share the water with other families of the locality during summer’.

Even when water resources are not mentioned in our sources, it is possible to infer irrigation from other kinds of references. The cultivation of sugarcane over North India is known from a variety of early medieval sources, both literary and epigraphic. As ‘outside the middle Ganga Plains (Bihar and eastern Uttar Pradesh) sugarcane must usually be irrigated’, the instances of sugarcane cultivation become pointers to the prevalence of irrigation. The inscriptions of the Chandella rulers, for instance, are replete with references to sugarcane in the fields of early medieval Bundelkhand. The terrain of the region lends itself to tank irrigation with least effort, while the variable (and therefore undependable) rainfall creates a general demand for it. Archaeological evidence for tank irrigation, traditionally dated to early medieval period, also survives in the area.

For all its importance, the irrigation measures would have covered only a small proportion of the total cropped area, as they continued to do till much later times. The larger proportion would have been dependent not only on rainfall but also on inundation of the flood-plains. The area of the floodplains must have been much larger then, which has now been considerably reduced by the large-scale embankment of rivers during the modern period for a variety of reasons, e.g. to facilitate railway train movements. The annual flooding of the plains of the Indus river was in particular important, on account of both the semi-aridity of the region as well as the enormous expanse of the inundation. But the importance of such as inundation was noted by late medieval chroniclers for areas with considerable rainfall too, such as eastern Uttar Pradesh. The division of land as *deva-matrka* (dependent

on rains) and *nadi-matrka* (dependent on rivers) in the sources underlines the importance of rainfall and river inundation for agriculture.

11.4 CROPS

By piecing together the casual references and occasional notices in the literary and epigraphic sources, it is seen that a large number of crops were raised in early medieval North India. The staples included wheat, barley, several varieties of rice, millets such as Kodon, China and Ragi, as well as a number of pulses. Apart from the oilseeds, viz. sesame, mustard, and castor, the sources also bear witness to the cultivations of a wide range of cash crops: saffron, sugarcane, betel leaves, betel nut, cotton, flax, sann-hemp, indigo, coconut and arecanut. So also are documented many vegetables as well as spices. Fruits appear to have constituted a significant supplement to common diet.

We are also reasonably well-informed, aided by later references, on the spatial distribution of these products. Thus wet rice cultivation is mentioned in the sources from well-marked rice-zones, but, as Xuan Zang attests, 'upland rice' was being grown, no doubt as a lesser crop, in many parts of north and north-west India: Jalandhara, Pariyatra, Kosambi and Takka (western Punjab). Cultivation of cotton is seen not only in Bundelkhand and Malwa but also, somewhat surprisingly for the modern observer, in Bengal. A number of literary sources, both indigenous and foreign, combine with the epigraphic ones to bring out the production of sugarcane through the early medieval centuries across our region, from Gandhara and Kashmir in the northwest to Rajasthan, Malwa, Bundelkhand, Uttar Pradesh, Bihar and Bengal. Saffron cultivation was already well in place in the north-west regions including Udayana, Darel and Kashmir, and as far as Kapisha in Afghanistan.

As to the scale on which different crops were produced in different regions, one should not of course expect any quantitative data from our sources. It is nevertheless possible to obtain some idea of the relative importance of a particular crop in a region. Thus while the Chinese pilgrim I-zing underlines the abundance of wheat in the north-west, the singular importance of rice as land measure in the inscriptions of early medieval Assam leaves no doubt about the crop's dominance there. A similar importance of rice for Kashmir may easily be detected in the *Rajatarangini* of Kalhana, but a reference in the *Nilamata Purana*, another text from the region, would show the importance of barley as a secondary crop, then as now. Barley appears to have been a crop of some importance in the western regions too. Similar indications of the dominance of rice in the regions of Eastern India appear in the sources, which are unfortunately rather reticent in this respect about wheat and next to silent about millets. A Chinese testimony shows that at least towards the closing centuries of our period, Malwa had assumed its present feature of a major cotton-producing region; according to another Chinese witness (Xuan Zang), religious taboos against onion and garlic had already taken their toll on the production of these crops in India at the onset of the early medieval period.

The special features of certain regions were already recognizable in the first half of the seventh century, such as the fame of Magadha for its excellent variety of rice. Vaishali in the neighbourhood was famed about the same time for its orchards of mangoes and plantains, a reputation that it still enjoys. It was, however, a story as much of change as of continuity. For instance, many varieties of rice seem to have come up during our period, with Bengal alone accounting for more than fifty of them. Likewise, from their negligible presence in the earlier period, coconut and

arecanut grew to be important cash crops in Bengal by the twelfth-thirteenth centuries. And, as we know, the agrarian contours of early medieval India were again to change significantly in the Mughal period. Maize was not introduced in our period, as is sometimes believed on the basis of an Assam inscription.

11.5 CRAFT PRODUCTION

We may begin our survey with the most basic of the Iron Age crafts, i.e. iron smithy. As with so many other crafts, we get no more than fleeting glimpses of it through the curtains of the sources. Sometimes it is in the form of the presence of the blacksmith, whether in a West Indian village getting his due of the harvest as in the *Lekhapaddhati*, or at the very limits of rural society, in a forest settlement in North India, as in the *Harshacharita*. When craftsmen (*karu*) in general are reported in land-grant inscriptions, e.g. Chandella charters, and those from early medieval Kumaon-Garhwal (which allude also to *karmanta-sthala*, probably the working place of the artisans), we can be reasonably certain of the presence of blacksmiths among them. Large bulks of inscriptions may at times draw a near total blank on them, as is probably the case with the inscriptions from early medieval Orissa. But from Orissa comes the most solid evidence of the massive scale and high skill of ferrous (i.e. relating to iron) metal-working, in the form of iron beams in the temples, when at times wooden beams could be dispensed with altogether. Malwa, with its famous Dhar iron pillar, presents a parallel case.

A good general index of the iron craftsmen's excellence is seen in the fame of Indian swords abroad, several centres for making which are recorded in the literary sources at home. These swords with patterned blades were prized everywhere, and came to be called 'Damascus' swords. These seems to have been a remarkable technological affinity between India and Islamic lands to the west in this respect. As Ahmed Y. al- Hassan and Donald R. Hill state in their book *Islamic Technology*: 'In general it is no exaggeration to say that Islam and India formed one cultural area as far as Damascus steel was concerned.'

The areas which were mined for iron ores in the earlier period and were in use in later times must obviously have continued to be tapped during our period, e.g. Jharkhand. Talcher in Orissa is believed to have supplied ores to the smelters of the region, as it does to this day. But one also gets a reference to the production of iron and other metals, e.g. silver and copper, in Western Punjab in the seventh century A.D., to which no reference has been traced in the later period. This has been explained, plausibly in our view, in terms of the existence of small deposits of the ores of these metals in the Lower Himalayas, Shivaliks, and Salt Range. They could be mined only for a limited period, whereinafter they were not noticed in the later literature. Their exhaustion would have led to prospecting in other areas. Likewise Kalhana reports the massive mining of copper by the state in a hill in South Kashmir for the eighth century, but not for the earlier or subsequent periods.

Largescale mineral production of non-ferrous metals included the famous Panjhir (later called Panjshir) silver mines in North Afghanistan, where ten thousand miners are reported to have been working in the tenth century A.D. However, as our source (Ibn Hauqal) makes it clear, the large number was an indicator less of the quantity of the silver deposits than of a chaotic silver rush among the people. It is stated: 'The people of Panjhir made the mountain and the market-place like a sieve because of the many pits.... [In this business] you will see a man start his day owning one

million, and by nightfall he owns nothing. Or he may start poor in the morning and by evening become the owner of unaccountable wealth’.

Cinnabar, the only important ore of mercury, was being mined at Broach in Gujarat in the tenth century, according to Al-Masudi.

A major source of gold in North India was the gold-bearing sands of the rivers, the most important of them in this respect being the Indus, as attested by Abul Fazl. A description of how gold was obtained from the Indus in the eleventh century is seen in Alberuni’s work on mineralogy, *Al-Jamahir fi ma’rifat al-Jawahir*:

‘At its sources there are places in which they dig small pits under the water, which flows over them. They fill the pits with mercury and leave it for a while. Then they come back after the mercury has become gold. This is because at its start the water is rapid and it carries with it particles over the surface of mercury which picks up the gold, leaving the sand to pass away.’

Nepal was an important source of copper, which was obtained also from tribal areas and beyond. In general the existence of mines as well as prospecting for metals may also be discerned in the inscriptions of the Kalachuris and of the Gahadavalas. Actual finds as well as epigraphic and literary references add up to an impressive account of the numerous types and expert execution of the non-ferrous metal products.

Stone, earth, and wood provided material for a number of important crafts: stone masonry, sculpture, lapidary, pot-making, brick-making, and carpentry. All these are attested in varying degrees of scale and detail for different regions. Early medieval India saw a new phase of art and architecture with distinct regional styles: Stone sculpture in black basalt during the Pala period in Eastern India, for instance, is so very different from the stone images in sandstone and marble from Western and Central India, and together they make early medieval India quite distinct from the preceding periods in Indian history. This new phase with its extensive sweep not only bespeaks many a significant innovation on the craftsmen’s part but also bears witness to the honing of their skills to classical perfection.

A major sphere of the non-agrarian economy was production of salt. Salt was made from sea water in the coastal areas on the west and the east. It was also obtained from the Sambhar Lake in Rajasthan and the Salt Range. Salt pits, where salt would be produced from nitrous soil, are also frequently attested, especially in the inscriptions of the Kalachuris, Chandellas, and Gahadavalas. In Sind the Saran Delyar deposits were probably exploited for the purpose. The significance of these local supplies may easily be appreciated in view of the high costs of transporting salt over long distances on land.

Then there were the crafts that derived from primary production in the countryside: textiles, oil-pressing, sugar-processing, liquor-making, and leather work. With their broad production base in agriculture and animal husbandry, it is not surprising that all these crafts should have been practised widely. Textiles were naturally far more important than the other products, and happen also to be the most visible in the sources.

A significant development in cotton textile technology took place during our period. The cotton gin came, between the sixth and the tenth centuries, to be fitted with both crank handle and worm gear, so that separation of cotton fibre from seeds and

other waste material could be done far more efficiently. As to carding of cotton, it used to be argued for several decades from 1969 that the carder's bow was introduced in India in the eleventh century. The older view has now been confirmed that the bow had been in use in India from pre-Gupta period onwards. Spinners, however, did not yet have the advantage of the spinning wheel, which is first seen in India in AD1350. (For explanation of these technical terms see Unit 23, Block 5)

The early medieval sources provide lists of a great variety of textiles, of cotton as well as of wool, sann-hemp, silk, and Ranku deer's hair. There have probably been no systematic comparisons in detail of these with the types mentioned in the earlier sources, as far as we know, but P.K.Gode showed *mashakahari* – bed-curtain or 'mosquito-net' – to be one innovation of our period, and it is likely that there were some more. The famous tie-and-die technique, of which Habib finds the earliest reference in Banabhatta's *Harshacharita*, was another early medieval novelty.

As the word *chakra* (wheel) for the oil-mill in the *Manusmriti* and the *Mahabharata* shows, the oil-mill, employing rotary motion, had been in use since early first millennium AD at least. An early medieval text, *Bhagavata Purana*, gives it a fuller name *taila-yantra-chakra*. Oil-mills came to be such a regular feature of common life that to speak of a machine, *yantra*, was to speak of an oil-mill. Lexicons take words like *yantra-grha* (machine-house) and *yantra-sadman* (*sadman* means *grha* or house) to mean an oil-mill or oil manufactory, so that the term *yantra-kuti* in a late-sixth century inscription from Gujarat has rightly been understood as an oil-mill or manufactory. An inscription from Himachal Pradesh, dated AD 804, calls it *tail-otpada-yantra*. This process of *utpidana* (squeezing or pressing out of) was apparently different from the ancient practice of grinding the seeds for oil-extraction as indicated by the term *taila-pesham* in Panini's grammar. However, the more common word for oil-mill in early medieval Sanskrit inscriptions is not *yantra* or *chakra* but a new term, apparently vernacular in origin: *ghanaka*, occasionally also called *ghana* or *ghranaka*. The term that is now popularly used for the oil-press is *ghani*, affiliated to *ghanaka*, rather than *chakki*, a derivative of *chakra*. The other current term for the oil-mill, *kolhu* also has its counterpart *kolhuka* in a ninth century Sanskrit inscription from Gwalior. The precise significance of this shift in nomenclature—*chakra* or *yantra* to *ghanaka* or *kolhuka* – for the technological history of the oil-press remains to be ascertained. All that is certain is that the making of the *ghani* in its present form was a wholly Indian conception, for the *ghani* of South Asia is very different from oil-presses elsewhere.

In his dictionary of Deshi works, called *Deshinamamala*, the famous twelfth century Jaina scholar Hemachandra listed *kolhuo* as a term for sugar press, and also described the process as one of *nipidana* i.e. squeezing. The similarity of terms suggests a similarity in the mechanism of the oil-press and the sugar-press. The flourishing state of the sugarcane-processing industry across North India is shown of course by the combined weight of the numerous references to sugarcane cultivation, its products, sugar-press, and the persons engaged in the processing and the distribution of the products. But perhaps the more remarkable thing is the impressive scale on which sugar industry, including sugarcane plantations, spread out beyond the subcontinent, from Iran through West Asia and North Africa to Spain and Sicily, all during our period. It is generally thought that the knowledge of sugar-making was brought to China from India about mid-seventh century by an envoy of the Tang emperor who was sent to India for this specific purpose. A re-examination of the evidence suggests that it was the Indian Buddhist monks and two

artisans from Magadha who were really responsible for the technology transfer to China about AD 647-648. The Chinese knew how to make a type of sugar at a much earlier date, but what they learnt now was the processes of making *khanda* and *sharkara*, the two coveted age-old Indian varieties.

The details of these processes, which had thus far remained unknown to historians of sugar-industry, have happily been revealed by a recently found fragmentary document in China, dated to ninth/tenth century AD, which refers among other things, to the working of the sugar press by oxen, the device seemingly being *kolhu*.

References to several varieties of liquor as well as liquor-makers point to liquor-making to have been a widely practised craft. The seventh-century account of Xuan Zang as well as the twelfth-century play *Moharajaparajaya* show liquor to have been a major source of state revenue, which would suggest that liquor was produced on a substantial scale. As to the details of production process, a majority of the Indian historians have not been sensitive to, or even aware of, the basic question whether these liquors, or any of them, were fermented only or both fermented and distilled. Through a review of the works of those few who have pursued the question, and adding his own research to theirs, the great Joseph Needham has argued that some form of distillation was practised in India from very early times, and that, along with non-spirituos liquors, distilled ones too were produced during the early medieval period.

Preparation of hides and their products is rather sparsely represented in our sources. An inscription from central India refers to one shoe-maker (*mochi*) while another is seen in the *Rajatarangini*. The tenth century Paschimbhag inscription from Eastern India mentions dozens of *charmakaras* (leather-workers) in connection with a monastery, but they seem to have been attached to the establishment as agricultural workers (*karmakaras*) rather than as leather workers, to the caste of which they belonged. This phenomenon of the professional caste of leather workers providing agrarian labour remains an important feature of Indian countryside even now, as craft specialization, being inadequate for regular livelihood, is not a full-time, all-season job. But the leather-workers who were organized into associations, as seen in an early medieval law-digest, seem to betray a higher level of status and (therefore) of professional skill and engagement. A category apart were the famed leather workers of Gujarat, whose products, rated as the best and the costliest in the world, drew the unstinting admiration of foreign observers like Al-Masudi and Marco Polo.

The hides were mostly those of the domesticated animals in all probability. However, as some references (e.g. the *Harshacharita*) suggest, skins of wild animals too must have been regularly used in leather work. In this as well as in other respects, most notably carpentry and basket-making, forests were an important source of the craftsmen's raw material. The tuskers of Orissa's forests were thus the basis of its ancient reputation in ivory work, which continued in the early medieval period, as attested in the *Hudud-ul Alam*; for central and western India, too, the agency of tribals (Pulindas) in the procurement of ivory is seen in early medieval Jaina sources.

11.6 ORGANISATION OF CRAFT PRODUCTION

The basic unit of craft production in the countryside was the individual craftsman with his family, living amid the agrarian communities, often in the company of the families of other professionals, including other craft specialists. A scatter of references, epigraphic and other, brings out the widespread dispersal of a number

of crafts over the countryside: that of the potter, the weaver, the ironsmith, the carpenter, the jaggery-maker, the oil-miller, the leather-worker, the liquor-maker, and so on.

Some of these groups were treated as untouchables and suffered from spatial segregation, living outside the village (even the town). The composition of such groups, however, seems to have varied from region to region; thus weavers were noticed by Alberuni as one such group of untouchable craftsmen who lived at a distance from the main settlement, but in a Jain text, they are listed among a category of professional groups called *narua*, that is, not untouchable, distinct from the category of *karua* groups, that is, untouchable ones. The binary division of these professional groups as *naru-karu* has persisted down to modern times. Similar contrasts in status for other groups too may be seen in the contemporary sources, with probable exceptions such as the leather workers, who seem to have been regarded as untouchables everywhere. In spite of the *narua* and *karua* divisions among them, artisans in general continued to be known generally as *karus*.

A typical arrangement between the artisans and their rural clients was worked out, one that came to be known later as *jajmani* system. The artisan would undertake to provide a fixed number of services to a peasant family in return for a fixed share in the peasant's harvest. A document in the *Lekhapaddhati*, a work from Western India, attests to the prevalence of this practice with reference to five *karuakas* (a variant of *karu*). In addition, a few inscriptions refer to the agricultural fields of artisans, e.g. the reference to a carpenter's field in a Maitraka charter. Going by latter-day practice, it is likely that the arrangement also included allotting a small cultivable plot to the artisan; he would raise a crop and use up all its produce, keeping nothing as seeds for the next season, which would be provided by his peasant clients in the form of a tiny share of the produce 'for seed' over and above the share for his consumption.

There would have no doubt been variations in the details of this arrangement over time and space, but it is plain that it covered neither the entire range of rural craftsmen nor the entire range of the production (and repair) work of any single artisan. We have seen above in the *Lekhapaddhati* the working of the system with reference to five *karuakas*, only three of whom are named as the blacksmith, the carpenter, and the potter. Whoever the other two might have been (it is often thought that they were the barber and the washerman) the villagers' requirements of professional services (e.g. weaving, oil-pressing, liquor-making) certainly went far beyond the services of the five *karuakas*. Similarly, going by considerable comparative evidence, there would often be demand for more pots, sickles, repair work, etc. than those agreed upon in the *jajmani* system. All these extra demands would be met outside the *jajmani* system, often through market exchange.

At the same time references to the fields of these artisans show – as does that to the leather-workers as agricultural labourers – that craft work was not the full-time job of these specialists. In fact, lack of sufficient demand for their skills (chronic underemployment) was a major reason why such specialist families tended to settle down only in larger villages and why even from there they would often be willing to extend their *jajmani* ties to the neighbouring small settlements.

This mix of the *jajmani* and the market context of craft production in the countryside was probably not seriously disturbed by the donation of some of these villages by the state to religious functionaries or institutions. Theoretically, it generally meant

the transfer of the craftsmen's obligations towards the state to the donees. On the all important question – what the donees did with their newly-won claims on the craftsmen and their families (which too must have tended to grow in number along with the rest of the village population) little direct or otherwise relevant evidence unfortunately has yet come to light.

In some religious establishments, however, craft production came to be organized, by special measures, on a pattern that resembled the *jajmani* system but could be more comprehensive than the usual web of *jajmani* ties. A hint of this is seen in a twelfth-century inscription of Orissa, when a potter was given two measures of land on condition of supplying on a daily basis cooking pots to a temple for religious service. A detailed portrayal of such an arrangement in tenth century for several temples in Sylhet region in Bangladesh is provided by the Paschimbhag Copper Plate Inscription. In one of these temples, for instance, two oil-millers, two potters, two carpenters, and two masons figure among the dozens of other service-providers as recipients of substantial plots each (at least 7.5 acres), apparently in lieu of their services. These services are not specified; in view of the substantial holdings, it perhaps means that their services were now at the temple's disposal. That is to say, the craftsmen (and others) would meet all the requirements (and not just some stipulated part of them) of the establishment.

Quite distinct from the thin spread of the artisans over the countryside was their concentration in varying degrees at certain places. Their larger presence was evidently in virtue of a larger demand for their products, and these places would generally be nodal points. That is to say, they would be points in networks of settlements where lines of communication (land or water routes) met or, which is the same thing, branched – lines along which food surpluses were mobilized, regions were interlinked and authority was asserted.

One type of such places was recognized as *karvata* or *kharvata*. One contemporary defined it as 'larger than a *grama* (village), but smaller than a *nagara* (city)' while another saw it as a village that 'abounded in artisans and agriculturists'. The *kharvata* was, then, distinguished as a settlement from an average village by its greater size and prominence of craft production, but was not *necessarily* recognized as an urban centre. In fact, as one of the two definitions shows, it could continue to be recognized as a village only but as the other definition shows, it could alternatively be recognized as a market town, a place where regular markets or *hattas* were held. Indeed, it is in the sense of market town that the terms *karvataka* and *kharvada* occur in inscriptions.

In an urban economy proper, a larger conglomerate of craftsmen would of course be seen. During the tenth century, for instance, in the flourishing town (*pattana*) of Siyadoni, located at the Lalitpur gap that joins North India to Malwa and thence to West and South India, one witnesses a sizeable presence of artisans, including potters, liquor-makers, weavers, sugar-boilers, braziers, oil-millers, and stone-cutters. Here, as elsewhere (e.g. Arthuna in Rajsthan), these craftsmen figure in the context of religious charity, and do not therefore represent all the crafts that were plied in the town. For instance, in the late twelfth century, the Jain holy site of Sanderaka in Marwar comes into our view as a place where royal and other benefactions were being made, where a donated house fetched annual cash income from its rent-paying inmates, and where there also were merchants numerous and important enough to have a *goshthi* organization of their own. Seven cart-makers or *rathakaras*, who were residents of this place, also figure as donors, and this is how we know that this

was an important cart-building site. This holy town must have had other craft activities – just as there must have been other cash transactions than that mentioned in the inscription – but we know nothing of them.

At times an urban economy was served by artisans living in neighbouring villages, as ancient Varanasi had been. Thus while in the Chhatisgarh region during early thirteenth century an engraver of inscriptions was a resident of a town called Padi, the artisans (*shilpins*) who engraved Amgachi plates of the Pala rulers Mahipala and Vighrahapala lived in a village called Poshali. The probable urban connection of the village is suggested by its identification with the modern village Posela, situated in the vicinity of the well-known medieval town Mangalkot. A similar situation may have existed in the case of the settlement Shubankarapataka in Assam with its two groups of weavers.

It is in the context of these producers outside the *jajmani* arrangement, temple establishment, and the like that craft guilds are mentioned. The more common term for these guilds was *shreni* (e.g. the *shreni* of oil-millers at Gopagiri in Gwalior region), but they were also known by other names, such as *deshi* (e.g. the *deshi* of liquor-makers in the Karitalai inscription from Central India) and *goshthi* (e.g. the *goshthi* of the *shilpins* of Varendra region in Bengal). When a number of professionals at a place are seen as acting together in a religious context (liquor-makers and stone-cutters at Siyadoni), or when they were being taxed as a unit (braziers and liquor makers at the town of Utthapanaka or Arthuna in Rajasthan), one may legitimately infer the existence of a guild-like organization of each such group, even though the term as such does not occur in the records.

An idea of the character of these guilds may be formed through a critical analysis of the combined testimony of law-digests, inscriptions, and other sources, which were concerned in different ways with their working and composition. Members of a craft guild tended to belong to one caste: Craft skills were handed down from generation to generation within a family, and marriage ties brought such families together as a caste. But these were varying levels of expertise where the masters were identified as *acharyas*, to whom others would flock as apprentices. Four stages of reaching perfection in a craft were recognized, and the trainees apparently learnt at the job while making a living out of it.

The affairs of the guilds were managed by a small group of its more influential members. At Gopagiri or Gwalior, a *shreni* of oil-millers had ten chiefs called *mahattakas* while a *shreni* of gardeners had seven chiefs called *maharas*. Thus the number and titles of those who looked after the affairs of the guild could vary from guild to guild, even at one place; the variations over regions would have been, if anything, even greater.

These guilds were mutual-help associations, membership of which was meant to provide insurance against misfortune, natural calamity, and oppression. The collective affairs of guilds could also perhaps include pursuit of common economic interests, such as by excluding competition from within and without. Their corporate character is again seen in collective acts of piety and receipts of deposits, but there seems to be little clearly-analysed evidence for the guild *as a unit* organizing production or undertaking an economic enterprise during our period. In fact, an indication to the contrary is seen in the cases where a guild received a deposit of a large sum from an outsider, in lieu of which members of the guild agreed to make a regular contribution (in cash or kind) *on an individual basis*. The deposit apparently went to the collective fund of the guild, which, lacking its own corporate means, could only depend on the

individual contributions of its members. It is inherently probable that the guild sought to augment its funds by lending some of it and gaining interest thereon, which everyone did, for example the Sun temple of Jagatsvamin at Bhinmal in Rajasthan in the thirteenth century (as shown by the Bhinmal Stone Inscription of Udayasimhadeva Vikrama Samvat 1306/c. AD1249). This was, however, quite distinct from the guild (or the temple) functioning as a banker.

There is good evidence to show that a number of artisans in early medieval India worked in conditions of dependence on merchants, even though no hint of any such dependence is seen for the majority of the artisans and their groups. In his commentary on the *Naradasmṛti* in the eighth century, Asahaya explained *shrenis* in the sense of artisans who were attached to, i.e. dependent on (*pratibaddha*) a big merchant. At the end of our period, in the legal treatise *Kṛtyakalpataru* composed in mid-North India, artisans are clearly stated to consist of two groups: dependent ones (*ashrita*) and independent ones (*anashrita*). It also speaks of 'artisans among merchants' and matters are further clarified by Hemachandra calling *shreshthins* or merchant-financiers as governors of the forts (*durgapalakas*) of eighteen guilds and subguilds. It is at this point that the state of affairs is seen to find a striking corroboration in the numerous epigraphic references to merchant settlements, called variously the *grama*, *nagara* or *kotta* (fort) of merchants, from the late sixth century to early thirteenth century. In a sixth-century charter of the Maitraka ruler Vishnuseva from Western India, for instance, a whole lot of craftsmen is seen to be living among and under the authority of merchants: sugar-boilers, indigo-dyers, liquor-makers, braziers, oil-press workers, producers of vinegar or bitter wine, tailors, weavers, shoe-makers, blacksmiths, sawyers and potters. The reference to a merchant chief (or alderman) subjecting 'the blacksmith, sawyer, barber, potter, and the like' to forced labour is a clear statement on the subordinate position of some of these artisan groups. Details of the nature of the dependent status of the artisans, however, remain to be worked out.

11.7 SUMMARY

Our topic has been a relatively neglected field of study. Yet the available information – a good deal more of which will be found in the readings suggested below – makes it possible for us to trace the changes and continuities in economic production in North India during the seven-odd centuries that followed the Gupta period. As in earlier times, the advance of the agrarian frontier continued apace, though not without some setbacks off and on; the land grant charters among other sources showcase this, but it is a mistake to think that land grants were generally *responsible* for the advance. Irrigation measures of different kinds were a significant aspect of the agrarian dynamism, especially in regions like Kashmir, Rajasthan and Gujarat, as also in peninsular India.

A similar dynamism is witnessed in the realm of craft production, with a number of innovations and a burst of activity in monumental architecture and other fields; in his survey of material remains in pre-Sultanate Bihar (and Jharkhand), for instance, R.S. Sharma found those of the early medieval period the largest.

A lot more effort is needed to clarify the nature of dynamism of early medieval economy, but what is known is enough to belie the obstinate image of an unchanging East or medieval stagnation. Any enquiry into an economy's dynamism would necessarily be concerned also with issues of regression, constraint and crisis.

In the end, you may note again – as you return to its re-reading for doing your exercises – that this Unit has sought not only to supply the details of agricultural and craft production but also to bring out the ways in which those details have been pieced together from the sources, and in the process has also pointed to some of the gaps in our knowledge.

11.8 EXERCISES

- 1) How do the land-grant inscriptions relate to the process of agrarian expansion?
- 2) Analyse briefly the irrigation techniques used during the early medieval period.
- 3) What were the traditional methods used to irrigate fields during the early medieval period?
- 4) Enumerate the cropping pattern in north India during the 6-13th centuries.
- 5) Critically examine the various forms of organisation of craft production in North India during the 6-13th centuries.
- 6) In what ways did the organisation of craft production in rural areas differ from that in urban centres during the 6-13th centuries?

11.9 SUGGESTED READINGS

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UNIT 12 NATURE OF STRATIFICATION AND REGIONAL PROFILES OF AGRARIAN SOCIETY IN EARLY MEDIEVAL NORTH INDIA, C. AD 550 - C. AD 1300

Structure

- 12.1 Introduction
- 12.2 Landownership
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12.1 INTRODUCTION

Early Indian society was anything but homogeneous. There were all kinds of differences among the people, and this differentiation was a matter of stratification as well. Caste is a well-known example: There were a number of castes in any given region, which were hierarchically organised, no two different castes being equal to each other. There was, in other words, caste-based stratification. There were other patterns of stratification also. We shall in this Unit be concerned with stratification based on the livelihood of people in agrarian society.

Land was by far the most important resource in early medieval North India, as indeed in all pre-industrial food-producing societies. The overwhelming majority lived off agriculture; as comparative evidence suggests, up to ninety per cent and more of the total population could have been engaged in agriculture, of which fishing and animal husbandry were important subsidiary parts. Stratification in this agrarian society was based on unequal distribution of land and its products. There were important divisions – based on unequal division of land – among the masses engaged in agrarian production, and there was probably even greater stratification (among a much smaller number) based on unequal distribution of surpluses extracted from the producers. A part of those surpluses was claimed on the basis of landownership by landlords (landowners who did no cultivation themselves) and rich peasants (peasants who owned so much land that they cultivated only a part of it, getting the rest cultivated by others). However, to all appearances the major player was the state with its demands on land, its produce as well as the labour-power of the producers.

As we noted in the previous Unit, these matters of agrarian relations have received a fair amount of attention from scholars. For the agrarian societies of the various regions of North India, sizeable information has been gathered from hundreds of land-grant inscriptions. Not all aspects of agrarian stratification, however, have been

equally illumined. Most of the available information relates to the creation of landlords. Epigraphic data from the *various regions* are analysed to bring out a *common* process of the transformation of agrarian society through the creation of 'landed intermediaries'. But there have also been attempts to underline the presence of some other agrarian groups and some other patterns of stratification than land-grant-induced ones. Region- and locality-specific data for these other groups too come almost entirely from those very land-grant inscriptions that attest to the creation of landed intermediaries. The result has been a richer knowledge of agrarian relations for those areas and periods of early medieval North India for which we have the land-grant inscriptions.

Accordingly, non-availability of these inscriptions has meant gaps in our knowledge of the agrarian structure. Thus, for the entire stretch of early medieval Punjab and for nearly four hundred years of post-Gupta and pre-Paramara Malwa region – agriculturally the most extensively cultivated area of Central India, even more so for the early historical period – we remain more or less in the dark about the agrarian make-up because of the near absence of land-grant inscriptions from these regions. Except for the *Rajatarangini*, literary sources have so far not been tapped for the reconstruction of regional agrarian structures.

There have also been significant differences of opinion regarding the overall character of agrarian stratification in early medieval India; these form the subject-matter of the Feudalism Debate about which you have read in detail separately in Unit 10.

Ironically, an aspect on the importance of which scholars are in perfect agreement and equally emphatic, the least work has been done. Historians of all persuasions have long been persuaded, quite rightly, of the importance of the regional context for a proper understanding of early medieval India. Regional profiles of early medieval North India, however, remain a desideratum even for the themes and periods where the possibility was clearly recognised. Thus, in 1965, R.S. Sharma stated: 'A thorough regional survey of villages granted to priests, temples, vassals and officials in Northern India *can be attempted* on the basis of the available land charters in the two centuries preceding the Turkish conquest...' (Sharma, 1965, p.210, emphasis added). No such attempt has been made till date, as you can see by going through the select readings for this Unit and the references therein.

We are far better informed about the uniformity of agrarian structures across regions than about the differences between the regional agrarian economies. Amidst the wealth of locality-specific details (there is hardly an epigraphic datum without an accurate spatial reference), and despite some regional studies (such as those by B.D. Chattopadhyaya and by Marlene Njammasch), regional specificities of agrarian stratification – based on critical comparisons of features specific to particular regions – do not really inform the sketches of the agrarian landscape of early medieval North India.

Our awareness of the regional variegation of the agrarian picture has thus failed to rise much above the programmatic level. It is not easy to say why. Perhaps there was a certain flagging of interest in the issue of agrarian stratification. It was brought back into sharp focus by the Feudalism Debate, where many a crucial point was underlined and clarified, such as the distinction between forced labour and labour rent. [If peasants worked for certain days in a week or month on the landlord's land in lieu of land given to them, they were paying him rent in labour. 'Forced labour' is unpaid and compulsory labour service by people for their political masters, whether the king or his subordinates.] For some front-ranking and many front-runner historians of early India, however, it produced a kind of deadlock, so much so that Hermann Kulke omitted the theme of

early medieval agrarian history altogether in his general history of India, while dwelling on early medieval political structures. Others plunged enthusiastically into all the controversies – real and putative – of early medieval India (trade, coinage, urbanism, importance of ‘brahmanic settlements’, feudal polity), but simply bypassed the debate in their accounts of agrarian history (B.P. Sahu, 1997; Ranabir Chakravarti, 2000). In retrospect, it seems difficult to escape the conclusion that investigations into early medieval agrarian structure have for some time been less than assiduous.

12.2 LANDOWNERSHIP

The subject of landownership in early India has often been debated, with some historians arguing for royal ownership of land, others for individual or private ownership, and yet others for communal ownership. For each of these positions, it is possible to find clear-cut evidence in the sources. For instance, one may refer to Xuan Zang’s (AD 7th century) testimony for early medieval India to argue that ‘the state in India was held at this time, virtually, if not legally, to be the owner of the soil’ (U.N. Ghoshal, 1929, p. 303). It is equally possible to contest the truth of each such evidence, to assert, for instance, that Xuan Zang did not judge the situation correctly in India, having being misled by his Chinese background (Ghoshal, 1929).

However, this confusion of evidence and thus of interpretation is not insoluble. It is not correct to ask whether the state or the individual/groups owned land, because in fact both ‘owned’ land concurrently, but differently. As explained by P.V. Kane in his monumental work *History of Dharmasastra*, ‘the state was deemed to be the owner of all lands as a general proposition’, but ‘individuals and groups that had cultivated lands in their possession were regarded principally as owners thereof subject to the liability to pay land tax and the right of the state to sell land for non-payment of tax’.

It was thus a case of coextensive rights. In fact, before Kane’s magisterial survey of the question, this had been realised by a long line of distinguished scholars, like Wilks, Dubois, Elphinstone, Patton, Chamier and Wilson. We have put the word ‘owned’ in inverted commas above because of a peculiarity of the concept of property (*svatva*) in early India, whereby all kinds of rights in land could be recognised in different contexts as constituting ‘property’, even the rights of sub-mortgagee. Thus, land could be seen variously as the *svatva* of the king or of the individual or of the latter’s tenant-farmers and so on. Failure to recognise this peculiarity of usage has probably been the other main reason for the above-mentioned debate on ownership, apart from the non-appreciation of concurrence of rights.

Among these multiple ‘owners’, nevertheless, one was clearly understood to be *the owner* with overriding rights. These were, as Kane puts it, the ‘individuals and groups that had cultivated lands in their possession’ – i.e., the peasant masses and landlords – who ‘were regarded *principally* as owners’. They held the title (*agama*, literally ‘lawful acquisition’) to their land, and came to be called *mulasvamins* – as distinct from the other *svamins* – or *bhaumikas*, those to whom the *bhumi* or land belonged. It was these people who were liable to pay revenue on the land, decided on the mode of its cultivation, could gift the whole or a part of it, and whose children would inherit it with all its incidents. (In law ‘incidents’ are privileges, burdens or rights associated with a piece of property.)

This ownership of land by the subjects is not negated by terms like *bhupati*, ‘lord of the earth’; and *bhusvamin*, ‘owner of the land’ for the king. These terms referred to the distinct claims of the state. These claims did not infringe on the rights of the

landowners of the realm, making them tenants at will, just as the other set of terms for the king, such as *narapati*, 'lord of men', did not take away the freedom of the subjects, making them slaves.

12.3 THE STATE'S CLAIMS ON AGRARIAN SOCIETY

To be sure, terms like *bhupati* and *narapati* do imply certain claims of the state on the land and the people. Details of these claims are, in fact, quite well-known in plenty from the legal and epigraphic literature. However, the debate over royal versus individual ownership of land has, especially in the context of the debate over early medieval agrarian structure, tended to obscure the precise nature of these claims. Advocacy of royal ownership has meant a near wholesale denial of peasant rights in land; counterclaims of individual ownership have confined the state's role to mere collection of its share of the produce as taxes.

Far from being a passive recipient of revenues, the state maintained a vigorous presence in agrarian society with a view to exploiting to the full all its claims. It began with the assessment, i.e., valuation of land for the purpose of taxation. Depending on the quality of the arable, the state *expected* a certain yield from every field, and taxed it accordingly. When we see, for instance, that a piece of land being granted in ninth century Assam was stated to be worth 2000 measures of paddy, it is clear that the land had been so assessed by the state. The law books provide for fines for the landowners if they do not properly cultivate the land, producing less than what they were expected to do, and thus causing a loss to the treasury. Neglect of cultivation could in fact lead after a time to the loss of title. In a very real sense the land belonged to the state.

Individuals (and collectivities) thus held land on condition of keeping it productive to a stipulated degree. All other territory was under the direct control of the king, who would of course be interested in making it worth his while in some way or the other. This was done mostly by encouraging people to colonise it under private titles, as we noted in the previous Unit, but the early medieval state did manage a bit of it itself, as we shall see presently.

In virtue of his general lordship of the entire territory, of being a *bhupati*, the king claimed a share of all kinds of produce on his land (including forest wealth), not just of the principal crops. Fruits, roots, fuel, vegetables, oil, ghee, everything that grew on, beneath and above his land: nothing could escape, in principle, state demand.

In virtue of the king also being a *narapati*, the state made two more sets of demands, exercising general lordship over the subjects, all of whom were subject to obedience in defined terms, which were generally incorporated among the legal (*shastric*) norms. One was in the form of fines in default of good conduct. The second set of demands comprised *generalised* labour service, as distinct from the labour tax levied from *specific* segments of population, especially the artisans.

As an adage in an inscription put it, the king was enjoined not to confiscate the land properly maintained (*paripalitam*) by good or honest people (*sadbhih*). You already have an idea of what is meant by 'proper maintenance' of land. But people had also to be 'good'/'honest'. If they were found to be deviating from proper behaviour, the state would not generally take back the land; it would fine them for misconduct. These fines were an important means of income to the state as it went about regulating the social order. In fact, the word *danda* come to mean both fine and punishment in

Sanskrit, as it continues to do in Hindi and other Indic languages. A common phrase in early medieval state records is *danda-dashaparadha*, referring to punishment through fines for ‘ten offences’. These stand not so much for some ten specific crimes, but for ten categories of them as seen in the legal literature, which are nearly all-encompassing in scope; the phrase *danda-dashaparadha* thus seems to stand for judicial fines in general. A small, but telling sample of them may be seen in the following extract from a charter, dated AD 592, of a Maitraka ruler of Gujarat:

For knocking (another person) down and dragging (him or her) along, or for cutting an ear, the fine is Rupaka 27. For verbal injury or injury by violence (beating), Rupaka 6¼ as fine. If (permanent) scars are visible (as a result of the beating), Rupaka 48.

Epigraphia India, Vol. 30, pp. 163-81, D.D. Kosambi’s translation.

[*Rupaka* denoted a type of silver coin]

By virtue of its lordship over the people, the state also arrogated to itself the right to demand service from them in a variety of ways. This forced labour was extracted everywhere, and was commonly known as *vishti* or *pida*. In Kashmir, it was called *bharodhi* (or *rudhabharodhi* in its intensified form); *utkhetana* in Assam had probably the same import. There could be several types of forced labour depending on the nature of the job it was needed for. As the term *bharodhi* suggests, forced labour in Kashmir was in the form of carriage of loads, but even there Kalhana could distinguish thirteen types of it. Inscriptions generally refer to all (*sarva*) kinds of forced labour or forced labour as per the occasion (*utpadyamana*), but those from Nepal specify several types, an interesting (and intelligible) instance being *bhotta-vishti*, i.e., *vishti* involving carrying goods to Tibet. Care was taken about extraction of forced labour from the surplus labour-time of the producing masses so as not to disturb the revenue-yielding production processes, such as sowing the seeds or harvesting the crops.

12.4 THE STATE AND STRATIFICATION – 1

The resources that were drawn off the rural world by the state to non-rural areas made the countryside so much the poorer; in themselves, they would not have affected the nature of stratification in agrarian society. However, if taxation was regressive – as it seems to have been – it could not but have deepened the fissures. Regressive taxation means that the burden of state demands was shared unequally, more by the less privileged majority than by the well-to-do strata. As you shall see in your Unit on early medieval polities, local notables such as *mahattaras* and *pattakilas* were routinely associated with state administration; through this direct involvement and general influence, they would have tried, with success, to manipulate the incidence of taxes in their own favour.

Then there were people and institutions whose land was officially either exempt from taxation or taxed at a concessional rate. Numerous records attest to the land of temples and of brahmanas as exempt from taxation (*deva-brahmana-bhukti-varjjam*). This was a special privilege, which was not available to the general run of temples and brahmanas. In fact, there was a category of land grant called *kara-shasana* where tax obligations continued, if at concessional rates. Elite brahmanas were called *brahmanottara*, and epigraphic evidence suggests that they enjoyed tax exemptions. Two categories of tax-free land called *brahmottara* and *devottara* respectively survived well into modern times, *brahmottara* obviously being a contraction of *brahmanottara* (in the sense of ‘the land of a *brahmanottara*’).

As distinct from the removal of a part of the state shares from the village was the consumption of the remaining parts in the countryside itself. A combination of circumstances favoured it. There was the dispersal of the armed forces and other state personnel over the realm, and it was only logical that they be paid out of the state proceeds of the locality. Then there were a large number of village resources, e.g., vegetables, milk, fish, etc., for each of which the state demanded its pound of flesh, for which there was hardly a market generally to commute them into cash payments, and most of which, being perishable and/or cumbersome, presented almost insurmountable problems of long-term storage and long-distance carriage. Finally, the appurtenances of war and government called for regular mobilisation of human labour for non-productive purposes, for which the people had to find time without leaving their station.

As the omnipresent phrase '*a-chata-bhata-praveshya*' – 'not to be entered by *chatas* and *bhatas*' – in the records of the period, meaning a great privilege, shows, their entry meant a major burden for the villagers. *Chatas* and *bhatas* were two categories of state functionaries, and it is usually supposed that the phrase referred to only these two types. However, as the combined testimony of two copper-plate inscriptions of Somavamshi kings from Sonpur in Orissa makes it clear, the combination *chata-bhata* stood for officialdom in general. These two records have an identical format, in one of which state functionaries are called by the familiar term *raja-pad-opajivins* but in the other 'of *chata-bhata Jati*' (*chata-bhata-jatiyan*, *Epigraphia Indica*, XI, No. 8, A, text lines 7-8; B, text line 9). In the same vein is the reference to the entry of '*chatas et cetera*' being forbidden (*nishiddha-chat-di-pravesha*) in Chandella charters, as a consequence of which the king, *rajapurushas*, *chatas* and others were to forego their perquisites or dues (*abhavya*) from the area in question.

The significant presence of the state personnel in the villages is seen in many other ways. There is that pointed expression in the Maitraka and Rashtrakuta charters – *rajakiyanam ahasta-prakshepaniya* (not a finger [literally "hand"] to be lifted at by the royal officers) – which, in its unambiguity of intent and clarity of direction, is more than matched by the following graphic detail in an Assam inscription:

... the land is not to be entered by a number of 'oppressors', comprising, among others, the queen, the royal princes, the royal favourites, the eunuchs, the persons in charge of corralling of elephants and mooring of boats, the officers tracking thieves as well as those charged with the *uparikara* tax and with the *utkhetana* impost. (U.N. Ghoshal, 1929, p. 329)

Two points may be noted. The reference is to a plot of land, not a village, which makes it clear that 'entry' does not mean trespass but denotes the obligation to serve the visiting 'oppressor'. Second, these obligations, e.g. the obligation to maintain an elephant or two, implied not only deliveries in kind but also labour service. A late commentary on the *Mahabharata* makes matters explicit by likening the king, who foists his elephants on his subjects, to the cuckoo; significantly, this act is called an instance of *vishti* – the obligation to maintain royal elephants belonged more to the category of labour service than to payments in kind.

A crucial feature of stratification in the agrarian society was thus a cleavage between what may be called the state class and the rural populace. [By 'state class' is meant social groups which made up the state apparatus.] It also seems reasonably clear that the presence of this state class bore heavily but unequally on the agrarian classes. It was the common peasantry that bore the brunt of the demands of the officials in

the neighbourhood. For instance, only those brahmanas who were considered no different from the shudras in status were generally seen fit for doing forced labour. In hilly regions like Kashmir and Nepal, it is true, that in principle no one, not even brahmanas, were exempt from it; it was only in lieu of huge wealth and in face of hunger strike that the Kashmir king could exempt a few priests from it. However, as references to fines for not doing work in both the regions show, the obligation to perform *vishti* or *rudhabharodhi* could always be bought off by those who had the wherewithal. The presence of the state class thus served to accentuate the already existing divisions in the agrarian society.

A very small number of references to royal (*rajakiya*) land in the inscriptions show that the government at times owned land and got it cultivated as private landowners did. This was qualitatively different from extracting revenue from the people. This role of the state is also seen in a ninth-century text from Bengal, the *Devi Purana*, which 'recommends that ... the ruler should resort to direct cultivation in the adjacent lower regions of the fort and, for this purpose, he should make the residents of the neighbouring villages (*khetakas*) render service (*sevane karyah*) to him' (Yadava, 1981, p. 264). In Kashmir where the state is known to have held a monopoly of the high-value crop saffron, such a role of the state would have been conspicuous.

A certain interpretation of a category of land-grant inscriptions, put forward by noted scholars such as V.V. Mirashi and Lallanji Gopal, would paint a far more extensive picture of royal farms in early medieval India. A sizeable number of plots of land *held by individuals* are known to have been *donated by the king*. In the same fashion the king is seen to be giving away irrigation resources in quite a few of other instances. How could the king give away what he did not own and possess? On this reasoning, all this is taken to constitute evidence for state-managed agriculture, with the individuals interpreted as temporary tenants having no rights over the land. This interpretation, however, is based on the assumption of either royal or individual ownership of land in exclusive terms. There are rival interpretations of the same evidence based on the same assumption; D.C. Sircar, for instance, thinks that the king purchased the land from the individual holding it before making a pious gift of it. In fact, there is no internal evidence at all for the act of purchase, nor for the individuals being temporary tenants.

The issue has been clouded by the assumption of either royal or individual ownership of land, which we have already found to be rather unhelpful. Once this assumption is discarded and other relevant pieces of evidence brought in, it becomes clear, that in that these were generally instances of co-extensive rights in land. What the king was giving away as *bhumida* ('the giver of land') was state claims over the land owned by the peasants, except in such cases as the one seen in the Jesar Plate of Maitraka king Shiladitya I, when a piece of land was of a missing (*utsanna*) peasant and so was exclusively state property at the time of the grant.

These alienations of revenue and other rights over the land and person of the agrarian classes were the most important way in which the state altered the character of agrarian society in early medieval India. These are considered in the next Section.

12.5 THE STATE AND STRATIFICATION – 2

The land grant inscriptions from North India that are known to us create an unmistakable impression that the vast majority of them relate to transfer of state claims to religious personnel and institutions. In order to have a precise idea of how

these grants affected the agrarian structure, we have to take into account first the details of the claims being granted and then the terms on which these were transferred. Once the structural significance of these grants is thus clarified, further issues of relevance – including questions of scale – may be discussed.

The details of the transfer in these hundreds of records are of course not recounted in a uniform manner all over throughout. The same kind of obligations could be expressed differently, and not all state claims appear in all the records. For instance, *bhaga* occurs as a fairly common name for the principal land-tax, i.e., one on the major produce, but *dani* and *udranga* (which occurs among other places in the Madhuban inscription of Harshavardhana from Uttar Pradesh) were its important variants. The difference in the format of grants between the charters of different kingdoms could be considerable. One major contrast was noted by R.S. Sharma:

Under the Palas and Pratiharas all agrarian rights such as the use of pasture grounds, fruit trees, reservoirs of water, bushes and thickets, forests, barren land, low land, land under occasional flood, etc. were transferred to the donees.

Under the Rashtrakutas, however, except for the rows of trees ..., which too are mentioned in later grants, no other village resources were specifically transferred to the donees. (Sharma, 1980, p. 94)

Even Sharma, who reads much significance in the enumeration of these resources, finds it difficult to accept that the contrast stands for actual differences in the state of affairs in the respective kingdoms. Variations are seen in fact among the charters of single regions or dynasties as well, not just between them. The details on the ‘oppressors’ of the village in the Assam grant already quoted, for instance, are generally missing from the other grants in the region; surely, however, this does not entitle us to infer the absence of these ‘oppressors’ elsewhere in the realm. A study of the records of the Paramaras of Malwa (AD 9 – 13th centuries) has brought out more than nine ways of enumerating the resources that were granted. Analysis shows that, despite the differences in enumeration, in each case all that the state had been asking for so far was being made over to the donee(s).

This kind of analysis remains to be extended to the records of other kingdoms. Yet there are several indications that what we see in the post-Gupta inscriptions are so many different ways of making a common point, viz., the state was handing over to the donees all the claims in their numerous specific details and caveats that it had exercised so far over the area being granted. This common point does not mean of course unvarying uniformity. The point rather is that both uniformity and variation require to be demonstrated through textual and contextual analyses of the sources rather than by taking them at face value.

Variations in some specific details, both within and a cross regions, are relatively easier to detect. To take an obvious example, step-wells (*vapis*) and water-wheels (*araghattas*) do not occur among the taxable resources of Eastern India, as is only to be expected. Then there are a number of terms, which are known to have been names of taxes or taxable resources, but their precise import eludes us, so specific they were to their time and place. One such term is *mayuta* that occurs in the tenth century Rajor inscription from Alwar region in Rajasthan. F. Kielhorn, the editor of the record, pointed out, there is no mistaking the term ‘as the inscription is written and engraved very carefully’. However, the term has been wrongly spelt by Ghoshal and, following him, by Sircar, and also wrongly interpreted as equivalent to *bhoga*

(in fact *bhoga* and *mayuta* occur as twin elements of the dual expression *bhoga-mayut-aday-abhyam* in the record).

It is also possible to discern variations over time and space in the mode of making demands, as well as in the overall burden of taxation. In some early records from Orissa and from Western India, the principal taxes were demanded in cash and a certain trend in this direction may also be seen in Bengal in the later centuries of our period. This remained of course a limited phenomenon. There is a certain impression among historians that the number of imposts increased in a marked way through the early medieval centuries, making for heavier taxation. This impression of the increasing number of taxes, however, is based on arbitrary selection of a very small number of records. It needs to be thoroughly verified first and then compared with that formidable benchmark of taxation in the earlier period, i.e., the *Arthashastra* of Kautilya, where, to quote Kosambi, 'fines [alone] take up nine full columns of the index to Shamasastri's English translation' (Kosambi, 1975, p. 216). The point, however, is that even establishing an increase in the *number* of imposts may not be decisive on the case for higher taxation. After all, at the end of the day as it were, the Delhi Sultanate, with its much shorter list, was levying no less. It would not do to compare numbers alone *over* different states; within any given kingdom, it would of course do.

We may consider a different set of indicators in the sources, which, taken together, point to the ever-increasing incidence of taxation through our period. The aforementioned Rajor inscription mentions customary (*uchita*) and non-customary (*anuchita*) taxes; the division implies the addition of new taxes to earlier ones. (Sharma takes these to mean 'proper' and 'improper' taxes, but this would suggest that the king was declaring his own taxation to be unjust, at least in part, in the act of making a pious donation – an unlikely scenario). A general tendency for taxes to increase may also be detected in a special praise for the founder king, Mularaja, of the Chaulukyas, who dislodged the Chapas of Gujarat. In a poetic pun on the word *bali*, he was credited with having 'fettered' *bali*, that is taxes, and so was like the god Vishnu who, in his Vamana incarnation, had restrained the demon king Bali. Yet the Chaulukyas themselves carried out later a fresh assessment (*nava-nidhana*), unfettering the *bali*! Finally, we have the testimony of Kalhana, who recounts in detail how king Harsha of Kashmir enhanced taxes to an unspeakably harsh extent.

There are, thus, fair grounds for supposing a tendency to increasing burden of state claims. But it does not seem that this was generally effected via land grants, by authorising the donee through grant of arbitrary powers to fleece the people as he wished. The state made over its own rights to the donees, who were authorised to exercise precisely those – no more, no less. This is *positively* shown (as distinct from being inferred from negative evidence) by phrases such as *yathadiyamana*: people were enjoined to pay as they had been paying so far. The state claims being transferred included of course the possibility of additional income in future, such as by getting fallow land cultivated. To quote the Rajor inscription again, it refers to *nibaddha* income as well as one that was not so (*anibaddha*). *Nibaddha* means 'registered', and so seems to stand for surveyed and assessed sources of income; the remaining ones would be *anibaddha*. Such additions were clearly not the same thing as the donee being empowered to increase the rate of taxation.

In accordance with the above, there is hardly any indication in the charters that the communal agrarian rights of the people were dented *for the first time* by the royal grants. Once it is seen that the people were asked to pay to the donees what they

had so far been paying to the state, and that the taxable resources included pastures, ponds, forests, fisheries and the like, it follows that these resources were already subject to taxation in the particular state. Contrary to what is argued sometimes, they were not the communally controlled resources over which the said state had laid no claims itself but, in the act of transferring them, made them subject in future to levies by the donees.

Two major patterns in the occurrence of certain key terms have been discovered by Sharma, which need to be noted and accounted for. One is that *vishti* or forced labour 'practically disappears in the records of the Paramaras, the Chaulukyas and the Chahamanas. Evidently, the practice had died out in their dominions. Similarly, the Gahadavala and Chandella records do not mention forced labour' (Sharma, 1980, p. 196). Second, in a few early charters residents are also mentioned along with the land or the village being granted. The residents are supposed to have been deprived of their freedom of mobility by such acts of grant which multiply in the later period. Accordingly, the grants which do not refer to the peasants and other residents in this fashion did not tie them to the land. For instance, 'Epigraphic records from Bengal do not refer to the transfer of peasants to the donees down to the end of the twelfth century. But later the practice spread to this part of the country as well'. (Sharma, 1980, p. 188. However, Sharma provides one mid-eleventh century instance of such a transfer from Bengal region in the preceding paragraph).

Some authorities feel uneasy about the first pattern without being able to modify it. The second pattern, i.e., reference to the residents being mentioned in the description of the grant, however, has been seen by the critics as having no special significance at all, being just one more way of making mere revenue grants. The inclusion of the residents among the resources being transferred along with the land, it is argued, placed them under no other obligation or restraint than payment of taxes to the donees. This difference of opinion, you should note, is over the inscriptions where the residents (or their houses) are mentioned *as part of the description* of the land/village being granted. There are a handful of records from Western India, where a few peasants themselves – as a category of their own – figure as items of grant. There is no controversy regarding the dependent status of these peasants, to persons of similar status references being found in the literary sources too.

In our view, these patterns, in order to be properly understood, requires fuller source criticism as well as a wider perspective on state demands (which were hardly, if ever, merely of revenue, bereft of further claims). If we bear in mind the three major components of the demands (taxes, fines, and generalised labour service), and take into account the totality of the evidence – evidence of the entire structure of any given record, not just of some terms in it, and of all the available records, not just of a few, – we shall see a confirmation of the point we made earlier: The same three types of state demands were being transferred everywhere (allowing for variations *within* each type). People were liable to perform labour service and were subject to the commands of the donees, even where the particular terms in question are not found. The same implications were present in different ways when *vishti* does not occur, and similarly, even where the residents were not enumerated among the resources that went with the land, other considerations show that they did not become exempt from the authority of the donees. All this may be seen in the following discussion of *all* the known land-grant inscriptions of the Chandellas as put together in *Corpus Inscriptionum Indicarum*, Vol. VII, part 3.

The Chandella charters have been noted, as already seen, for the absence of any reference to *vishti* as well as for the inclusion of the residents – ‘artisans, peasants, merchants’ (*karu-karshaka-vanij*) – among the resources being transferred along with the land. They have also been noted for lengthy lists of resources: ‘The Chandella charters present the most elaborate list of the village and its products made over the donees’ (Sharma, 1980, p. 183). However, we find that although all the land-grant records of the Chandellas have the same format, only two records refer to the transfer of the residents; the rest do not (one of these two has *karukapamkavanij*, which is sometimes interpreted as *karu-kapamka-vanij* or as *karuka-pamkavanij*, but is obviously a mistake, as Sharma pointed out, for *karu-karshaka-vanij*). Further, we see much variation in the elaboration of the details of the grant. In one record, there is only one phrase on the village resources (*simatrna-kashthako-paryanta*). In some, people are asked to pay, very briefly, ‘*bhaga, bhoga, et cetera*’ (*bhaga-bhog-adika*), in others, *pashu-hiranya-kara-shulka* is added before the ‘et cetera’, and so on. We would not have known whether the Chandella kings donated income from fines too, but for two records which have *dandadaya* in the list and, besides, refer to the twofold division of the imposts as customary (*uchita*) and non-customary (*anuchita*).

If we go by the variations alone, we will have to conclude that apart from the two exceptions, the rest of the residents in the donated villages were free to stay or move as they liked, that generally the donees did not have the right to levy fines from the people, including even those in the two villages where they were transferred along with the land, that the imposition of non-customary taxation was an exception rather than the rule, and so on. But if we look at the overall structure of the records and take into account the other terms and phrases, it becomes reasonably clear that we will have to conclude differently. The ‘et cetera’ in ‘*bhaga, bhoga, et cetera*’ of one Chandella record included the imposts specified in the other Chandella records such as fines, *pashu-hiranya-kara-shulka* as well the other taxes which might have been in force but are not known from the available evidence which, incidentally, gives us no clue to the nature of division between customary and non-customary taxes. When the sum-total of all state claims (*nihshesh-adaya*) was being gifted it did not matter if the resources were listed in full or part. If people were asked to be attentive to (*shravana*) and comply with (*vidheya*) the command (*ajna*) of the donee things did not change materially due to the non-mention of the residents in the description of the grant. People transferred with the land or placed at the donee’s command could not possibly have refused him service. And if we know of no early Indian state which did not demand generalised labour services from its subjects, we are not entitled to assume the absence of the practice in the Chandella state.

The terms on which the state claims were transferred to the religious personnel and institutions created a form of agrarian property. The grants were made in perpetuity, ‘as long as the moon and the sun endure’ as the phrase went. This was typically done by the ritual of libation of water. The adage that we have already alluded to reads in full as follows:

**adbhir = dattam tribhir = bhuktam sadbhis = ca paripalitam |
etani na nivartante purva-raja-krtani ca ||**

(Translation) ‘(land) granted with libation of water, enjoyed by three (generations), properly maintained by good people, and granted by previous rulers – these are not to be confiscated (by the state)’.

The reference to grants made by previous kings indicates that the first item refers to grants made by the reigning king. The second category may be understood in terms of the distinction between *bhuj* (possession/enjoyment) and *agama* (title); it refers to the early *Smriti* view that three generations of enjoyment give the title to the land (the period was to be hugely extended in later legal literature). The third category regarding 'proper maintenance' and 'good people' has already been discussed.

The importance of this adage lies in showing the emergence of religious land grants as a recognised form of agrarian property, on a par with the other, older forms. Grant with 'libation of water' represents this form here, but in the inscriptions it is underlined in more than one way. In the records of the Kalachuris of Tripuri, 'libation of water' is in fact usually replaced by *shasanatvena*, 'by *shasanatva*', translated somewhat unsatisfactorily as 'by means of a grant'. More generally, aside from the reference to the libation, the property rights were described in terms of rights to 'enjoy the land, cultivate it, get it cultivated, and assign it': The donee was to exercise these rights in the same ways as the state had done so far, which also entails that the donee was to respect the extant agrarian rights of the people as the state had done so far. The clearest statement on the granted land as property occurs, it may be pointed out, in the Chandella charters, where the donees' rights are stated to be 'gift, mortgage, and sale' (*dan-adhana-vikraya*), apart from those of enjoyment, cultivation and the like.

Through the creation of this distinct form of agrarian property was called into existence a distinct class of landlords in early medieval North India. They claimed a share of all kinds of produce in their area, and enjoying extra-economic authority over the people, became their lords.

Several units of such landlordship are seen. At the lowest a small tract of cultivated land, was assigned to a brahmana. In other cases dozens of them, sometimes more, sometimes less, would be collectively granted a village or villages. The more general practice seems to have been the grant of one village to one person, at least at a time.

But there was also the University of Nalanda in Bihar having two hundred villages and the temple of Somanatha in Gujarat, reportedly the owner of two thousand villages. It is impossible to say with precision at what scale the grants were made during our period. There are several indications, however, that a fairly substantial number of landlords were thus created.

By and large the kings of early medieval North India refrained from making such grants to their officials. The state functionaries were no doubt granted land revenue for their services, but it was highly unusual for them to be granted state claims over land on a hereditary basis; an example of such an unusual instance may be seen in a Chandella inscription, when a person was granted land in this fashion on the death of his father in war. The officials, with their service perks and grants, were of course present as members of the state class in the agrarian society. In times of weakening state control, they usurped power at local levels and became hereditary lords. But, to repeat, it does not seem to have been regular state policy to make hereditary landlords of its officials, in sharp contrast to regular state policy towards religious personnel and institutions.

Yet there seems to have existed, on a fairly widespread scale, secular counterparts of the religious grantee landlords armed with state claims over land and people. They were self-created potentates rather than beneficiaries of state grants. A number

of terms in the inscriptions and literature indicate their presence in a very complex composition, but precise details await clarification through research. B.N.S. Yadava has referred to the general category of *bhogins* in the literary sources, one of which refers to *bhogins* seizing villages, and another likens them to kings (Yadava, 1981, pp. 280-81). One regional example of such *bhogins* would be *damaras* of Kashmir. More than one reference in the *Rajatarangini* suggests that the *damaras* arose out of the ranks of prosperous peasantry to dominate the countryside individually (they could own forts) and pose a threat to royal power collectively. Far from being creations of the state, they struck out on their own and competed for a share in state power with the central power (royalty), which followed a conscious policy of preventing the rise of such groups. Their position as landlords would have been analogous to that of the state-created landlords in that they would have the same kinds of claims on the agrarian classes, but different in that while the *damaras* survived and prospered by their own might, the religious grantees remained dependent on the continuing support of the kings, who are known to have, on occasion, exchanged one benefice for another, or seized a grant for some compensation, or even indulged in outright confiscation; it is also known that royal officials could make life impossible for the grantees.

12.6 PEASANTS, SHARECROPPERS AND LANDLORDS: AGRARIAN SOCIETY FROM BELOW

This Section remains one of the least known areas of historical research, less in terms of material available than in those of interest displayed and methods deployed, though recently there have been some fervent pleas for shifting the focus of research to agrarian groups other than the land-grantees.

Most of the research in the field remains terminological. A number of terms that denote the various agrarian groups have been noted and extensively discussed, more by Yadava (1993) than by others, with his usual breadth of scholarship. In-depth studies of the problem remain on the anvil at best.

Kutumbin/kutumbika is the commonest term for peasantry across our period and area. The Maitraka (AD 5-8 centuries) inscriptions contain an appreciable amount of detail on them: their names and the sizes of their plots in precise spatial, chronological and economic contexts. Systematic, detailed studies of these, however, do not seem to have been made, at least in English. But the impression of significant variations in the amount of land held by individual *kutumbins* suggests that the term included, besides the common mass of peasantry, also the more well-to-do groups, i.e., rich peasantry. The same conclusion is suggested for Eastern India in a general way by the reference to *pradhana* or leading *kutumbins* and those of lower status (*kshudra-prakriti*), and in a particular way by the references to a *kutumbin* making a gift of land, meaning he had more land than needed for bare subsistence.

At the lower end, we find *kutumbikas* in conditions of dependence, as when individual *kutumbikas* themselves occur as items of gift. There are other terms in the sources that bring out the existence of such a stratum of helpless dependent peasants, such as *baddhahalika* (a tied ploughman) or *pratibaddhena yojita* (yoked [as an animal] by force).

A category of landholders above the *kutumbins* was that of *mahattaras*. They are known to have been much fewer in number than the *kutumbins* in the village, inducted at local levels in state administration, recognised as the dominant group in a village and bribed the king in individual capacities in pursuit of more power and resources. Seeing that *kutumbins* could include a stratum of rich peasantry, it is quite likely that *mahattaras* must have counted landlords among them. In Western India, *pattakilas* seem to have been a comparable group.

The significant presence of the rich peasants and landlords who got their land cultivated by other is brought out by the evidence for their labouring counterparts, i.e., sharecroppers or farm tenants. I-tsing (AD 7th century) refers to the Buddhist monastery of Nalanda getting its land cultivated by such sharecroppers, who were important enough to figure as a caste in the legal literature.

Were these sharecroppers landless persons or were they smallholders, i.e., people who owned so small pieces of land that they needed to go in for farm tenancy? That there had been some kind of differentiation among them is suggested by the *Arthashastra*'s reference to more than one kind of sharecropping arrangement. Historians, however, have often assumed that the untouchable castes in India were almost by definition landless. Lack of actual research in this issue was underlined by Harbans Mukhia very sharply in the course of the Feudalism Debate:

... no contemporary evidence has yet been cited [Mukhia writes] to the effect that the caste system (or the state) denied them the right to hold land.

Since my familiarity with ancient Indian history is based on secondary sources, I requested three of my colleagues, B.D. Chattopadhyaya, Suvira Jaiswal and Romila Thapar ... to help me out with primary evidence on this point; each has reported failure. (Mukhia, 1985, pp. 253, 261-62 n15)

It may be reported here that in the *Rajatarangini* the king had to request an untouchable landowner (a shoemaker) to sell his land to the king so that a temple could be constructed on the land!

12.7 SUMMARY

In conclusion, we discuss the conceptual foundations of the foregoing account of agrarian society. The early medieval agrarian structure of North India may be visualised in terms of multi-layered stratification. By multi-layered stratification is meant different groups (each group being a stratum) forming a hierarchical order of several layers.

The strata, however, were not all of the same kind, nor did they form the same type of hierarchy in relation to each other. There were, for instance, farm tenants of different types (several 'strata' of them), whose sharecropping arrangements with their landlords formed one type of 'hierarchy'. Likewise, there were peasants of different categories – rich and medium, as well as smallholders. Equally surely, there must have been significant differences in the quantity of land held by the landlords. Peasants differed among themselves, but they differed in a qualitatively different manner from the landlords. The state and its men entered the picture in yet different ways. The concepts of strata and hierarchy are thus useful, but not adequate, for comprehending the specific character of different agrarian groups, and thus the overall character of the agrarian structure.

It becomes, therefore, necessary to bring in the category of class, which provides a uniform scale for distinguishing the crucial divisions of the agrarian society. Agrarian classes are defined principally in terms of landownership, structure of labour employment and mode of surplus extraction. Sharecroppers, peasants, landlords, and the 'state class' as outlined above are in fact such classes.

The defining feature of our agrarian society was the presence of a distinctive class of landlords. They came into existence – either on their own or through the initiative of the state – by converting the state claims over the land and people of an area into their own private claims, on a lasting basis. A new form of agrarian property arose, where all the pre-existing agrarian classes – from the landless labourer to the biggest landowner – were subjected to the demands and authority of the new landlord. Does he remind you of the feudal landlord of medieval Western Europe?

12.8 EXERCISES

- 1) Critically discuss the regional dimensions of our knowledge of early medieval agrarian structure.
- 2) In which ways did the state own land?
- 3) How did the king, in the process of realising his dues from the people, affect the stratification in rural society?
- 4) Analyse the implications for the rural economy of the various types of land grants.
- 5) Write an essay on the landlords other than those created by royal religious grants.
- 6) Discuss the composition of the masses engaged in agricultural production in post-Gupta North India.

12.9 SUGGESTED READINGS

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UNIT 13 ORGANISATION OF AGRICULTURAL AND CRAFTS PRODUCTION, REGIONAL PROFILES OF AGRARIAN SOCIETY, NATURE OF STRATIFICATION: SOUTH INDIA

Structure

- 13.1 Introduction
- 13.2 South India: The Region
- 13.3 System of Land Grants: The *Brahmadeyas* and Agrarian Expansion
- 13.4 The Tamil Region: The Pallavas (Tondai Nadu – Northern Tamil Nadu): 6th to 9th centuries AD
 - 13.4.1 The Nature of the *Brahmadeya* Grant: The *Pariharas* or Immunities
 - 13.4.2 *Brahmadeya* Expansion in *Nadu/Kurram* and *Kottam*
- 13.5 The Tamil Region: The Pandyas (Southern Districts of Tamil Nadu)–6th-10th Centuries AD
 - 13.5.1 Land Rights
 - 13.5.2 Irrigation – 6th to 10th Centuries AD
- 13.6 The Agrarian Order and Revenue Organisation 9th- 13th Centuries AD
 - 13.6.1 Tamil Nadu: The Cholas
 - 13.6.2 Kerala
 - 13.6.3 Karnataka: The Chalukyas of Badami and the Rashtrakutas
 - 13.6.4 Andhra Region: The Eastern Chalukyas
- 13.7 Summary
- 13.8 Glossary
- 13.9 Exercises
- 13.10 Suggested Readings

13.1 INTRODUCTION

The early medieval economy was in many major ways different from early historical period. The change is attributed to the decline of trade and commercial economy and absence of monetary transactions in the wake of the decline in trade. The change led to an agrarian organisation based on a Land Grant system (grants to brahmanas and religious institutions as also secular grants to royal administrative functionaries), which is often believed to have brought into existence a feudal society and polity. Although the theory of feudalism itself has been borrowed from the medieval agrarian organisation of Western Europe, important differences from the west European model have been recognised and this has resulted in the characterisation of the Indian agrarian organisation as Indian feudalism. The theory of Indian feudalism has, however, been constantly under debate and such a characterisation of the early medieval economy for the whole of India has also been questioned due to the absence of serfdom and the nature of intermediaries, both religious and secular, as also regional

variations in agrarian structures (For feudalism debate see Unit 10 of the present Block). In order to understand the nature of the agrarian economy of the early medieval period, one has to study the Land Grant system during the Gupta (4th-6th centuries AD) and post- Gupta periods (7th-13th centuries AD), when the Land Grant system became a sub-continental phenomenon and when many of the regions, especially the regions peripheral to the Ganges valley began to emerge as distinct political and cultural regions. While the Land Grant system spread with an amazing uniformity in all the regions, there were significant variations in the ways in which agrarian expansion and integration of the regions were achieved from the 7th to the 13th centuries AD.

13.2 SOUTH INDIA: THE REGION

South India here refers to the region south of the Vindhyas covering the areas where the Dravidian languages are spoken and excludes the northern most region which is now part of Maharashtra, i.e, not the whole of peninsular India. The geography of this region makes an interesting study with two major divisions i.e., the Deccan plateau and the plains. The Deccan plateau is now represented by northern and southern Karnataka and parts of Andhra region i.e., Telengana and Rayalasima marking the eastern edges of the plateau and the coastal plains of Andhra, watered by the Godavari and Krishna valleys (deltas), where the agrarian tracts are concentrated from early times. Agrarian expansion, i.e., extension of agricultural activities was an ongoing process and starting from the fertile river valleys moved into frontier zones – forest and hilly tracts – of pastoral and hunting-gathering economies. In the Deccan and Andhra regions the delta areas of the Godavari and Krishna show evidence of early agricultural settlements and the larger Deccan plateau is marked by smaller agricultural pockets in the valleys of the middle and upper reaches of the Godavari and Krishna valleys and the tributaries (Tungabhadra and Malaprabha, etc.) and the upper reaches of the Kaveri in southern Deccan or Karnataka.

Of the south Indian regions the Tamil region, which has been the focus of major studies on agrarian organisation and the state, provides the most impressive evidence of this development. Although the Deccan and Andhra regions, on which much less work has been done, have equally important evidence on the institutional processes of agrarian organisation and production, the nature of the pre- *Brahmadeya* (revenue free land grants given to the Brahmins) agricultural organisation is little known, except in the form of primitive agriculture or subsistence level settlements in the river valleys and pastoral and hunting-gathering settlements in the frontier regions like forests and hills. The Andhra Delta also has *Brahmadeyas* but the early Copper Plate (4th-6th centuries) records of grants are short and give no details. Later ones give more information. In Andhra (delta) the *Brahmadeyas* of the 6th to 8th centuries have not been studied so far with a view to discussing their role in agrarian integration. No organised peasant micro regions (like the *nadus*) of the kind that existed in the Tamil country are known. The Tamil plains are more continuous, with conspicuous agrarian tracts in the major river valleys like the Kaveri (middle and lower reaches), Vaigai and Tamraparni valleys and minor river valleys like the Palar and Pennaiyar, even from the early historical period (3rd century BC–3rd century AD), which later came to be re-structured into the new agrarian order through institutions like the *Brahmadeya* and the temple. Tamil Nadu also has a rich corpus of early Tamil literature (the Sangam classics of the early centuries of the Christian era), which provides evidence of the *marutam* (plains) as distinguished from the *mullai* (forest) and *kurinci* (hilly) as eco-zones with different economic activities such as agricultural,

pastoral and hunting-gathering respectively. It is the expansion of agricultural activities within the *marutam* region and beyond into the other eco-zones that marks the opening up of agrarian tracts and their integration through the Brahmanical institutions from the 6th century AD. It may be assumed that a similar process of the opening up of agrarian tracts occurred also in the Andhra and Karnataka regions, starting from the fertile river valleys and beyond into the forest and hilly areas. Hence the early *Brahmadeya* and temple settlements emerged in the coastal region of Andhra plains (lower Godavari and Krishna valleys and the deltaic region) from the 4th to the 10th centuries AD and the drier regions of Telengana and Rayalasila came to be integrated into the new agrarian order from the 11th to 14th centuries. In Karnataka the upper and middle reaches of Krishna (Tungabhadra and Malaprabha) and Kaveri with their tributaries with narrower plains were colonised early i.e., from the 4th to 9th centuries and then followed the expansion of the new agrarian order into the frontier zones.

The beginnings of this process may be placed in the period from the 4th to the 6th centuries AD in the Deccan and Andhra regions, where the Brahmana-Kshatriya allies in power viz., the newly founded Brahmanical dynasties like the Vakataka (4th-6th c. AD), Kadambas (4th-7th c. AD), Western Gangas (4th-10th c. AD) and Vishnukundis (c. 475-615 AD) introduced the *Brahmadeya* and the temple as agrarian institutions of expansion and integration. The early Pallavas (4th-6th c. AD) before they moved from the Andhra region into the Tamil country were also participants in this process. From the 7th to the 9th centuries under the Chalukyas of Badami and the Rashtrakutas of Manyakheta agrarian resource bases were created in the upper Godavari and Malaprabha-Tungabhadra i.e. tributaries of the Krishna. Under their subordinates and minor ruling families the southern Deccan (Karnataka) came to be integrated into an agrarian base in the upper Kaveri valley. Later the Western Chalukyas and Hoysalas continued this process from the 10th to the 13th centuries AD, thus bringing into existence the various politico-cultural regions of South India with vast agrarian resource bases.

13.3 SYSTEM OF LAND GRANTS: THE *BRAHMADEYAS AND AGRARIAN EXPANSION*

The grant of a *Brahmadeya* (and *Agrahara*) was considered as the supreme *dana* and was sought to be protected by specific injunctions and imprecations against those who tampered with it or destroyed it in any way. Following the *Dharma Sastric* injunctions the ruling families made grants of land to the Brahmanas, on occasions like victory in war or for special astronomic phenomena like eclipses, in areas of agricultural potential with existing settlements or in new areas extending agricultural operations. On such occasions the Brahmanas were given *pariharas* or exemptions from various obligations including revenue payment to the king and given management rights over land and cultivation process. Exemptions meant generally non-intrusion by royal or government functionaries and troops into such areas, while sometimes a specific amount of revenue was levied annually or for all times. Deforestation and extension of cultivation in hitherto uncultivated land and settling actual tillers/agricultural workers in effect meant that the agrarian base was extended and king's authority established for the first time, where it did not exist earlier. Hence the *Brahmadeya's* politico-economic role in agrarian expansion was significant.

A *Brahmadeya* was not exclusively populated by Brahmanas, but was often inhabited by non-Brahmana cultivators or service personnel working for the village as a whole

and for the land controlling Brahmanas. Hence a kind of landlord-tenant or service relationship evolved in newly established *Brahmadeyas*. There are also instances of pre-existing pastoral-cum-agricultural settlements which were clubbed together and granted as *Brahmadeyas*, wherein the lordship and management rights were given to the grantees. The temple, which either came up along with the *Brahmadeyas* or independently in such settlements was equally significant in the agrarian integration, yet the temple assumed greater importance as the integrative institution from the 10th century AD in gradual phases in all the south Indian regions. Grants of land and other items to the temple were also administered by locally influential land controlling groups like the Brahmanas and also dominant agricultural groups other than the Brahmanas.

Land grants could be either made to a single brahmana (*ekabhoga-Brahmadeya*) or to a group of brahmanas (*gana-bhoga*) or for the maintenance of a brahmanical educational institution (*Vidyasthana* and *Ghatika*). With each of the *Brahmadeya* and temple settlements an irrigation system was invariably established either in the form of tanks (*tataka* and *eri*), canals or wells. (e.g. as in the Pallava-Pandya regions). Many of these projects were initiated by the rulers but managed by the local bodies especially the *Sabhas* or assemblies of the *Brahmadeyas* or the Mahajanas. Elaborate arrangements were made by these assemblies for the upkeep of the irrigation works, including maintenance, repair, attention to silting and control of water supply through cesses and specifying committees (*variyams*) as in the *Brahmadeyas* of the Tamil region, for their supervision and administration. Thus effective management was the key to the difference between the farming societies of the early historical and early medieval periods.

13.4 THE TAMIL REGION: THE PALLAVAS (TONDAI NADU – NORTHERN TAMIL NADU): 6th TO 9th CENTURIES AD

In the Tamil region the history of this development extends from the 6th to the 13th centuries, which may be further divided into two phases, first from the 6th to the 9th centuries AD and the second from the 10th to the 13th centuries AD. Eventually it led to the creation of different levels of complex land rights, superior and subordinate, and to a stratified society based on economic status and more significantly on the varna ideology creating caste distinctions with increasing occupational diversification and the temple becoming the reference point for all such distinctions in status, particularly ritual status.

The early Pallava grants in Prakrit and Sanskrit (4th to 6th centuries AD) refer to villages in the Krishna and Guntur districts, and further south in the Nellore district. Here the *Brahmadeya* seems to make its first appearance till the establishment of Pallava territorial authority over the northern region of Tamil country, with Kancipuram as their centre of power. Henceforth the bilingual copper plates in Sanskrit and Tamil record grants of *Brahmadeya* land in new areas as well as pre-existing, cultivated areas in the Palar-Cheyyar valley and further south into the Pennaiyar and Kaveri regions. These records are remarkable documents for reconstructing the development of agricultural economy and agrarian organisation in different phases. The *Brahmadeyas* and temples may be seen as harbingers of advanced farming methods such as irrigation technology and seasonal cultivation process. This is clearly established by the Pallava-Pandya records, when they are considered in the context of their geographical and ecological setting. They are also

useful as records providing the most detailed references to the nature of the organisation, both agriculture and craft production, which was generally complementary and supplementary to agricultural activities.

The Brahmanas were organisers and managers of production in the *Brahmadeyas* and the Velalas or land owning (controlling) peasants in the non-*Brahmadeya* (*Ur*) settlements, where the focus of activities was the brahmanical temple. In the *Brahmadeya*, the Brahmanas, due to their specialised knowledge of astronomy, would have introduced an element of predictability in yields, on the basis of seasonal sowing, cropping patterns, as well as effective management of water resources. Hence in the records of this period, demarcation of boundaries, establishment of “ownership” or enjoyment rights, nature and category of land and the number of crops to be raised become important details.

The *Brahmadeyas* in most cases meant the giving away of rights, economic and administrative, to the donees. Instances are not wanting to show that they were not completely exempt from revenue payments to the king. The real advantages lay in integrating older subsistence level settlements and non- *Brahmadeya* villages (*Ur*) into the new agrarian system, and also bringing virgin land under cultivation, both waste and forest land and making them surplus oriented. There are also examples of several pre- existing settlements being clubbed together into a new *Brahmadeya* or integrated into it (e.g. Udayendiram Plates and Pattalmangalam Plates of Nandivarman II- 8th century AD). The tax exemptions given to the *Brahmadeyas* do not obviously apply to such villages thus brought into the system, unless otherwise specified.

The circulation of resources was through the *nadu* or *kurram*, which were existing and entrenched peasant regions, duly made into revenue units by the early medieval states – Pallava (6th-9th c. AD), Pandya (7th-10th and 13-16th c. AD) and Chola (9th-13th c. AD). The circulation of resources was also effected through the temple. The older subsistence level settlements were part of the *nadus* and quite a few of them were integrated into the new agrarian order through *Brahmadeyas*. Their extent cannot be precisely determined. Regular revenues reached the royal *bhandaras* (treasury) through such circulation. Yet, at the local level, the chief beneficiaries of the redistribution process were the locally powerful elite, temples and brahmanas, apart from temple functionaries and tenants. The co-ordination of the production and distribution processes were in the hands of the *sabha* (brahmana assembly) and *Ur* (non- brahmana /Velala assembly), the latter often working in close collaboration or cooperation with the brahmana *sabha* or under their guidance and often as *nattar* or as members of the *nadu* assembly, whose role in the organisation and production of agricultural resources was significant, particularly with regard to the common agrarian problems like irrigation and mobilisation of labour and means of production and redistribution. The *Brahmadeya* was administered independently of the *nadu* and hence the *Ur* is less conspicuous in the epigraphic records while the *nadu* and *Brahmadeya* are prominent.

In the *Brahmadeyas* and temple centres, land relations thus came to be organised around these two institutions, with three categories of landowners- the brahmana, the velala and the temple (administered by the brahmana and Velala)- emerging as the local elite. All the occupational groups were placed in a ritual hierarchy around the temple within the *varna* framework, depending on the nature of their profession and relationship with the temple as service groups.

Cesses appear to have been generally levied in kind and this ties in with the low level of monetisation in this period. There were cesses on the manufacture of salt, on looms, on markets, oil mills, etc. Not only goods but services too seem to have been provided to the donees as indicated by the cesses on potters, weavers, blacksmiths and others. There is some degree of controversy about whether the *Brahmadeyas* were actually freed from complete taxation. For example the Pullur plates refer to '*pannirattai-k-karaiyirameyam*' which has been translated as 'non-payment of taxes for 12 years'. In other words such grants were meant to develop agriculture and extend cultivation initially and were brought under taxation after some years.

13.4.1 The Nature of the *Brahmadeya* Grant: The *Pariharas* or Immunities

It would be useful to set out the earliest references to immunities based on the *Dharmasastric* injunctions, the *pariharas* usually numbering 18. This would give us an idea of how the management of cultivation and production of allied crafts as well as non-agricultural activities, were placed under the new land controlling grantees. It would also show how some kind of a dependency between the land controllers and landless cultivators and craftsmen was built up within the village due to the village craftsmen being paid in the form of land produce or assigned land in lieu of such payment. The Pallava Copper Plate grants of the 4th-6th centuries AD inscribed in Prakrit and Sanskrit refer to such *Brahmadeyas* in the Guntur, Krishna and Nellore districts. The 18 *pariharas* or immunities are not listed in all the grants but the implication was that wherever such taxes or cesses existed; they need not thereafter be paid to the king or his representative but to the grantees to whom services also had to be provided. (i.e. all immunities -*sarva pariharehi pariharata pariharapita*).

The <i>Pariharas</i> or Immunities	
<i>Alonakhadakam</i>	Free from salt manufacture, a royal privilege or monopoly
<i>Aratthasamvinayika</i>	Free from administrative control
<i>Aparamparabalivadam</i>	Free from supply of bullocks to the royal officials
<i>Abhadapapesam</i>	Free from entry of soldiers for tax collection
<i>Akuracholakavinasikhatayavasamvasa</i>	Free from supply of boiled rice, pot, cot and dwelling
<i>Aburadadhigahanam</i>	Free from sweet and sour milk
<i>Akaravetthikomjallam</i>	Free from tax, forced labour and supply of sour gruel
<i>Atanakattagahapam</i>	Free from taking of grass and wood
<i>Aharitakasakapuphagahanam</i>	Free from vegetables and flowers

Donees were also given the services of labourers receiving half the produce. It is interesting to know that most of the grants of the 6th to 9th centuries period were made also on the request of a *Vijnapti* (one who made a representation to the king), invariably a local chief or by a royal functionary and executed by an *Anjapti* (again a local chief or functionary), pointing to the fact that the reorganisation of agricultural production and control was widespread and adopted even in the tracts of minor chiefs who accepted the overlordship of the new dynasties.

The land grants of the 4th-6th centuries AD in Prakrit and Sanskrit, provide details of the *pariharas*, which were evidently based on the *Dharmasastric* rules. Often a whole village including garden land was granted and the royal *sasana* (order) was addressed to *gramabhajaka*, *grameyakan*, *adhikrita* (officers), *sarvadhyaaksha* of district (?) (overseers), *ayuktakas*, *naiyogikas* and *rajavallabhas vallabhas* of districts, *sasana samcharin* (official messengers), *govallavas*, *aranadhkato* (foresters) and others in service. Villages were converted into a *Brahmadeya* (e.g. *Vesanta*) with 18 *pariharas* with the exception *devabhogahala* (land of the temple). Thus when a village was granted, all lands with the exception of *devabhogahala* (land enjoyed by existing temples) were given. The term *vasad-bhogyamaryada* points to 'enjoyment by residents (only) or tenants' occupancy rights, which were assured. Taxes payable by *loha-charmakara* (metal workers and leather workers), *apana-patta-kara* (shop keeping cloth dealers), *pravaranchara* (licensed spies or those going about in loose masks or garments), *rajjupratihara* (rope jugglers), *apana ajivika nahala* – taxes payable by barbarians and outcastes, *mukha dharakas* (mask actors or self-mortifying devotees), *kupa darsakas* (water diviners), *tantravaya* (water diviners? Is it *tantuvaya*?=weaver), *dyuta* (gambler), *napita* (barber) and on *vivaha* (marriage), taxes and tithes payable by artisans enjoying privileges of *sarva parihara* would also indicate the nature and growing number of crafts and professions in a settlement. In fact these immunities would also indicate the kinds of crafts that were carried on in the village and how they were part of a large number of service groups inhabiting the village with dependent relationship with the grantees who had superior rights in land. Their remuneration was often in the form of the assignment of land or its produce within the village, which consisted of separate living quarters for them. The later grants either refer to the *pariharas* in general or mention increased number of taxes and cesses depending upon the increasing complexity of the productive process and of the administrative organisation of a growing state. It also points to agrarian expansion and an extending resource base of the ruling dynasties. This is the case with most grants from the 9th century AD. (late Pallava and Chola periods).

In the bilingual (Sanskrit and Tamil) land grants of the 6th -9th centuries AD boundaries are defined and the nature of land described such as *nir-nilam* (wet land), *pun-cey* (dry land), *kanru-mey pal* (pasture), *kadu* (forest), *pidilikai* (land on which sanctuary stood?), *kidangu* (ditches), wells (*keni*), *manai* (house site), *manai-p-padappu* (house garden) and all lands "where the iguana runs and tortoise crawls". For example the Pallankoyil grant of land to Vajranandi, a Jaina teacher, in Sramanasrama or Amanserkkai, a Palliccandam (grant to a Jaina institution), with similar rights and privileges records that the existing tenants were removed (*kudi-nikki*) and the rights of king and his authority removed (*kovum-poriyum marri*). The term *kudi-nikki* translated as removal of existing tenants has been a matter of debate as it is also taken to mean that the existing *kudi* (meaning cultivating villagers) the grant did not include the *kudi* or occupants/cultivators of the land or that the rights to change the occupants or retain them on the land were clearly mentioned. It does not necessarily mean eviction at will.

Brahmadeya lands are often seen to be held in shares by the grantees. For example, the Kuram Plates assigns land to the temple priests and for worship, repairs, water and fire for the temple, recitation of (*Maha*) *Bharata* as *devabhogam*. The rest of the 20 parts in the village was constituted into a *Brahmadeya* for 20 *chaturvedins*. Crafts like oil pressing (*sekku*), loom/weaving (*tari*) and *kulam* (*bazaar*), smithy (*kattikanam*)—on blacksmiths? are mentioned, while *Uratchi* (share of the *Ur*)

may refer to a levy for the Ur's administration. Rights over the Perumbidugu channel from the Palaru river were also given for water resources.

The Udayendiram plates of Nandivarman II (AD 752) records a grant made on the request of the Vijnapti, Pucan, a chief, according to which two villages (Kumaramanagala and Vellattur) in Paschimasraya nadu of Paduvur *Kottam* (Mel-Adayaru *nadu*) were combined and converted into a *Brahmadeya* with all immunities with the name Udayachandra Mangalam (Udayendiram in Gudiyattam *taluk.* of North Arcot district). The Vijnapti is a petitioner, often a chief or an officer, seeking permission from the king to make a grant. The term *paradatta* or *paradatti* thus points to a grant by others and not directly by the king. With two *jalayantras* (water levers) for irrigation in *Korragrama*, the 108 brahmana grantees had 133 shares of land.

The Kasakkudi (near Karaikkal adjoining Tanjavur district) Copper Plate –753 AD – Ekadharamangalam (Kodukolli village?) was addressed to the *nattar* of *Urrukkattu-k-Kottam* (*Undivana kosthaka*), the already entrenched peasant organisation. The grant was made in the presence of *Nilaikkalattar* (local authorities?), *adhikarikal* (officers?) and *Vayiketparu* (secretaries?), excluding previous grants made to temples, brahmanas and the houses of *ryots*? The land measure is here called *patti* or *pattikai*. The use of water channels from the rivers Vegavati, Seyyaru and the tank of Tiralaya (Tiraiyaneri?) and specification of the kind of land such as *Nir-nilam* (wet land), *pun-cey* (dry land), *manippadaippu*, etc. points to the facilities provided. The donee and his descendants were given the right to build houses and halls of burnt tiles. This grant is one of the most significant as it provides evidence of a larger number of taxes or cesses. Tax exemptions included *sekku*, *tari*, *ulliya-k-kuli* (hire of well diggers), *brahmanarasakkanam* (share of brahmanas and the king or tax of one kanam on profits of the brahmanas or tax payable by them), *sengodi-k-kanam* (share of Sengodi, a plant), *kallal-kanam* (on ficus tree), *kusakkanam* (on potters), *kanittukkanam?*, *katirakkanam* (share of corn ears), *arikori* (on sifting paddy), *ney-vilai* (on selling ghee), *puttaka vialai* (price of cloth or fees levied on sellers of cloth or on tents), *pattigaikkanam* (share of the cloth or toll at a ferry or on ferrymen), *iramaleyan-nayatikalum-tutuvaram*, *kanikarttikalum*, *pannuppaledupparum*, *putukkutikai-k-kurratuveyiyum*, *pullumiramaiyum* (tax on hunters, messengers, dancing girls, elephant stalls, horse stables, grass?), *nalla-a* (good cow), *nallerudu* (good bull), *nadu vagai* (share of the nadu the larger revenue or administrative unit), *patankariyum kaiyalum* (share of cotton threads?), *nedumbarai* (on drummers of the village), *panampakkum* (on palmyra molasses), *karanadandam* (fine to accountant or fine imposed on offenders by 'inferior court'), *adhikaranadandanam* (fine on offenders by chief court), *pattur sarru* (on toddy yielding trees of Pattur or proclamation by beating of tom-tom in the surrounding villages), *ulavai-palli-vattu* (tax in kind from the servants of the temple or from hamlet or tax on site for the Jaina temple), *kuvalaneduvaru* (on planting water lilies), *kuvalekkanam* (share of water lilies), *kal-kotturamai* (the 4th part of trunks of old trees, which are given, including areca palms and coconut trees or tax on digging channels). Such details often occur increasingly in the bilingual copper plates (Sanskrit and Tamil).

The Pullur (North Arcot district) grant (AD 764) combined four villages (Nelli, Pullur and Kudiyur in Kil Venadu and Takkaru in Manalaikula *nadu*) all in Palakunra *Kottam* and named it Nayadharamangalam, as a *Brahmadeya* grant to 108 Bappa Bhattarakas. Being addressed to the *nattar* it specifically mentions the removal of all authority by placing it beyond the jurisdiction of the nadu kappan, *viyavan*

(headman) with all *pariharas*. Some of the new terms are *Koyil-vasal sekku* (tax on oil mill at the temple site?), *ettakkanam* (on water lever), *sadippon* (in gold payable on burial jars) and some seem to refer to various allied economic activities.

The Tandantottam (Tanjavur district) Copper Plate (AD 789) refers to a grant of land to the west of Tandantottam in Ten-karai-Naraiyur *nadu* in Chola *nadu* as *Brahmadeya* called Dayamukhamangalam to 308 learned brahmanas from the Telugu country, who had studied the three *Vedas* and *Smritis*. The shares are specified, the largest being 12. Addressed to the *nattar* of Tenkarai- Naraiyur *nadu* the grant gives exclusive rights to the grantees over water channels. New terms like *tattukkayam* (on goldsmiths); *Ilamputci* (on professional toddy drawers), *Idaipputci* (on cattle breeders or shepherds); *taragu* (brokerage); *tirumugakkanam* (fee for remunerating the person bringing orders from the king); *uppukkoceigai* (royalty? for manufacturing salt), *vatti nali* (on baskets of grain brought to the market), *kadaiyadaikkyum* (on areca nuts for sale in shops); *puda nli nali* would show the virtual exercise of control over the new settlement by the grantees.

The Pattattalmangalam (Tanjavur district) Copper Plate of AD 792 created a new *Brahmadeya* out of the 40 *veli* of land that existed around a village in Arvala-k-kurram in Chola *nadu*. To this two more pieces were also added and integrated into a new village called Pattattalmangalam and granted it to 16 brahmanas. Addressed to *nattar* of Tenkarai Arvala-k-kurram (Naraiyur *nadu*?), it mentions amenities, apart from the usual ones, like *manai*, *manaipadappum*, *kottagaram*, *uvar*, *ur-palum*, *kadu*, *odai*, and *parambu*, etc., the rights of king and his authorities over the village were removed, while the *kudi-nikki* meaning previous occupants (*kudi-nikki*) also seem to have been removed. New terms—*manru padu*, *uratci*, *nadu kaval*, *udupokku* (tax in the form of mixture of grain or a fee for settlement of disputes or most probably rights for passage through an area.), *ner-vayam* (for use of water) again point to an increasing number of privileges or tax exemptions to the brahmana donees.

The Velurpalaiyam (North Arcot district) Copper Plate of AD 852 (Nandivarman III) records the grant of *utpuravu Deavadana* (all cultivable land fit to be taxed) for services connected with worship of Siva at Titukkattuppalli. It was addressed to the temple assembly – *paradai*? (parishad- council) and the immunities included the *nadatci*, *uratci*, (share of the *nadu* and *Ur*), *puravupon* (on land), *tari-k-kurai* (on weavers one standard measure of cloth per loom), *nadu-kaval* (policing the *nadu*), *kallanakkanam* (on marriage), *paraikkanam* (on quarries/stone used by washermen in public tanks), *pattinaseri* (dues by fishermen payable to the king) and other privileges.

The Bahur (Pondicherry) Copper Plate of Nripatungavarman (late 9th century AD) founded the Vidyasthana of Vagur combining three villages [Chettuppakkam, Vilangattankaduvanur (Kaduvanur 5 miles west of Bahur), Iraippunaiccheri, all in Vagur *nadu* and addressed it to the *nattar* of Kilveli–Vagur *nadu* a subdivision of Aruva *Nadu*. Dispossessing former tenants and excluding ancient charities and *Brahmadeyas*, all other *nir-nilam*, *pun-cey*, *ur*, *ur-irukkai*, *manai*, *manai padappu*, *kulam*, *kottagaram* (storehouse), *meiyi-pulam* (pasture), ditches, wells, etc. were given.

The references to *vetti*, *vedinai* and *eccoru* – forced labour and other burdens suggest a near total dependence of the service groups and small peasants and landless workers. The redistribution of land among tenant cultivators and marking of



Translation: (Line 1.) Hail! Prosperity!

- (Verse 1.) Let Madhu's destroyer (Vishnu) grant you prosperity, the lotus-eyed one, whose lotus-feet are rubbed by the diadems of the gods (bowing to him), the unborn one, (who became) the means of the destruction of demons that terrified the whole world!
- (Verse 2.) In the eye of the sleeping husband of Sri (Vishnu) was produced the luminary (i.e. the Sun?), (which is) the means of duration, destruction, and production. From his (Vishnu's) naval arose a lotus-flower the germ of all. From this (flower) the self-born one (Brahma) was produced.
- (Verse 3.) From this four-mounted lord of the world, Angiras was born, (and) from the latter, Brihaspati, the minister of Sakra (Indra), the splitter of (the demon) Vala.
- (Verse 4.) From him was born Samyu; from him, he who was named Bharadvaja; from him, the great archer Drona, whose valour equalled that of Sakra in battle.
- (Verse 5.) From this Drona was produced, it is said, by a protion of Pinakin (Siva) the long-armed Asvatthaman, who was skilled in all fights.
- (Verse 6.) From this Asvatthaman was born a king named **Pallava**, who ruled the kings residing in the nine continents, together with the ploughmen.
- (Verse 7.) From his family arose a group (of kings) commencing with **Vimala** and **Konkanika**, which was bowed to by the wives of enemies; which imposed commands even on other rulers of men; which was much beloved ; (and) which continually shouted 'victory.'
- (Verse 8 f.) Then, after **Vimala**, etc., having enjoyed by their own valour the earth girt by the four oceans, had gone to heaven on aerial cars, there was the long-armed (king) **Dantivarman**, who resembled Purandara (Indra), showed firm devotion to Mura's foe (Vishnu), (and) was bowed to by the diadems of the rulers of the earth.



- (Verse 20.) Therefore the (sur) name Nilailangi (i.e. 'The support of the world') (was as) suitable to this ruler of men as (unto) a god, or because (his real) name (Martanda, i.e. the sun) was quite manifest (to all)
- (Verses 21-23) This promoter of the family of **Kuru** gave to a seat of learning (*vidyasthana*) three-villages in his own province (*rashtra*) which, at (his) request, (he had) received, provided with an executor (*ajanpti*), from that lord **Nripatunga**, viz. the village of Chettuppakkam, rich in fruit, then another village whose name (consisted of) a word ending in an *r* and beginning with *Vidyavilanga* (and) thirdly the very prosperous (village of) Iraippunaichcheri.
- (Verses 24-26) Just as the god Dhurjati (Siva) carried on the single lock of (his) hair the approaching Mandakini (Ganga), agitated by the velocity of waves, thus the deep river of learning, filled with troops (of scholars) from the four directions, stayed after it had filled the seat of the residents of the village of **Vagur**. Therefore they call this seat of scholars a seat of learning
- (Verses 26 f.) This ruler of land thinks highly of himself after he has given to those (scholars) the (three) villags, provided with an executor, their limits having been circumambulated by an elephant, accompanied by all immunities, (and) protected by freedom from taxes.

E. Hultzsch, 'Bahur Plates of Nripatungavarman', *Epigraphia Indica*, Vol. XVIII (1925-26), New Delhi, p.12-14.

boundaries are implied in the terms like *Karai-idudal*, *Ericceruvu* and *Eripatti*, *Erikkadi*. *Payal nilam*, *payaleruvaram*, *adainilam* as also the transfer of the king's share of the produce (*Sarruvvari*) and *panam pagu* (on palmyra palms and toddy yielding ones), *Kadaiadaikkay* (levy on areca nuts) and on cotton, medicinal plants and flowers. Irrigation was a major concern of both the grantor and the grantees as indicated by such detailed references to weirs and sluices (*kalingu* and *tumbu*), mentioning head sluices like *vay*, *vayttalai*, *talaivay* and *mugavay*.

These agriculturists or peasants (*Kudi* or *Kudimakkal*) lived in small houses with mud walls and thatched roofs. The term *Agambadi udaiyans*, mentioned in the Uttaramerur inscription of Dantivarman (late 9th century AD), may indicate a higher level of peasants who seem to have been smaller landowners, also serving the major groups like the Brahmanas and Velalas of the *Brahmadeya* and non-*Brahmadeya* villages.

The Village crafts groups included spinners, weavers, potters, cattle breeders, goldsmiths, carpenters, artisans, owners of oil presses, middle-men and whole sale merchants. (*Aruvai vanigar* of Srikantapuram). Separate areas (*ceris*) existed for most of these peasants and craftsmen in the rural areas while in bigger towns and cities like Kanchipuram traders and merchants also had their quarters e.g., the residents of. *Videlvidugu-Kudiraicceriyar* (traders in horse? or king's horsemen/cavalry?).

In a sense the theory of self-sufficiency or closed village economy arises out of these land grants of the pre-7th century period as well as the period from the 7th to 9th centuries AD. However, expansion of the agrarian order was continuous and the regional variations and pre-existing agricultural settlements and regions (entrenched peasant organisations as in the Tamil country) required new ways of organising the *Brahmadeyas* and temple centres by retaining the existing structures and integrating them into the new agrarian order. This is precisely what happened in the Tamil region, where peasant settlements and pastoral settlements had emerged in river valley and beyond, even in the early historical period and the early medieval inscriptions referring conspicuously to peasant micro-regions (*nadus* or *kurrams*). [The *nadu* or *Kurrams* were self evolved regions, in which members of kinship groups (clan) lived together and organised themselves as a peasant group and/or region.]

13.4.2 *Brahmadeya* Expansion in *Nadu/Kurram* and *Kottam*

In northern Tamil region the *kottam*, a pastoral-cum-agricultural region, is conspicuous and existed apparently from the early historical period, but was organised into a unit of revenue under the Pallavas and Cholas. Agrarian expansion within the *kottam* took place both due to the establishment of *Brahmadeyas* and to the creation of new *nadus* with separate irrigation works under the Cholas. Hence the Tamil region comes up with interesting evidence of the re-organisation of agriculture and craft production with the phased opening of the river valleys and beyond. This development is remarkably well marked in this region and its pattern can be mapped through the geographical and ecological contexts in which the *Brahmadeyas* and temples emerged.

The *nadu* or *kurram* represented a group of villages/clan settlements, which had evolved spontaneously in the rich alluvial river valleys, with no artificial boundaries, based on kinship ties and kin labour and communal control over land, with a capacity

for expansion due to demographic expansion as well as extension of cultivation. *Nadu* is known as a generic term for any settled region (e.g. *malai nadu* or settled hilly tract), but became a potential unit of agrarian and revenue organisation. Thus *nadus/kurrams* came to be integrated into the new agrarian order when the early medieval ruling families introduced the *Brahmadeya* and the temple as integrative forces. *Brahmdeyas* were placed out of the *nadu* jurisdiction and the non-*Brahmadeya* villages (*Ur*) remained within the *nadu* as *vellan-vagai* (taxable), the *nattar* (of the *Nadu*) accepting the royal order creating the *Brahmadeya* and providing the necessary facilities to the new land controlling Brahmanas. In other words the *nattar* and *urar* cooperated in the process of agrarian expansion and integration. This has been interpreted as representing a Brahmana-dominant Velala alliance by the followers of the segmentary/peasant state and society theory, as the *nadu*, the peasant region is believed to be an autonomous peasant region (segment) and hence the alliance resulted in the crystallisation of a peasant state and society. This view questions the validity of the feudalism theory for the south Indian state and society, although the land grant system provides evidence of the emergence of intermediaries, both religious and secular, between the king and the cultivator and suggests exploitative relations between a land controlling class and labouring class of peasants.

13.5 THE TAMIL REGION: THE PANDYAS (SOUTHERN DISTRICTS OF TAMIL NADU) – 6th-10th CENTURIES AD

In the Pandya region i.e., the southern districts of Tamil Nadu, the restoration of earlier *Brahmadeyas* (Velvikkudi and Dalavaypuram plates) is recorded suggesting their existence even from the early historical period. Yet, what was actually being done was the institutionalisation of the *Brahmadeya* as the integrating force. Brahmanas were non-producing class with managerial functions. Temples were also non-producing institution with lands redistributed among peasants and others for cultivation. This was more intensive in the Tamraparni valley than in the Vaigai valley, the two major river valleys of this region. [By institutionalisation of *brahmdeyas* as an *integrating force* we mean an institution through which the peasants of different settlements (which were at the subsistence level of production) were brought into a system of surplus oriented production.] The land grants introduced non-producing, intermediary land owners/controllers, whom the surplus reached.

Through the ability of the Brahmanas, the Velalas of *Urs* or *Nattar* and the Velalas of *Nadus*, in the organisation of advanced agriculture leading to a substantial surplus in production, the kings were actually augmenting the spheres of advanced agriculture in their kingdom. The brahmana and the Velala mode of agrarian organisation integrated the rural society through its social division of labour and allied relations of production. The land grants to temples as *Deavadana* (*Kudi ninga Deavadana* – without removing the earlier settlers and *Deavadana-Brahmadeya*) also introduced similar relations of production and redistribution. The change characteristics of the period were in the organisation and management of production, but not in the technology as such. Each technique was put to a wider utilisation through institutional and organisational support and the capacity for mobilisation of labour.

The creation of *Brahmadeya* villages was mostly in the areas of clan settlements. Often the founding of the *Brahmadeya* not only involved the superimposition of certain superior rights over the earlier communal ownership of land, the

expansion of the *Brahmadeya* system of agrarian organisation into such areas caused the dissolution of primitive agriculture on the one hand and the transformation of the clan settlement on the other. It may not always have been a peaceful extension and hence the reference to the need for clear documents of ownership in the Velvikkudi grant, which was claimed to have been appropriated by the Sudras, a clan leader (*kilavan*) converting a portion of an early grant (*ekabhoga Brahmadeya*) into a sudra settlement. The non-brahmana resistance to the expansion of *Brahmadeya* system would have been countered by the status of the brahmanas as a class with superior managerial ability, calendrical wisdom and the technical knowledge of advanced agriculture. The ultimate security of *Brahmadeya* lay in warrior (*ksatriya*) power. There is a concentration of *Brahmadeyas* in the fertile *nadus* and *kurrans* of the fertile wet lands of the modern districts of Tirunelveli and Ramanathapuram (two thirds) in the *nadus* strung on the banks of the Tamraparni. (*valanadus* like Parantaka *valanadu*, Amitaguna *valanadu*, Valuti *valanadu* and Kuda *nadu*). The distribution pattern shows a proliferation in the regions of a relatively uniform rainfall, drainage, soil structure alluvial or mixed soil of high fertility- red soil), temperature and vegetation, such as the Ghatana branch of Tamraparni, the Vaippar and Arjuna *nadi* with their tributaries, the tributaries of the Gundar, the two branches of the Virisuli and in Venadu on the banks of Periyar. The expansion of small agrarian localities – *Ur* or *kuti* – and larger ones – *nadu* or *kurram* units with groups of such settlement was helped by the *Brahmadeya* system. Named after first (core) village or after the source of irrigation (Vaigai *valanadu*, Magalur Kulakkil, etc.), it was the capacity of irrigation source that determined the range of expansion in each settlement and each *nadu*. The Valanadu was a royal creation unlike the *nadu*. Altogether 40 *nadus*, 11 *valanadus*, 6 *kurrans*, 3 *kulakkil* and one *muttam* have been located in ecological zones of paddy cultivation.

13.5.1 Land Rights

The *Brahmadeya*, *Deavadana* and *Palliccandam* (grant to Jain religious institutions) represent the superimposition of superior rights in land and institutional ownership with a corporate body of landholders. As organisers of agriculture and not cultivators themselves, they got the land cultivated either by original agrarian communities (or earlier settlers) or by settling new *kudi* or occupants. Alienation of land by gift of a share or shares (*panku/pangu*) or by purchase was possible, while leasing of land to tenants introduced further intermediary strata between the owner and cultivator. Transfer of superior rights over land in a *Brahmadeya* was made by way of *pratigraha* – gift of the share (*panku*), *stridhana* or dowry, etc. It did not mean absolute ownership but the tendency was towards making the share and thereby the land inheritable. In the few individual transactions known, there is no reference to the transfer of *miyatci* (superior rights). In the case of the *Brahmadeya* all transactions of *panku* were exclusively among the qualified brahmanas. The hierarchy/stratification is indicated by the following rights. The king (*konmai*) as theoretical sovereign of all land created the *miyatci* (superior rights of organising and controlling production) to the donees who either enjoyed the *karanmai* (supervising rights) or gave them away to others i.e., tenants who got the land cultivated by the *Kuti* (*Kutimai*). *Karanmai* could be alienated by redistribution of land. The *Kil pati karanmai* – the lower half of the *karanmai* and *melpati-miyatci* (higher share) may refer to smaller and bigger share of tenants (*karalar*). The

original *karanmai utaiyar* were sometimes deprived of their rights through transfer of such rights. Service tenure was referred to as *Virutti* for the *pani makkal* in the service of the temple. Craftsmen like the carpenter; potter and weaver also received land for their service and were among the *Kutis*. The *Sabha* and other corporate bodies like *Ur* could sell, gift or purchase land. All these made the delineation of the land and boundaries (*vayalum karaiyum*) necessary. Thus the *miyatci* (superior rights) holders (donees) leased land to *Karalar* (cultivating rights) who undertook to employ the tillers and a relation based on agricultural production and the sharing of the produce got established. Through the redistribution of land endowments, the temple gave rise to various intermediaries between the organisers of agriculture and the actual tillers, i.e., structured social relations based on land rights *Miyatci*, *karanmai* and *Kutimai* (occupants or those who actually till the land). Terms and suffixes like *Araiyar* (local rulers?), *kilar* (land owners) or *kilavar* (village headmen?), *sabhaiyar* (member of *sabha*) and *Urar* (members of the *Ur*) indicate the major landholding groups. There were Brahmanas also among the araiyar, kilar and Urar.. The land holding brahmanas emerged as the most significant among the power groups and in the nexus of social relations both individually and collectively as custodians of *Devadanas*. As for the artisans, craftsmen and tillers, it was hardly caste but their rights over land which determined their social status and power.

The various artisans and craftsmen besides other functionaries like washermen (*vannattar*), *kollar* (blacksmiths) were allocated subordinate land- rights, mainly *Kutimai* by the *Sabha* so as to ensure their services to the temple as well as the settlement of the *Brahmadeya* and *Devadana* villages. Some of the more important crafts groups like the weaver (*saliya* and *Kaikkola*), carpenter (*taccar*) and mason (*acariyan*) and even the potter (*kusavan*) were also such *kudi* or occupants of land. The *Vettikuti* (*tevar-vettikuti* and *tali vettikuti*) seem to represent not those who provide free labour, but a pastoral people in charge of supply of ghee, etc. to the temple and seem to have shared *karnamai* rights. The tillers were attached to the land as a servile group. They were also sometimes transferred along with land. *Virakituvan* and *irankolli* are some of the menial services referred to in inscriptions.

Thus land rights were structured as follows: *Konmai*, *Miyatci* of *Nattanmai* (corporate *nadu*), *Uranmai* (corporate *Ur*), *Brahmadeya-kilamai* (*kilamai* = rights/ownership), the *Karanmai* of tenants and the *Kutimai* of service groups and tillers. The agrarian system, which evolved in the *Brahmadeya-Devadana* villages was adopted gradually by the non-*Brahmadeya* villages. This was consequent on the various transactional relations the non-*Brahmadeya* villages maintained with the temple i.e. extension of *Brahmadeya* mode of land relations into a non-*Brahmadeya* village (*vide Dalapatisamudram* and *Eruvadi* inscriptions). The structuring of land rights was also similar. Communal ownership continued and their dissolution was an ongoing process. The growing significance of land rights and their hereditary nature gave way to the crystallisation of various social groups into endogamous caste groups (artisans and craftsmen). Caste became tied up with hereditary functions, the cult of *Bhakti* and temple promoting a ritual hierarchy. The royal craftsmen had a better position as holders of land as royal tenure? Often their lineage was legitimised with *Puranic* links. Ideology thus played a significant role in the socio-economic organisation of the agrarian society.

Boundary specifications became essential as also classification and measurement of land due to reclamation of forest and waste land and the emergence of smaller holdings (individual) against communal control. Renewal of old charters was necessitated by lack of specification essential for settling problems of enjoyment, inheritance, etc. e.g. *Karnamai* rights became inheritable according to patriarchal system, the laying of boundary becoming a ritual—a female elephant (*karani-bhramana*) going around the land granted with libation of water, witnessed by the landholders of the locality. The shareholders right over his share was perpetual and he could sell, mortgage or gift it as he pleased. Fragmentation of land was an ongoing process.

Livestock was another resource of the temple. Cows and goats (sheep), which were gifted were entrusted to the *Vettikutis* (*Idaiyar* and *Ayar* = pastoralists). Sometimes a *pataittalaivan* (chief of the pastoral group in some villages?) was given charge of such endowments.

Gold was another potential resource of the temple. Gold deposited with the temple was also redistributed. The gold in the form of *Kalanju* and *Kasu* was given in exchange for land. Other forms of money like the *Palam kasu* (old *kasu*), *Krishna kasu*, *Ilakkasu* and *dinara* were given as gifts to be reinvested or redistributed. Gold endowments were redistributed mostly among the *sabhaiyar*. The interest (*palisai* or *poli*) received by the temple was mostly in terms of paddy and ghee. Interest rates varied, the standard rate per *kasu* being two *kalam* of paddy per year. Measures also varied. The role of money was marginal. Money was used only in land transactions and payments of royal dues. *Pon*, *tulaippon* are known in Pallava records (a later Pallava currency?). The *Kava (i?)tiyar* (accountant) seems to be an functionary to keep the accounts of the temple? Other commodities were exchanged mutually in given weights and/or measures. Weights and measures depended on the kind of article exchanged or used. *Kalam* and *Nali* were the most widely used grain measures. Land measured by rod (*kol*) specified for the purpose. *Veli* was the standard unit. *Makani* and *ma* were also units of land based on the sowing capacity of land (land measure—*padakaram* of land was yet another land measure) Generally two harvests (*irupu*) depending on seasonal rainfall were made.

The kinds of land included *puravu* (cultivable), *nancei* (wet land) and *puncei* (dry land) and *manai* and *illa vilakam* (house site). Agrarian tracts were described as *tati*, *Nir nilam*, *kalani* and *vayal*, while *tottam* meant garden land. Waste land was referred to as *Mutu nilam* or *pal-nilam*. *Parutti nilam* referred to land for cotton cultivation.

The circulation of agricultural resources was complex i.e., from the tillers to *Karalar*, major share to holders of *Kani* rights (*kani-utaiyar*) who in turn shared it with the temple and the *sabha* or the *Ur*. (*kanikkatan*). *Katamai* was the tax due from the intermediaries to the state or institutions to which the land was granted. The term *irai=tax* was a non-specific term. The lumpsum—as *Irai-kaval* or *irai dravyam*—along with the price of land was accepted from the purchaser by the *sabha* or *Ur*. Often it included all kinds of dues, even *Vetti* and *Vetinai*—free labour and burden?

The pattern of the sharing of the chief resource which determined the structure of social relations had its bearing on the distribution of other resources also. A lion's share of the pulses, spices and condiments also reached the land holders just as paddy) and was redistributed to the functionaries and others attached to the temple.

Virutti referred to the land tenure through redistribution of the *Deavadana* among various people attached to the temple- carpenter, *kanakkappantaram* (accountants), *uvaccar* (the drummer), the temple manager (*srikaryam arayvan*), potter, and menial servants. The temple as consumer of luxury items and aromatics, etc. also attracted trading groups, both from within the region and from outside, thus encouraging movement of traders and inter-regional exchange as well as long distance trade from the 10th century onwards.

The general economic pattern of the period represents a combination of primitive agriculture (slash and burn) of the elevated places and hill slopes, animal husbandry of the pastures and advanced farming of the irrigated plains and crafts/industries of agrarian settlements. While advanced paddy cultivation was the dominant mode of production with a complex division of labour and structured social relations, tied through non- economic bonds of a temple society, arts, crafts and labour were mostly obligatory and their payments was largely in kind. Trade was confined to non- local goods of daily consumption with an increasing capacity to bring in greater diversity in market organisation (*nagaram*) and long distance trade from about the 10th century AD (See Unit on Exchange networks and Merchant Linkages and Urbanisation of the present Block)

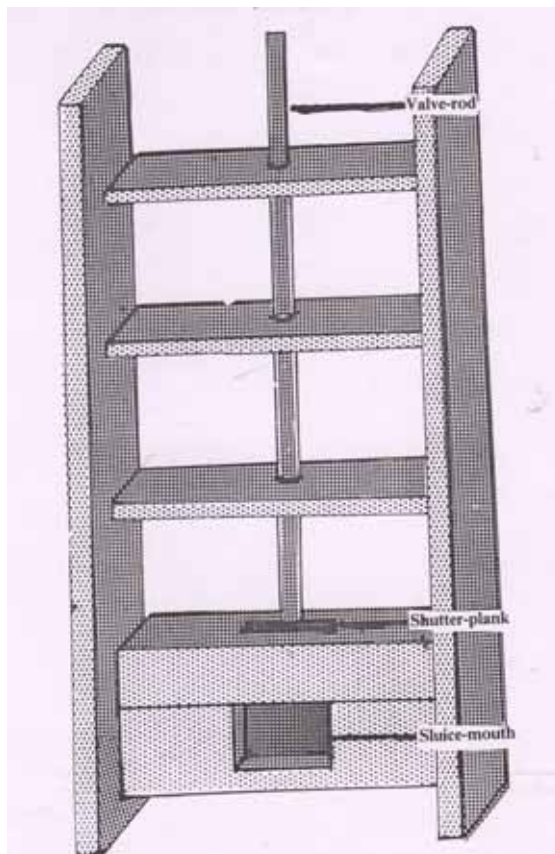
13.5.2 Irrigation – 6th to 10th Centuries AD

Both perennial and inundation techniques were followed in the Pallava and Pandya regions. Canals were dug from rivers and streams. (*vide* the Vaigai bed inscription of Centan Arikesari (Madurai district) –7th century.) Major irrigation works were carried out by kings and chiefs (e.g. Iruppaikkuti Kilavan, a chief who got several *eris* (reservoirs/tanks) dug in this region. The local chieftains who enriched their localities with such projects were granted higher political status. Both the Pallava and Pandya regions are often called tank districts as they depended almost entirely on such reservoirs and monsoon rains feeding them. River fed *eris* are also known. Building and renovation of bunds (*matai*) and sluices (*tumpu* and *kumili*) and *kal* (channel) would point to irrigation as the major concern of the agrarian regions and *Brahmadeyas* of these regions. A network of *vaykkals* leading from the village tanks (*Ur kulam* or *eri*) irrigated the lands. The Nattuppermkal- big channel of the *nadu* refers to the canals which supplied water to the whole *nadu* and was evidently under the *nattar* control. Wells were also attached to fields for supplementing irrigation from tanks. The manual works of irrigation in the fields were done by a servile group.

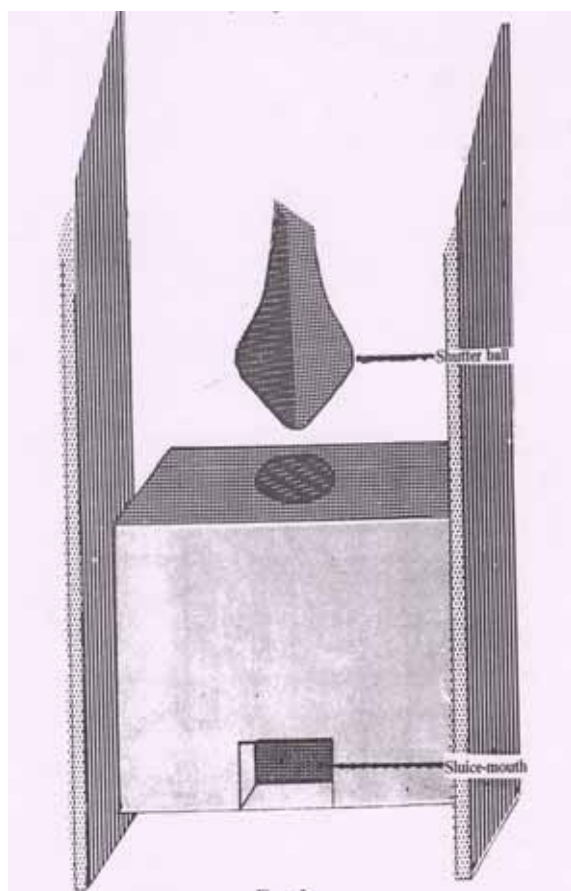
On the upkeep and maintenance of tanks more details are found in the Pallava inscriptions and the actual remains of many of these tanks in both regions and their renovation during British colonial rule are recorded in the district gazetteers and manuals. No special committees like the *Kalinku varyyam* or *eri varyyam* of the Pallava inscriptions are known in the Pandya region. Attention to de-silting and maintenance also included provision for boats to be used while de-silting the entire lake or reservoir from its centre to the periphery. Such provisions are also recorded in the late Pallava inscriptions (Kaverippakkam–North Arcot district). Interesting evidence has been found to show that between Tamil region and Sri Lanka there was irrigation technology transfer, and the Sri Lankan irrigation system showing considerable advance even from the early centuries of the Christian era.

The Sluice System

A number of granite sluices (*karttumpu*) with inscriptions in the Pandya region were mostly left unnoticed and hence not recorded (e.g., the Tumpu inscription of Periya Minakshipuram—constructed by a *tattan*). The Tumpu was single valve system without any devices for mechanical advantage. The sluices consisted of two granite pillars installed in the tank on either side of the sluice mouth. Pillar heights varied as required by the depth of the tanks. The pillars are connected by cross-slabs through the centre of which a rod was inserted from above upto the sluice-mouth. The edge of the rod was flat covering the whole of the sluice mouth and could act as shutter of the sluice mouth. One could swim across to the pillars and rest on the cross-slabs to operate the shutter by lifting the rod.



Tumpu (Sluice) System: Gurukkal, Rajan (1986)



Kumili (Sluice-pit) System: Gurukkal, Rajan (1986)

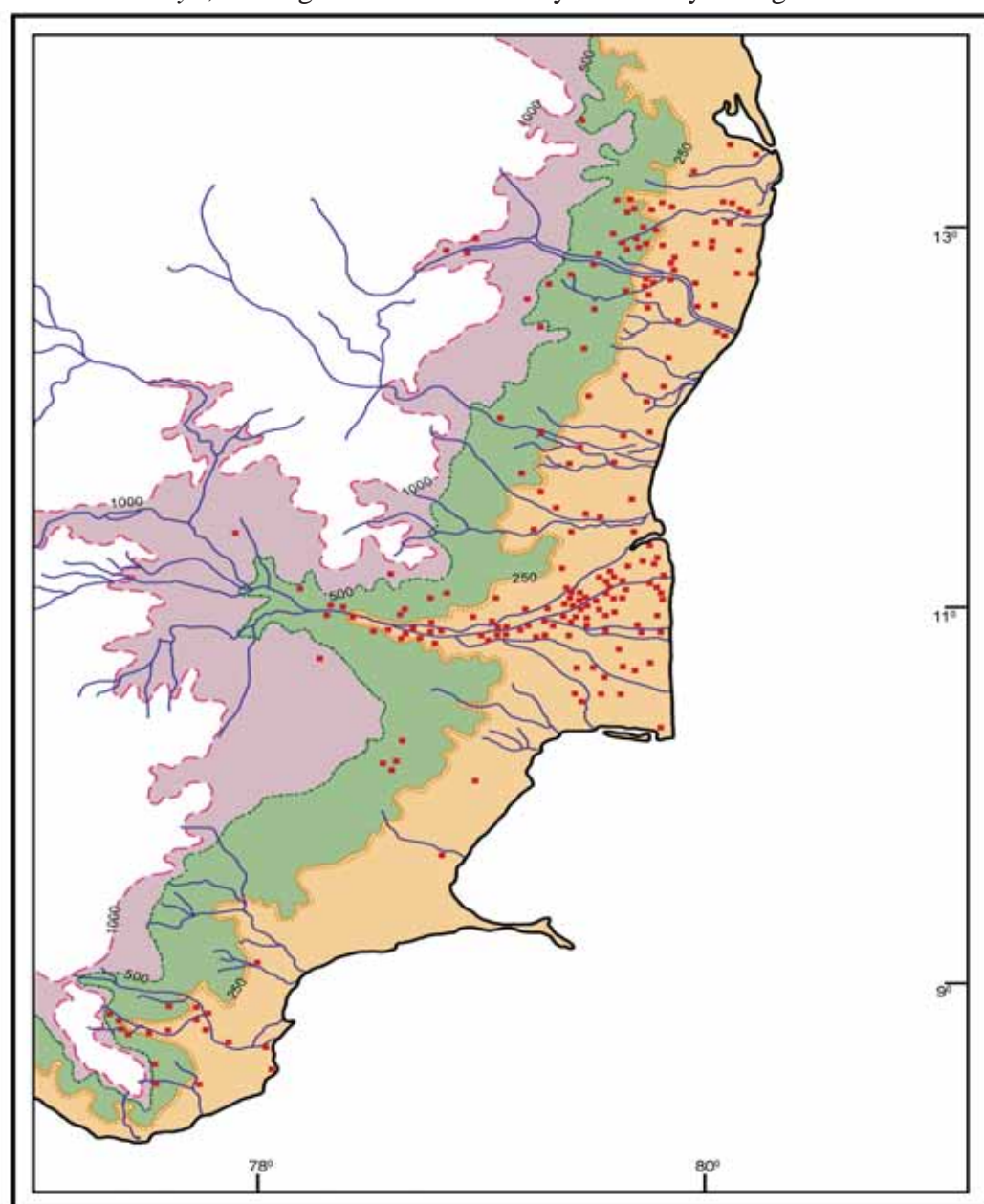
In the *Kumili* system, the edge of the shutter rod which was more or less global, closed the opening in to a stone pit. The nature of the valve was different, as, here, the water flows from above and in the former from the side. The water is led to a well called *etirakkinaru* built up outside the tank. Unlike ordinary wells its construction was upwards from the ground level. It has openings at the base level to different channels running to various directions. The flow worked on gravitational force. The wells had *piccotah* systems. Major irrigation projects were carried out in the 7th-8th centuries AD. (chiselled stone used for the construction of the sluice at Pullan *eri* – Ramanathapuram inscription). Irrigation was under the collective management of corporate bodies like the *nadu*, *sabha* and *ur* and also under the control of local chiefs.

13.6 THE AGRARIAN ORDER AND REVENUE ORGANISATION – 9th-13th CENTURIES AD

The pattern of agrarian order further got restructured in the 9-13th centuries with more direct state interventions in the regions.

13.6.1 Tamil Nadu: The Cholas

Under the Cholas, the agrarian order came to be further restructured due to the state directly entering the localities and regions for a land survey and assessment together with new and larger revenue units formed out of the existing peasant regions and *Brahmadeyas*. The *nadu* continued to organise and control agricultural production and redistribution in non-*Brahmadeya* villages. However, the creation of the *Valanadu* (groups of *nadus* for revenue administration) and the enhancement of the position of the major *Brahmadeyas* into separate revenue units (*tan-kuru* or *taniyur*) with control over several non-*Brahmadeya* villages with temples, around the *Brahmadeya*, meant greater intrusion of royal authority through such institutions



Brahmadeya Distribution in Tamilnadu C.A.D. 1300

Stein, Burton, *Peasant State and Society in Medieval South India*, OUP, Delhi 1980, between pages 150-51. See largest concentrations of *Brahmadeyas* below the 250 metre isohyets.

into the regions for the mobilisation of agrarian resources. With the proliferation of the *nagaram* as the market centre for each *nadu*, corporate merchant organisations also played an important role in the local production and redistribution processes.

It would appear that communal ownership in *Ur* continued although by the end of the Chola period land rights became more complex and stratification of land rights became regular in the non-*Brahmadeya* villages too (*Ur*). In non-*Brahmadeya* villages landholding was generally common but towards the close of the period individual landownership became prevalent in these villages also. In *Brahmadeya* villages landholders and cultivators formed two distinct classes whereas in non-*Brahmadeya* villages, the landholders were themselves cultivators. Individual ownership or shares continued in *Brahmadeya* villages with a majority of Brahmanas being the owners. Secular grants to royal functionaries also increased and villages placed under such functionaries to whom the revenues were assigned as *jivitam*.

Sale and gift of land (*nancei* and *punnei*) to the temple by *kani*- holders (*udaiyar*) and by *Ur* became more frequent (Isanaikkurai village). There are records of sale of shares (*pangu*) to the Jambukesvaram temple by 16 *kani* holders (in Karisattangurai—in fact the whole village was transferred to the temple) and in Rajarajakkurrangudi purchase by 39 persons from two brothers – *kani* holders – gifted to the Jambukesvara temple and sale to the Jambukesvaram temple by an individual (Sembiyan Kurrur), who purchased land from the four *kilavar* and their brothers (33 *veli*- covering the entire village as *Deavadana* village). Land transfers were carried out by individuals either as pieces of land or entire villages. Such transfers occurred occasionally by the *Ur* as a whole as a communal landholding. In the later period of Chola rule land transfers by individuals became prevalent in the non-*Brahmadeya* villages also. Interestingly, such transfers meant the rights to produce and revenue and the seller or grantor remained the *karanmai* holder i.e., cultivation rights and also *kutimai* (occupancy). What was being transferred was the major share of the produce (*kanikkatan*) and/or *kadamai* (land tax – *puravu vari*) payable to the king. In some cases the dues from land were paid by the cultivators to the donee and the tax to the state (*puravu-vari*). Many land transfers between individuals and temples began to occur. It is suggested by Noboru Karashima that such transfers led to *kani* holders becoming tenants and losing influence. It is also interpreted by James Heitzman to mean that in Chola period only revenues assigned and not transfer of ownership with no economic loss to donor. In fact the donor's status as the cultivator – proprietor – was confirmed. *Katamai* had by now become a tax universally applicable to the whole of the Chola region i.e., the Tamil region, with the Cholas organising a separate department of revenue administration called the *Puravu Vari Tinaikkalam* and royal functionaries like the *Nadu vagai seigira adhikari* for reorganising the *nadu* and *valanadu* revenue units.

Kani rights now meant rights inherited (*ennudaiya*) over lands, the right of possession, which was being transferred by the seller or donor (equivalent to the later *miras* rights). *Kani* in other words became hereditary rights over any asset (including the right of service in temples) and when applied to land it may mean right of possession.

The *kani* right holder enjoyed a privileged life in the village based on possession of land. The *kani* right in this wider meaning (that owning some *nancei* is the core of the *kani* right) could have been exercised only when the unity of the community was unchallenged. Otherwise it might have meant merely the right to possession of certain plots of land in the village. The emergence of a number of big landholders by the late

Chola period is indicated by titles such as *udaiyan*, *kilavan*, *alvan*, or *araiyan* (also officials). Economic development in the lower Kaveri valley during the middle Chola period (11th century AD), resulted mainly from the distribution of wealth acquired through wars and the increase of productivity of land by development of an irrigation system and the increase of land grants to officials in the middle Chola period. This is indicated by the appearance of military holdings—*irasakulavar*, *padaipparru*. Leasing out of land benefited more of non-brahmana and other frontier people. New land owners and large holdings characterised the new agrarian order in the lower Kaveri valley.

Under the Cholas the irrigation system of the Kaveri valley, which depended mostly on the mud embankments and breaching for canals supplying the *nadus* through a network of canals and channels criss-crossing the *nadus*, was promoted by the *nadu*, chiefs and the ruling families, just as much as the new *nadus* with large tanks/reservoirs that were created by royalty and organised and maintained by the local assemblies like the Sabha and *Ur* in the northern parts of Tamil Nadu. The mud embankment and canal system was also introduced into newly conquered areas as in the Tamraparni-Ghatana valleys, where the existing *nadus* were expanded and new *Brahmadeyas* created. The Land Survey and Assessment of the periods of Rajaraja I and Kulottunga I (985-1014 and 1070-1118) with the *nadu* *vagai seigira* *adhikari* (officers classifying and demarcating *nadus* and reorganising them into *valanadus*) were major initiatives for the increase in agricultural production as well as revenue organisation—a project which covered the whole of the Tamil region by the end of the 11th century AD. In fact the new agrarian order and integration which began under the Pallavas and Pandyas were finally led to their optimal development by the 11th century together with the proliferation of local and regional markets, which by the end of the 11th century led to the emergence of trading networks and commercial activities including specialisation of crafts and markets and long distance trade. (See Unit 15 of the present Block)

13.6.2 Kerala

Traditionally the number of Brahmana settlements in Kerala is believed to be 32. Curiously, no single *Brahmadeya* has a royal charter and hence it would seem that they were founded by migratory Brahmanas. They spread, establishing fresh settlements, by fusing together elements of established ones and by amalgamating two or more settlements to form a bigger one. Between the rivers Parumpula and Karumanpula are located 9 such settlements; between Karumanpula and Curni—13; and between Curni and Kanya Kumari—10. Perumcellur, Isanamangalam, Mulikkalam, and Tiruvalla are some important ones. They are found in clusters in the Pampa valley, Periyar valley in their more fertile zones. Due to rapid increase in agricultural production and extension, subsidiary settlements or upagramas came to be attached to the main Brahmana settlement (The Tiruvarruvay Copper Plate of Sthanu Ravi (AD 861) . However, the term *Brahmadeya* hardly occurs with reference to these Brahmana settlements, which are invariably associated with temples.

The term *Urar* and others like the *tali*, *tali-adhikarikal*, *taliyar*, *sabhai*, *sabhaiyar*, etc. refer to the Brahmanas who controlled the temple and the settlement. The *Urar* of Tiruvarruvay, *Netumparam tali* and *Pudukkode* are also referred to as *Patinettu nattar*, *painarumar* and *erupatteluvar*, etc. evidently the number of people. The *Paratai*, *Mulaparatai*, the council administering the temple; *Potuval*, *ahappotuval*,

variyaar and purappotuval, etc. refer to the service personnel of the temple. The variyam or committee of the type that occurs in the Tamil region is absent in Kerala.

The emergence of the temple as the new ideological instrument by about the 8th century AD, marks the genesis of an agrarian society headed by the Brahmanas and centered around the temple Endowments of vast landed estates to the temple (Tiruvalla Copper Plate and the thousands of para (a measure) of paddy from them are on record. Grants to the sala (educational institution) attached to the temple are also known, which were managed by the temple corporations. A large part of the fertile lands between Karumanpula and Curniyar (river Periyar) was under the control of the temple corporations of 11 temples including Paravur, Irnjalakkuda, etc. Most of the fertile agrarian tracts of contemporary Kerala belonged to the brahmanas as proprietors of the temple.

The localisation of agrarian activities under the institutional supervision of the temple resulted in the establishment of an elaborate agrarian order and an unprecedented expansion of agriculture. The temple could organise the society for various activities of better production through irrigation projects and large-scale land improvement schemes. Small-scale reclamation and cultivating processes (including manuring, etc.) were carried out by the *Karalar* as part of their tenancy obligations. Fertile uplands (hills) were brought under cultivation. As the head of the *nadu*, the *Naduvali* – made grants of land giving complete ownership to temples. Terms like *Cerikkal* refer to crown lands, *Devasvam* or *Kilitu* were lands to temples, which enjoyed the *karanmai* rights (as in the Tamil region) and 18 different taxes due from the village were also assigned to temples as in the case of the village of Katuvur assigned to the Tiruvalla temple. The temple corporation received *Rakshabhoga* in the form of paddy (in measures called *kalam* and rice (*para* or *nali*) and ghee (*itankali*). The annual dues to the temple were known as *Attaikkol*. The protection temples was entrusted to the 300, 500, 700 etc. (groups of men—armed?) who were given land as *nilal*, *kaval* (protection) as *kilittukkanam* – meaning subordinate rights in land. Lands given as *Attipperu* (income from land), *panayam* (mortgage), etc. gave the temple different levels of rights like those of the owner of all revenues, protector, and temporary revenue ownership with *karanmai* rights. An elaborate system of distribution and redistribution developed. For the organisation of economic activities, lands were entrusted to various *ganas* (groups) of the temple. The temple lands were redistributed to *Karalar* (those who got them cultivated—tenants) and then to *kutikal* (actual occupants/tillers). The temples leased out lands to *karalar* who were made responsible for providing the requirements of the special temple rituals for which the endowments were made. *Karalar* had the rights to cultivate, and the *kutis*, such as tillers, artisans and craftsmen, the occupation rights. For various services to the temple (e.g. to the kalavaniyar potter) – service tenures – *virutti* and *jivitam* were given. *Virutti* was an allotment with hereditary rights and *jivitam* was for life. The *Uranmai* was retained by the temple corporation thus creating superior and subordinate rights. The hierarchy in the descending order represented *Uranmai*, *karanmai* and *kutimai*. A three tier structure of rights evolved i.e., *Koyinmai*, *Uranmai* and *Karanmai* and the fourth i.e., *kutimai* often had no permanent rights over land.

Gold was another resource deposited with the temple and was often exchanged for land, loaned on mortgage, etc. The gold lending economic activity of the temple brought interest in paddy. However there was no monetisation, despite the fact that references to *kalanju*, *kasu* (old) and *dinara* (Arab) are made in the form of gifts.

All artisans and craftsmen or professional castes settled in temple-centered villages, economically dependent, based on ties from the lowly to the higher groups i.e., the temple and village proprietors. This has been understood as representing a relatively self-sufficient local unit and the prevalence of service tenure, an established inter-commodity exchange ratio and insufficiency of coinage are believed to be the features of a closed economy.

13.6.3 Karnataka: The Chalukyas of Badami and the Rashtrakutas

In Karnataka under the Chalukyas of Badami (6th-8th c. AD) and the Rashtrakutas of Malkhed (Manyakheta) (8th-10th c. AD), the land grant system introduced a similar organisation of agricultural villages with the Brahmanas as the major landowning group, controlling the cultivation process in the *Agraharas* or *Bramapuris* (*Brahmadeyas* are not as prominently mentioned in the inscriptions as *Agraharas*) and also in the pre-existing settlements which were brought under the overarching influence of the *Agrahara* or *Brahmapuri*. Here the presence of the non-Brahmana land controlling groups is indicated by the term *Okkalu* referring to the agriculturists who like the Velalas of Tamil region were both land controllers and tenant cultivators, under the reorganised agrarian order. They functioned along with the Brahmanas in most centres. In the place of the *Sabha* or organisation of Brahmana assembly, the term *Mahajanas* indicates the big men and their assembly in both the *Agrahara* and non-*Agrahara* villages. Yet for this region there is need for intensive research as has been done for the Tamil region on the production processes and the nature of stratification of land rights. It is however possible to infer that the *Agrahara* and the temple under the leading landowning Brahmanas and *Okkalu* had similar organisational control over production, mobilisation and redistribution of resources, both agricultural and non-agricultural resources.

In Karnataka under the Western (later) Chalukyas of Kalyani (10th to the 12th centuries AD) the grants to Brahmanas were often called *Agrahara*, *Mahagrahara*, (while *Brahmapuri* referred to the whole settlement or centre), where the Brahmanas lived. The *Agraharas* had several *keris* e.g., *Kukkanur Agrahara* had 48 *keris* or colonies, pointing to the separate living quarters of the inhabitants. The grantees evidently had no right to alienate land or living streets. The village usually had an inhabitable area, temple, shops and commercial establishments, craft centres, charitable houses, warehouses, godowns and sheds, vacant sites, tanks or ponds, wet lands, gardens and forests, hay-stack and a fortification in some cases. Quarters of barbers, washermen were separated and located in the outskirts. Craft groups and trading communities (e.g. oil mongers of Lokkigundi) occupied a single row in which their places of business and residence were situated together.

The records mentioning the King's consent in giving away land or a whole village as grant to brahmanas (e.g. the village of Degamve gifted by the queen of a Kadamba king of Goa, in the presence of Mahajanas, Brahmanas or neighbours as the corporate bodies) theoretically acknowledge the king's right of absolute ownership (also rights over most of the escheat property for public use). Exemptions and conferment of privileges or rights to the donees are also similar to the grants made throughout the early medieval period. Reference is also made to the State revenue registers for land transfers, purchase, sale and taxes.

The Mahajanas conducted the survey and measurement of land and were entrusted with the management of customs and tolls donated to temples, receiving deposits of

gift money and utilising the interests earned for purposes specified by investors. They were also in charge of tanks—construction, repair and maintenance. They were generally trustees, witnesses to gifts, to exemptions from payment of taxes and tolls and gave permission for levy of taxes and settled disputes, etc.

Other local elite were the king's functionaries and the village elite like the brahmanas, Gaudas and *jiyas*. Apart from the Mahajanas, who were the most important local big men in charge of temple grants, the sthanikas, who seem to be royal functionaries, were also entrusted with the proper functioning of the temple's administration.

Land Tenure

Land was assigned for special services such as construction of tanks, clearing of forests and formation of new lands or repairs to temples (*Nettaru-Kodige*) for acts of bravery shown in rescuing cattle or women; boundary disputes, etc. *Deavadana* or *datti* – for worship in the temple; *Umbali*, another tenure, was meant for various public offices, either as revenue assignments or enjoyment of yields with claims to ownership. Many to Brahmanas and other religious or secular purposes was made entirely free from taxes (*sarva manya*) or partially free (*ardha manya*). Others such as *Kutumba Vritti* – for maintaining one's family. *Sarana vritti* – for feeding religious devotees; *Bittu vatta* – for some special service including maintenance of tanks—public works. Service tenure also included, apart from temple service, also others like military service, *Bilu vritti*—gift to the defeated king; *Kumara vritti*—to a minor prince. *Prati vritti*—a share of land obtained in exchange? *Dingariga vritti* a unique tenure translated as servant's income or livelihood ? like *nattrau kodige*?; *Anuga jivita vritti*—gift based on love affection or *olume* made to members of the royal family.

It has been suggested that there were three types of ownership—1. Complete ownership in common, 2. Part-rotation and part-common ownership, and 3. Part severalty and part-common ownership. Community control was complete and the individual entitled only to a share. Community retained the right of periodical redistribution, under which land was allotted by dividing the lands into blocks or *tattus*, with common tenure or control being retained only in so far as the periodical redistribution was concerned. Common ownership over pasture-land only. The rest was held individually according to some agreement made forever. The rights implied in common ownership extended to alienation, pre-exemption and denial of admission to strangers. In the third category, each household had its allotted share without any common control or regulation. This is said to be an ideal example of corporate life, in which the main object was to ensure that the shareholders should construct tanks and channels by themselves in their respective villages and live in peace. There were identifiable boundary marks to prevent mistake or frauds. Separation, alteration and exchange of shares were prohibited. Even in *Agraharas* evidence of common ownership has been identified. (Hirenallur—AD 1215). Common ownership meant that the rights of alienation, transfer of cultivation, sale, mortgage, gift, remission of taxes (brahmanas?) were held in common and apart from maintenance and repair and joint sale was meant for the prevention of sale to strangers. The period of tenure is defined as *sarvabhyantarasiddhi*, *achandrarkataram* (perpetual) or *ekabhoga* (single time harvest; sometimes it is also used to refer to the enjoyment rights of one person – thus *ekabhoga brahmadeya*), *tribhoga* (three times harvest) and for 21 generations.

Temple lands were leased out to tenants classified into *uttama*, *madhyama* and *kanishtha*, implying a classification among the types of land and the tenants undertaking cultivation themselves. The lease amount was fixed in certain cases (*Kattuguttage* – fixed lease amount) including garden products. *Siddhaya* or minor cesses had to be paid. However, references to tenants freed from forced labour – *bitti solla* and house taxes would point to the prevalence of forced labour. Most of them were tied down to their respective blocks and the tenants had to cooperate in building tanks, temple etc. A share of produce was payable to the land owner apart from the government's share.

There was no uniformity in the size of landholdings and hence it is difficult to study the nature of holdings. Small holdings were common, as for example one *mattar* or 2 *mattars* of wet or dry land (*kodagi* land), while 16 *mattar* is a rare holding. Fragmentation evidently became more common in the latter part of the early medieval period.

Irrigation was a major concern in all regions and in Karnataka the irrigation projects were under the collective care of the local big men (Mahajanans) and references to *kere*, *samudra*, *eri*, *katte*, *kola*, *kuttai*, *kumte*, *sarovara*, *tirtha*, *tataka*, point to the types of reservoirs constructed. The sluice system was common as terms like *Tubu* – sluice, *kodi* – weir, *agali* – iron rod or *nirottu* for controlling water supply, *hatta* or *kaluve* into which water was led from the tank through *kodi*, would show.

13.6.4 Andhra Region: The Eastern Chalukyas

Agrarian expansion in Andhra began early in the 4th-6th centuries AD. In the initial phase, a greater part of land in coastal Andhra, particularly the deltaic region, was brought under cultivation due to high soil fertility (alluvial) and adequate rainfall. Hence the dense settlement pattern through out coastal Andhra. The early grants of *Agraharas* in the Andhra region numbering about 27 and belonging to the 4th-6th centuries are concentrated in the Krishna, Guntur and Godavari districts (coastal Andhra).

It is of interest that the names of the tributaries of the Godavari, the largest perennial river, are derived from those of the Vedic–brahmana or rishis or sages or gotra lineages such as Gautama, Vasishta, Vaisvamitra, Vanadevi, Bharadvaja, Atreyi and Jamadagni. Next in importance is the Krishna with its tributaries–Vamsadhara and Nagawati (the Vengi region (modern Andhra).

Agrahara, a technical term, applied to an endowment of villages which were in the exclusive and undisturbed enjoyment of a brahmana or a group of Brahmana beneficiaries. Exempted from all taxes (*sarva kara parihara*), the grants were given immunities with revenue and administrative rights as also a strong restriction against official interference. The *Visaya* and *rashtra* are regions in which the grant village is usually located. Although in the later bilingual Pallava copper plates the Sanskrit portion has *Visaya* or *rastra* (e.g. *Adayaru rastra* in the Udayendiram plates) in the place of the Tamil region called *nadu*, the Andhra region does not seem to have had such well entrenched peasant regions, which organised production. The inhabitants of the gift village were to obey the grantees.

From the 7th to 13th centuries AD the Eastern Chalukya grants numbering 53, of which 34 have been identified (17 in Krishna district, 7 in Guntur district, 4 each in East Godavari, and Prakasm districts, one in Srikakulam and one in Visakhapatnam) mark a further expansion and reorganisation of the agrarian order. Early Eastern Chalukyas like Kubja

Visnuvardhana encouraged Brahmanas to settle in the frontier areas e.g. between Kalinga and Andhra (Visakhapatnam and Srikakulam) as buffer villages

The comparative absence of settlements in Rayalasima and Telengana, despite frequent westward shifts in the political boundaries of the dynasties like the Eastern Chalukyas may be attributed to their geographic and climatic differences. Both Telengana (Adilabad, Nizamabad, Karimnagar, Medak, Warangal, Hyderabad, Mehbubnagar, Nalgonda and Khammam districts) and Rayalasima (Kurnool, Anantapur, Cuddapah, and Chittoor) are on the plateau. These are two major physiographic zones—The Ghats and Panepains (Eastern Ghats)—marked by a series of eroded surfaces of rocky region, with an average of 85 cm rainfall, the rainfall decreasing from northeast to southwest, Rayalasima, being a rain shadow area. The soils are red, black, laterite, and alluvial with black cotton soils mostly in Telengana and some in Rayalasima and the alluvial only in a small portion of the plateau. The forests (moist deciduous of the plateau along the north eastern border of the region and dry deciduous forests in areas of low rainfall) with limited forest area in coastal area were gradually brought into the new agrarian system, either by deforestation or more often by foresters being brought into temple society as economic groups supplying various items of consumption by royalty and the temple and also other plains people.

In Andhra the association of *Agrahara* and *Brahmadeya* with temple is initially not well established as in other parts of south India i.e., till the 10th century AD. They are not temple-centered as in Kerala or Tamil region. However, they had Ghatika as centres of education.

According to the *Yasastilaka (Campu)* of Somadeva – AD 959 – a minister is alleged to be demanding unpaid labour at the time of sowing, collection of dues while the corn ear is still unripe and that there was unbridled movement of troops at the harvesting season. This would probably indicate the prevalence of forced labour and the intrusion of troops, from which exemptions are given to the Brahman settlements. There is evidence of the transfer of share croppers and labourers along with land (Hirehadagalli plates – Bellary district), a practice which continued in the later periods also.

Within Andhra, regional variables are critical. Interior Telengana and Rayalasima continued with their pastoral life styles for a long time. Eras of copious epigraphic documentation correspond to momentous changes in the political economy of South India. The colonisation of interior Andhra was likewise a long term process. Expanding agrarian frontier and the demand for military labour in later periods resulted in physical mobility. Considerable labour resources came in with migrants, who, in return, were granted privileges like village headmen e.g., the Reddis in the 13th and 14th centuries.

Two important features of Telengana (Kakatiya period 11th-14th centuries) and Rayalasema (Vijayanagara period, 14th-17th centuries) were tank irrigation and temples, which were not functionally equivalent or homologous. Under the Kakatiyas, political and military connections provided the route to wealth and power, which were achieved through a web of economic interests. Land provided entry into a privileged nexus of surplus extraction. Land under *Racadinamau*, *raja-palu* (share) defined royal prerogative in making *Agrahara gifts*, *raca sunkamu*, etc. *Vritti* grants were made to religious institutions and specialists and *jivitamu* to warriors. Differing rights existed between nobles and officers, although land (proprietorship) was alienable.

Expansion of agriculture through reclamation of forest land and waste land as well as Population pressure occurred more regularly after the 10th century AD. Grants in Telengana prior to 11th century were fewer than under the Kakatiyas. By 13th century, apart from royalty, the *astadasapraja* or 18 communities (a conventional number found all over south India in epigraphic references to the agricultural and allied communities) were also making grants. New villages with temples and tanks emerged. The *Sarvabhyantarasiddhi* included many rights and privileges, the most significant being rights over irrigation works like tanks (large number in the Warangal and Karimnagar districts). Under Sarvamanya, the donee or donees were entitled to the enjoyment of income from all taxes and other rights as fines and fees of various kinds – *nidhi*, *nidana*, *sulka*, *danda*, *dhana*, *upabhogya* and as *tribhogyabhyantara siddhi*. They also had control over other crafts production like oil crushing (*ganuga*—oil crushing machine), *karamba* – waste land?

The creation of villages progressed on a larger scale mostly in new areas and land grants to brahmanas and temples (*Devadana* and *Agrahara* and *Mahagrahara*), around which new settlements seem to have come into existence. In the *Agraharas* shares of land assigned to brahmanas and the donees were not to leave the place nor sell. More villages from forest lands were brought under the new order during the times of Prataparudra II-1290-1323. The new settlements were given special incentives, like remission of taxes. The Brahmanas of one *Agrahara* (*Mantrakuta*) could hold lands in other villages. (Prataparudra's period). For temple service, land as *Vritti* – *deva brahmana vritti* – or service tenure, was allotted as in other Brahmana and temple centres.

In Telengana (and Rayalsima, the last region to be brought into the new agrarian order but in the period after the 13th century AD) tank irrigation was the major source. Tank construction was one of the *saptasantanas*. The rich invested their surplus in temples and tanks. Tanks often became private property. The whole of Telengana was covered with planned irrigation facilities—e.g., Chaunda Samudra and The Pakhal lake. Royalty, feudatories and other rich families of merchants constructed tanks (dams, sluices, etc.) Tanks were *nadimatrikas* (river fed) and *Devamatrikas* (rain fed), the former mainly in river valleys and latter in monsoon dependent areas. Natural streams called *Vagus* were also channelised for irrigation. The later *dasabandha manya* – for tank maintenance may well have originated in the Kakatiya period. Tank owners derived substantial income from the use of water by peasants. Different kinds of water lifts (like *ratana* – water pulley) were taxed. Canals and streams were under the communal control of villagers. Except the canals which flowed through the *Agraharas* and other tax free areas, the rest of the canals fetched income to the state. The nayakas, who were royal officials with estates to govern seem to have benefited by their control over such projects. Differential rates of payments from different sections of the community would show the inequality of the system. Water cess was collected mostly as rent by the intermediaries.

Double cropping (system of double cropping – in *Kartika* and *Vaiskha*) or sometimes three crops are recorded in the inscriptions. Types of land such as *Marturu*—wet land; *mutlu* – dry land; land measures like *nivartanas* for wet land and *khandis* for dry land. are referred to. *Putti* was a measure both for land and grain. *Nivartana* was an age old measure of land in the Deccan and Andhra regions, which continued to be in vogue till the late medieval times. One *nivartana* was between 2 ½ and 4 ½ acres. *Beddachenu*- stony land; *recadi* – black soil; *tomtabhumi* – garden; *nir nela* – wet land; *veli bhumi* – dry land are some of the soil and land types known from the inscriptions.

Paddy was not only a major consumer crop but also a medium of exchange and trade article. Varieties of rice (e.g. best – *rajanalu*), Jowar and bajra were also cultivated, apart from cotton and sugarcane. Cotton production and trade in cotton became a leading craft and commercially viable product by the 12th-13th centuries AD practically all over South India. Oil seeds were also cultivated and the *Teliki vevuru*, a community of oil mongers (guild) were among the organised craft groups of this period.

A complex system of tax appropriation emerged. The terms used are often confusing, but it is clear that taxes on agriculture were numerous. (like the *Siddhaya*, *ari* and *Koru*; *Kanika* and *katanamu*; at the time of harvesting; *Vennupennu*; *Pullari*–grazing tax. *Sulkam*, *Koluchu* and *ammadikalupannu*, paid in grain. Tax on water–*nirohari*, *nohari* and *nir mudi*, *ratanavamu*, *ettubhandamu*, *tumunayamu*, *sunkamu*, etc.) The *panchamakula* or agricultural labourers would seem to have been the actual payers of all taxes and dues. The system of taxation was not uniform and varied according to caste pointing to the servile condition of actual cultivators.

The several communities of cultivators or those engaged in agricultural operations including crafts for agriculture (*astadasapraja*) mentioned in the inscriptions and literary works like the *Kridabhiramamu*, *Sakalaniti Sammatamu* – on *dharma*, and *Velugoti varivamsavali*, etc. were headed by the Reddis, Gavundas and *Karanams* who kept the records of the village lands in the Andhra region. The merchants emerged as an economically independent and powerful force by the early 11th century. *Komatias* and *salevaru* and others made gifts in the form of money – *cinnas*, *madas*, etc.

Crafts Groups

Among the crafts groups were metal workers (*panchalohadhipatulu*); *bangaramu* (gold), *vendi* (silver), *raci* (copper), *tagaramu* (tin), and *sisamu* (lead.); the *Salivaru* – weavers; *vaddavaru* – stone cutters; *kase* – masons; *vadrunki* – carpenter; and *kammailu* (blacksmiths) *kummarilu* (potter), *musara varu* (manufacturers of small crucibles) and *teliki varu* (oil crushers) are prominently mentioned. By 12th century AD most crafts groups were socially and economically stabilised in Telengana. Not all artisan classes were present in every village. Their grants were in the form of a share of the income from the sale of their items of manufacture. Most of these crafts were in the form of manufacturing agricultural implements and water devices, carts and boats, etc. They were all remunerated for their services in the form of land which they usually cultivated themselves. (For details of crafts and commerce see Unit 15)

13.7 SUMMARY

The period is marked by the decline in trade and commercial activities resulting in heavy reliance on agrarian sector. In the period from the 9th to 13th centuries agriculture continued to be the mainstay of the economy. This led to the widespread expansion of the land grant economy, particularly the *agraharas*. Another related feature of the economy of this period, though highly debated, was the emergence of feudal economy. To its positive side *Brahmadeyas* were instrumental in agricultural expansion to a large extent. However, there also emerged ‘superimposition of superior rights in land’. The major beneficiaries were none other than the Brahmanas who emerged as major landowning groups in the region.

13.8 GLOSSARY

<i>Campu</i>	: A literary style that mixes verses with prose.
Escheat	: King's right/claim over the property/possessions of the deceased officers.
Communal Ownership	: Lands owned in common by peasant community, of which some were brought under the control of the <i>brahmadeya</i> donees and some gradually were brought under <i>Urar</i> and <i>Nattar</i> .

13.9 EXERCISES

- 1) To what extent *agrahara* and *Brahmadeya* grants helped in the agrarian expansion in South India?
 - 2) Explain *pariharas*. Analyse the *pariharas* in the context of the *Brahmadeya* grants.
 - 3) Examine the pattern of tank irrigation in the Pallava-Pandya regions.
 - 4) Critically analyse the nature of land rights under the Cholas.
 - 5) Give a brief account of the nature of land tenures under the Chalukyas.
 - 6) Analyse the pattern of agrarian expansion in the Andhra region during the early medieval period.
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UNIT 14 TRADE, TRADING NETWORKS AND URBANISATION: NORTH INDIA, C. AD 300 - C. AD 1300

Structure

- 14.1 Introduction
- 14.2 Sources
- 14.3 Trade, Market Places and Urban Centres AD 300-650
 - 14.3.1 Merchants
 - 14.3.2 Guilds
 - 14.3.3 Market Places
 - 14.3.4 Trade Routes
 - 14.3.5 Long Distance Maritime Trade
 - 14.3.6 Coinage
 - 14.3.7 Urban Centres
- 14.4 Trade, Market Places and Urban Centres AD 650-1300
 - 14.4.1 Debates on Urban Decay-Arguments for Decline
 - 14.4.2 Debates on Urban Decay-Arguments Against
- 14.5 Summary
- 14.6 Glossary
- 14.7 Exercises
- 14.8 Suggested Readings

14.1 INTRODUCTION

Our previous survey of trade and urbanization for nearly nine centuries (*c.* 600 BC-AD 300) indicates a steady development in exchange related activities and in proliferation of urban centres in north India. The five hundred years preceding the fourth century AD mark the peak of commerce, especially long-distance trade, and urbanization in north India. Conventional historiography generally gives an impression of steady continuity and little change in economic life in the period that follows: *c.* AD 300-1300. This is a position which in the recent decades has been questioned by many leading historians. It is indeed possible to discern a few significant shifts both in the agrarian and non-agrarian sectors of the economy. That is why it is better to study the economic situation of these thousand years as a separate unit. In view of the changes occurring in social, economic, political and cultural life during these thousand years in north India, it would be logical to divide the millennium from AD 300 to AD 1300 into two chronological segments: *c.* AD 300-650 and AD 650-1300. (For details see our Course EHI-03, Block-1).

The period from AD 300 to AD 650 has attracted great attention of scholars who generally designate this phase as the Gupta period or the classical age in Indian history. The period indeed witnessed the rise of the imperial Gupta family to political paramountcy over greater parts of north India (*c.* AD 320-570). The first half of the seventh century is famous in the political history of northern India for the growth of the power of Harshavardhana of Kanauj, though for a limited period. The period

(300-650) is celebrated in Indian historiography for great cultural achievements and general peace and prosperity. While in the previous period a substantial part of cultural patronage came from non-royal persons, from the fourth century onwards, and especially after seventh century, resources to cultural activities came mainly from the royal houses. This itself is an indicator of significant changes in the socio-cultural situations.

The six centuries and a half, spanning from c. AD 650 to 1300, brought in regional features in socio-economic, political and cultural life in the whole of India, including north India. The political scene was featured by the presence of many regional and local powers in north India and the lack of a paramount power like the Gupta Empire in north India. This holds also true for the political situation in the Deccan and the far south. In spite of endemic clashes among powers, military victories did not necessarily result in territorial expansion. Regional and local powers emerged not merely in the Ganga valley, but also in hitherto fringe zones like, Kamarupa (upper Assam), Samatata (eastern Bengal), Dahala (Jabalpur area in Madhya Pradesh), Kashmir and Rajasthan. Many of these areas did not experience a monarchical polity prior to AD 600. The sustenance of the extensive Gupta Empire for nearly two centuries and a half and the proliferation of monarchical states in many new areas in north India must have come from a strong agrarian base. In fact the immense spread of agrarian economy during the period from AD 300 to 1300 has led to an impression that the economy was greatly ruralised; the non-agrarian sector of the economy, according to many historians underwent a decline from AD 600-1000. It is after AD 1000 that crafts, commerce and urban centres are perceived to have revived again. This perception has generated considerable scholarly controversies. It will be difficult to miss the growing regional features permeating social, economic, cultural and political situations. That is why the period from 650-1300 is labelled as post-Gupta or 'early medieval' in Indian history. The very phrase early medieval implies that the period signalled shifts from the situation in the 'ancient' times; it was actually a phase marking the transition from the ancient to the medieval and hence termed 'early medieval'.

14.2 SOURCES

That the period under survey was marked with many shifts from the previous period is also indicated by new types of source materials and documents which themselves were witnesses to changing condition. The most important source material for the study of this period is the huge number of inscriptions. Inscriptions had already appeared as early as the third century BC. But most inscriptions after fourth century belonged to the category of copper plates (*tamrasasana/tamrapatta*). These copper plates recorded transfer of revenue-free landed property by royal orders to recipients of the grant. Though this practice probably appeared first in the Deccan around second century AD, the practice of issuing land grants became fully established from the fourth century onwards and assumed an all-India proportion after AD 600. Most of the copper plates record the creation of revenue-free grant of land gifted to a brahmana, a group of brahmanas or a religious institution (a Buddhist monastery, a brahmanical temple or a *matha* or a Jaina establishment). Such grant of land to religious donees (recipients of endowments) is known as *agraharas*. Being official records of grants of landed property, the copper plates are invaluable for understanding of rural economy, especially for understanding the process of transfer of landed property, rural settlement pattern, crops, irrigation projects,

peasants and agrarian revenue demands. However, on some occasions the grant may also throw light on important merchants and craftsmen whose presence as important witnesses to the pious act of donation of land was recorded. Merchants also figure in copper plate grants in a group or as an assembly on certain auspicious days when the merchants decided to voluntarily offer some cesses on the commodities they dealt in in favour of a deity or temple. In such grants naturally appear not only merchants but also various types of commodities. These inscriptions also inform us about various types of market places from some of which were collected tolls and customs (*sulka*), thereby indicating the revenue bearing potential of trade. Also known are inscriptions recording individual donations by merchants, either in favour of a deity or for some works of public benefactions.

Information on trade and urban centres is available from voluminous legal or theoretical treatises (*sastras/dharmasastras*). Theoretical treatises (*smritis*) by Vishnu, Vasishtha, Brihaspati and Narada will be useful for our purpose. Commentaries on these texts (e.g. the commentaries on the *Manusmriti* and *Yajnavalkyasmriti*) also offer some data on this subject. Relevant data can be gleaned from technical treatises like the famous lexicon, *Amarakosa* by Amarasimha (fifth-sixth centuries AD), the *Abhidhanachintamani* and the *Desinamamala* by Hemachandra (eleventh-twelfth century) and the *Lekhapaddhati*. Some impressions of commercial activities are available in the vast creative literature, e.g. the works of Kalidasa, the *Mrcchakatikam* of Sudraka, the *Dasakumaracharita* of Dandin and various types of Jain texts. It is important to take note of the fact that two well known Jaina texts *Jagaducharita* and *Vastupalamahatmyam* were biographies of two premier merchants of early medieval Gujarat. Non-indigenous textual materials are of particular importance as source materials for the history of trade, especially the external trade of India. The Chinese accounts of Fa-hsien (early fifth century AD), Hsuan Tsang (first half of the 7th century), Itsing (late seventh century) and Chau ju Kua (AD 1225) are invaluable sources for the understanding of trade in India. Arabic and Persian texts on geography and travel (those by Sulaiman (c. 851), ibn Khordadbeh (AD 882), al Masudi (AD 915), Buzurg ibn Shahriyar (AD 995), the anonymous author of *Hudud al Alam* (AD 982), al Biruni (AD 973-1048), and al Idrisi (AD 1162) are replete with information on Indian commodities and India's trade linkages with West Asia, though these accounts are occasionally stereotyped as many of the Arab authors did not visit India. To this may be added the late sixth century AD accounts of the Syrian Christian monk Cosmas Indicopleustes and the famous descriptions of India by the Venetian traveller Marco Polo (late thirteenth century). An unusual type of source is the letters of medieval Jewish traders, who regularly traded between the west coast of India and the Red Sea. Though the main point of their contacts was the Karnataka and Malabar coasts, these unique business letters, recording the impressions of the actual participants in long-distance trade, furnish significant data on trade in the Gujarat coast.

In sharp contrast to the wealth of field archaeological data for the period from 600 BC to AD 300, the subsequent period of one millennium has yielded only handful of excavated and explored materials. Unlike the early historical settlements, the early medieval ones have not been systematically explored and excavated and therefore the field archaeological data on trade and urbanisation are quite inadequate. The Gupta rulers are credited with the issuance of superb

gold coins and also silver coins. The gold coinage of the Gupta Emperors was imitated by a number of smaller powers in the seventh century AD. But coins of precious metal (gold and silver) became fewer in the early medieval times than those in the preceding centuries. Minting of quality coins was limited to a handful number of places in north India; it is after AD 1000 that the issuance of precious coinage once again revived. Numismatic sources thus offer lesser data than that furnished by early historical coins. This itself has been interpreted by some scholars as a prime indication of dwindling commerce, especially foreign trade of India during the 600-1000 period. The evidence of coins found in some parts of India during the early medieval times will be discussed in the relevant section.

14.3 TRADE, MARKET PLACES AND URBAN CENTRES AD 300-650

India's thriving commerce with the Roman world seems to have declined after c. AD 250; there was perhaps a lesser demand for Indian products in the West and the volume of trade seems to have declined. The fall of the Kushana empire around c. AD 262 could have also contributed to the lesser volume of external trade of north India during the period. These shifts in the trade scenario, however, should not imply any major crisis in the commercial transactions within India and in north India.

14.3.1 Merchants

Thus the famous lexicographer, Amarasimha explains trade as *kraya-vikraya* (purchase and sale of commodities). As before, *vanik* (trader in general), *sresthi* (very rich merchant, possibly banker or money merchant), and *sarthavaha* (leader of the caravan traders) continue to be active in this period. Following the strict *varna* code they could be assigned the status of *vaisyas*. But trading activities on some occasions transgressed the strict *varna* norms. Thus two merchant brothers, Bhrikutivarma and Achalavarma appear in an inscription of AD 466 (of the time of Skandagupta) as pious donors (of cash) to a Sun temple at Indrapura (modern Indore, Bulandshahr district, Uttar Pradesh); they were of *kshatriya* origin and hence described as *kshatriya-vanik*. Such violation of strict *varna* code neither brought them any disrepute, nor was their donation unacceptable to the shrine. Three such *vaniks*, Saktinaga, Kumaranaga and Skandanaga, patronized another sun temple in the present eastern part of Madhya Pradesh. They appear in the early sixth century not in the Ganga valley but in the ancient territory of Dahala (near Jabalpur) which was located in a forest tract (*atavirajya*). In two inscriptions of early sixth century from the same area figure a merchant (*vanik*) and a craftsman (*karu*). These instances speak of the active presence of merchants not merely in the Ganga Valley but also in the relatively isolated region of Central India. Following the profession of a merchant was so common that the hero of the famous drama *Mrichchhakatikam*, Charudatta, was a trader though born in a brahmana family (*vipra-sartha*; *vipra*= brahmana and *sartha* being an abbreviation of *sarthavaha*). The drama in fact describes that Charudatta's father and grandfather too were merchants. Though they were of brahmana origin they resided in the quarter of the city assigned to the merchants (*Sreshthi-chatvare*) *Sarthavahas* and *sresthis* figure consistently in five Gupta copper plates from Damodarpur (in northern part of Bangladesh), which was included in the

Pundravardhana *bhukti* (province) of the Gupta Empire. These copper plates are dated from c. AD 443-44 to AD 543-44 (i.e. a century). The actual term referred to in these inscriptions is *nagarasresthi*. *Nagara* stands for a city and *sresthi* the chief merchant; the term therefore is taken to mean the chief merchant of the city, possibly of the city of Kotivarsha (identified with the archaeological site of Bangarh, South Dinajpur district, West Bengal) from where the records were issued. The term *nagarasresthi* has also been explained as the chief banker or money merchant, as the *sresthi* was often a very rich merchant investing cash in different business. Along with the *nagarasresthi* appears the *sarthavaha* or the leader of the caravan merchants in the copper plates of the Gupta period from north Bengal. The significant point to note is that the *nagarasresthi* and the *sarthavaha* were members of the district level administrative board (*vishayadhisthana*), assisting the district officer (*vishayapati*). The district administrator was a distinct officer, appointed by the provincial governor (*uparika* or *uparika-maharaja*) of Pundravardhanabhukti, who in his turn was appointed by the reigning Gupta emperor himself. The *nagarasresthi* and the *sarthavaha*, on the other hand, were not salaried officers of the Gupta provincial government in north Bengal. They appear to have been inducted to the district board as representatives of their respective professional organisations. This would logically imply that in north Bengal there were not only important merchants but mercantile organizations or bodies too. Leaders of such merchants' bodies were important enough to be considered as members of a district board without being salaried staff of the state. The system, in vogue for at least a century, certainly speaks of the importance of merchants in the social and political set up of north Bengal in the fifth and sixth centuries AD.

The prominent role of merchants (in association with craftsmen) is however not merely confined to north Bengal. As many as 270 seals and/or sealings have been found from Vaisali (north Bihar) and assigned to the Gupta period. These seals belonged to professional bodies of merchants and artisans (*Sresthi-Sarthavaha-Kulika nigama*)/*prathama-kulika*, etc.) The term *nigama* denotes a professional organization and is synonymous with *sreni*. It is likely that at vaishali merchants, caravan traders and artisans had their respective professional organizations. Besides these, there was also another larger body as a federation of professional organizations (*Sresthi Sarthavaha-kulika-nigama*).

Epigraphic evidence therefore strongly undershine that merchants were organized in their respective *sreni* like bodies. The cooperative character (*Samuha*) of such bodies is particularly emphasised in the *Dharmasastras* of Brhaspati and Narada. According to Brahaspati, as and when a new member was inducted in a *sreni*, he had undergo a few processes: i) *Kosla* or a test to ascertain his moral character, ii) *Lekhakriya* written undertaking by the new member to abide by rules and regulation of the body, iii) *Madhyastha*: the required presence of a person who knew thoroughly the new member. The *Dharmastra* repeatedly emphasize on the compactness of the organisation. It was expect that each and every member of the *sreni* would ensure equal investment to the organization. If a member causes harm to the *sreni*, in spite of the objections levelled against him by other members, the accused member was to compensate any loss suffered by the *sreni*. A member violating the terms and conditions of the organization (*samvit vyatikrama*) had to face legal actions. The *Dharmasastra* also strongly uphold that the laws of the *sreni* were at par with the laws of the land. In other words, an accused member of the *sreni*, was to be tried according to the laws of the *sreni*.

Gupta Copper Plate Grant From Damodarpur

On the 15th (?)th day of Phalguna, in the regnal year While *parama-daivata*, *parama-bhattacharaka*, *maharajadhiraja* **Sri Budha-gupta** was (the ruler of the earth), and while in the *vishaya* of **Kotivarsha**, prospering under the government of *uparika-maharaja* **Jayadatta** in the *bhukti* of **Pundravardhana**, who was favoured by his Majesty, the *ayuktaka* **Sandaka (Gandaka?)**, appointed by him (Jayadatta), was administering the affairs of the town (*adhishthana*), in the company of (i.e. with the help of) *nagara-sreshthin* Ribhupala, the merchant Vasumittra, the chief *kulika* Varadatta, and the chief scribe Viprapala, whereas application was made by this *sreshthin* Ribhupala thus – “In **Donga-grama** in **Himavach-*chhikhara*** (lit. the summit of the Himalaya) 4 *kulyavapas of aprada* lands were formerly given by me to Kokamukha-svamin and 7 *kulyavapas* to Svetavaraha-svamin, in the hope of benefit to myself (and) for the sake of increasing religious merits; now in the neighbourhood of those cultivated lands I wish to build two temples and their two store-rooms for those supreme gods Kokamukha-svamin and Svetavaraha-svamin (and?) one *namalingam* (?). So it behoves you to give (me) *kulyavapas* with *vastu* (building-grounds) in accordance with the prevailing custom of sale.”

Rradhagovinda Basak, ‘The five Damodarpur Copper-Plate Inscriptions of the Gupta Period’, *Epigraphia Indica*, Vol. 15, 1982, New Delhi, Plate No. 4 (tr.), pp. 140-41.

14.3.2 Guilds

Professional organizations were known in the legal literature and also in inscriptions as *srenis*, often loosely translated as ‘guilds’. Such *srenis* in our sources are mostly organisations of craftsmen and service groups, but only occasionally of merchants. A particular body of merchants, named *vaniggrama*, prominently figures in three inscriptions from western India dated in the sixth century. The term *vaniggrama* does not denote a village or settlement of merchants, but a professional body of merchants (*grama* in the sense of a collection or collective body). A perusal of the mercantile organization *vaniggrama* will be in order here. In two inscriptions from Sanjeli (Gujarat), dated AD 503 and 506 the *vaniggrama* figures prominently. More elaborate information is available from the inscription of AD 503. This record enlists the names merchants converging at Vadrपाली. There is little doubt that the mercantile organisation in question consisted of both local (*vastavya*) and non-local traders, the latter coming from various places (*caturdisabhyagatakavaidesya*). Of the thirteen merchants explicitly mentioned in the record, some came from as far as Kanyakubja (modern Kanauj) and Ujjayini. The name of merchant, Gdusuyebhassam-from Ujjayini-is distinctly non-Indian. The traders met at the house (*grhavastuveti*) of merchant (*vanijaka*) Shashthi who was possibly a local merchant at Vadrपाली. The merchants’ group decided to pay voluntary cesses on certain commodities in favour of a Vishnu temple. It appears that three years later, in AD 506, Shashthi donated his own house (*svadiyagrihavastu*) to the same Vaishnava temple (*paramadevatabhagavatayatana*). The commodities handled by the members of *vaniggrama* at Vadrपाली were mostly bulk items of daily necessities. Interestingly, many of the cesses were levied in cash, more precisely in silver coins (*rupinikas*, *vimsopanikas*), although some items like, oil was levied in kind. The *vaniggrama* looms large in the third inscription from Gujarat, dated AD 592. This charter, issued by the Maitraka ruler Vishnushena at Lohatagrama in western Gujarat, records a number of privileges for the *vaniggrama* who by such concessions were expected to be settled down (*acharasthitipatra*) at Lohatagrama. All the seventy two clauses in

the inscription are related to the activities of the vaniggrama merchants. That these merchants undertook trips to land abroad, possibly by sea-going vessels (vahitras) is indicated in the record of AD 592. The inscription informs us about various types of indigenous modes of transportation, including ferry services, and different types of craft-products (e.g. bamboo-working, leather-working, and indigo production) which were levied cesses at fixed rates.

14.3.3 Market Places

Different terms appear in our sources to denote centres of exchanges. This implies the existence of different types of market places. Ordinary rural level centres of trade were called hatta. In an inscription of AD 507 from Comilla region, Bangladesh, figures a dosihatta or a centre for textile trade. The market place is mentioned also as vipani in Kalidasa's work. Kalidasa seems to have meant shops by the term apana. The shop selling intoxicating liquor is known as saundikapanam and the street leading to shops is mentioned as apanamarga. Classical Sanskrit literature is replete with accounts of highways flanked by prosperous shops (riddhapanam rajapatham).

14.3.4 Trade Routes

Merchants seem to have traversed well established routes of overland communications to reach different places in north India. North Indian plains, especially the Ganga basin and the Ganga delta, must have offered facilities of riverine communications. A perusal of the travels of two well known Chinese pilgrims, Fahsien in the early fifth century and Hsuan Tsang in the first half of the seventh century, demonstrates that greater parts of north India, stretching from the northwestern borderlands to the Bengal delta and Kamarupa in the Brahmaputra valley, were connected by traditional routes. Needless to add there were numerous difficulties of communications and hazards of unsafe routes on account of inhospitable areas and robbers. Their travel accounts nevertheless amply bear out north India maintained linkages with the Deccan through two corridors: one through eastern Madhya Pradesh and Orissa and the other through the Malwa region. The famous Dakshinapatha (Deccan) invasion of Samudragupta (c. 335-75) seems to have penetrated the eastern Deccan through the first route; it was through eastern and western Malwa that his son and successor Chandragupta II reached Gujarat to defeat the Saka rulers of western India in late fourth and early fifth centuries AD. King Chandra of the Mehrauli iron pillar inscription (palaeographically assignable to the Gupta times) is credited with reaching Bahlika (Balkh, present Mazar-i-Shariff, Afghanistan) by crossing the seven mouths of the river Indus. This may suggest linkages between the Indus delta and northeastern Afghanistan. Overland routes passing through the northwestern regions were particularly important for the supply of quality war-horses from Kamboja. Yavanas or merchants of West Asiatic origin, according to Kalidasa, brought fine horses through this route to north Indian plains (*asvavanikena yavanena*).

14.3.5 Long Distance Maritime Trade

Our information on long-distance maritime trade during the period under review is relatively less than that available for the previous centuries which witnessed vibrant commercial contacts between India and the Roman Empire, especially through the Red Sea network. One notes a gradual decline of trade with the Roman Empire and the western sector of the Indian Ocean at the turn of the fourth century AD. However,

coins of Byzantine emperors have been found from coin hoards from south India. Ports of Gujarat seem to have been important for trade in the Persian Gulf which provided the major communication with Iran under the Sassanid rulers. This will be evident from the late sixth century descriptions of the port of Barygaza in the Christian Topography by Cosmas Indicopleustes. The distribution of Red Ware from coastal Gujarat to the Kirman coast of south-western Iran strongly suggests maritime contacts of the north-western littorals with the Iranian sea-board. Overseas activities are more frequent in the Bay of Bengal which facilitated commercial and cultural contacts with South-east Asia. The Bengal delta played an important role as an outlet to the sea for the land-locked Ganga plains. In AD 414 Fa-hsien boarded from the famous port of Tamralipta a commercial vessel bound for Sri Lanka. The description of this voyage clearly shows that it was a high sea-voyage, distinct from a coastal journey, facilitated by the north-east monsoon wind system. From Sri Lanka the Chinese pilgrim proceeded to Java in south-east Asia and finally reached the Chinese coast. The seaborne contacts of the Bengal coast is best illustrated by the presence of a *mahanavika* (a master mariner), named Buddhagupta in Malay peninsula. This sixth century inscription from Malay peninsula mentions Buddhagupta as a resident of Raktamrittika (*Raktamrittikavasika*), usually located in the Murshidabad district, West Bengal. The Bengal delta with numerous rivers including the Ganga was particularly suitable for reaching the Bay of Bengal. That is why in two sixth century inscriptions from Bangladesh mention is made of a ship-building area (*navataksheni*) and of an officer looking after trade (*vyaparakarandya*). An area in central deltaic Bengal was named *Navyavakasika* (new channel or opening) which was associated with *praksamudra*. The term *praksamudra* either implies that the administrative area of *Navyavakasika* reached upto the sea or the eastern (*prak*) sea (*samudra*) was accessible from the deltaic zone through a new fluvial channel. The premier port in this area was undoubtedly Tamralipta, figuring prominently in Hsuan Tsang's travel account in Bengal. Hsuan Tsang also indicates the importance of San-mo-ta-ta or Samatata which maintained overseas contacts with six areas in mainland South-east Asia.

14.3.6 Coinage

A significant index of trade in north India during the three centuries comes from coins. The Imperial Guptas are celebrated in Indian history for minting excellent gold coinage for nearly two centuries. Superbly executed, the Gupta gold coins were known initially as dinaras and later as *suvarnas* in contemporary inscriptions. They were struck on a standard unit of weight (metrology) of 124 grains; in other words, the Guptas probably continued the metrology of the Kushana gold coins. It was during the reign of Kumaragupta (AD 414-54) that the first attempts at striking the Gupta gold coins on a heavier metallic standard was made. Some of the gold coins of Kumaragupta weighed 132 grains. The heavier *suvarna* weight standard of 144 grains for the Gupta gold coins was introduced during the reign of Skandagupta (AD 455-67). Though the Gupta gold coins begun to be struck on a heavier weight standard, the metallic purity of gold coins was far from being maintained, especially after AD 500. In fact, there is a distinct possibility that the *suvarna* standard gold coins of the later rulers of the imperial Gupta family had a debased gold content. This strongly suggests a period of economic difficulties within the empire. Long-distance trade could have been disturbed by the Huna inroads in north India during the reign of Skandagupta (c. AD 455-467) and also during the first quarter of the sixth century AD. Many rulers formerly vassals of the Guptas began to issue coins as marks of their overthrowing allegiance to the Guptas. They often imitated the weight standard and devices of the Gupta gold coinage; but these gold coins were

mostly debased gold currency, sometimes having as low as 37% gold contents. It is unlikely that these gold coins of *suvarna* weight standard (144 grains) had adequate intrinsic value and were hardly suitable for long-distance trade during the second half of the sixth century AD.

The silver coinage of the Guptas began with the conquest of Gujarat region from the Western Kshatrapa rulers in the early part of the fifth century AD. The Gupta silver coinage followed the weight standard of Kshatrapa silver coinage and was not based on the long-standing indigenous *karshapana* (silver coin) standard of 32 *ratis* or 57.6 grains. A copper plate of the fifth century from north Bengal clearly shows that the Gupta silver coin was known as *rupaka*. The ratio between the Gupta gold and silver coins was 1:16. These coinages in precious metals speak highly of the trade, including long-distance trade in north India, at least till AD 500 after which a slump in the long-distance overland trade in north India cannot entirely be ruled out.

14.3.7 Urban Centres

Urban centres as politico-administrative centres, trade centres and cultural centres figure in the literary texts of the period, especially in the celebrated works of Kalidasa. Sanskrit texts and inscriptions are replete with references to *puras* and *nagaras*. The famous lexicon, *Amarakosa*, cites the terms *pura*, *nagara* and *putabhedana* as interchangeable terms to denote urban centres. The term *putabhedana*, it has already been stated, means a type of trade centre. Its inclusion in terms to denote cities suggests that at least some major centres of trade assumed urban proportion. Another well known technical treatise, the *Kamasutra* of Vatsyayana has the city-bred man (*nagaraka*) at the centre of its focus. Images of vibrant city life are also available in four *bhanas* or monologue plays of the Gupta period. On the other hand, Fa-hsien and Hsuan Tsang give the impression that several famous and older cities of north India lost their erstwhile prosperity and glory and were experiencing decay. To this has been added the field archaeological information about urban centres of north India many of which showed signs of impoverishment. Cities like Sravasti, Mathura, Atranjikheda, Khairadih (in Uttar Pradesh), Rajagriha, Vaisali (in Bihar), and Champa were past their heydays. It is true that cities like Varanasi and Ujjaiyini continued to be important urban centres. There is also no major sign of decline in the urban standard at Mahasthangarh and Bangarh in north Bengal. But in general the archaeological material of the Gupta phase (AD 300-600) are not as rich as the Saka-Kushana-Satavahana phase (c. 200BC-AD 300) in terms of urban artefacts. A number of scholars have attributed the decline of urban centres in the Gupta period to the decrease in India's long-distance trade with the Roman Empire and to the adverse effects of the Huna raids on overland trade routes in north India. This perception of languishing trade and decaying urban centres during the Gupta and post-Gupta times has generated considerable scholarly controversy. The problem will be elaborately discussed in a subsequent section. (For details see our Course EHI-03, Block-1, Unit-2)

14.4 TRADE, MARKET PLACES AND URBAN CENTRES AD 650-1300

Studies of these six centuries and a half have in recent years generated significant debates among historians. The period in question began to attract the attention of historians since the mid-thirties of the twentieth century, though initially scholars showed a distinct preference for dynastic history. Politically, north India and the

whole of the subcontinent abounded in monarchical powers. But unlike the powers of the pre-600 AD none of the powers exercised paramount position over either north India, the Deccan and the far south. The political scene is featured by the prevalence of a number of regional powers of great strength and many local powers. Another notable character of the politico-administrative set up is the presence of numerous feudatories or *samantas* of various grades and ranking. The political scenario is much more complex than the previous centuries. In recent times scholars are more interested in explaining the processes of the emergence and consolidation of regional polities rather than presenting the narratives of dynastic successions. All these rulers issued numerous land grants which provide the main source of information not only for the political life but also for social, economic and cultural history.

14.4.1 Debates on Urban Decay-Arguments for Decline

As we have pointed out earlier, the land grants understandably contain extremely valuable data on early medieval rural society and economy. But the very nature and purpose of these grants leave little scope of recording activities of craftsmen and merchants in urban centres. One can hardly miss the immense proliferation of copper plate charters since AD 600 in the whole of the subcontinent, including north India. Information on the non-agrarian sector of the economy in such grants is relatively scarce. This is in sharp contrast to the donative records and administrative documents prior to AD 600 where merchants, craftsmen, various professional groups were prominently mentioned often in the context of the non-rural settlements. A number of scholars have argued that the change in the mode of documents and documentation is in fact an indicator of the changes in social and economic life. The huge number of land grants, according to them, implies a strong ruralisation of the economy after AD 600/650. In such changing material milieu the relevance of craftsmen, merchants and urban centres appear to have lessened. It has been argued that the decline in India's flourishing and brisk commerce with the Roman empire after the fourth century adversely affected India's commercial economy. The period from AD 600-1000 did not witness India's meaningful participation in long-distance trade, and as a result there was little urge to commodity crafts production and their exchange in an international network. It is implied therefore that India's long distance trade revived after AD 1000 mainly because of the growth in the trade with the expanding Arab commercial network. To the data from epigraphic materials has been added and supplemented information from literary texts, especially the *Puranas*. A close perusal of the major *Puranas*, which appear to have taken their present shape by around 4th/5th century AD, has led many scholars to conclude that the *Puranic* descriptions imply sharp changes in social, economic and political situations. These scholars perceive major crises in the socio-economic and political set up after fifth century. Attention has been drawn to *Puranic* descriptions of the impoverished conditions of merchants in the *Kaliyuga*, the worst of the ages in the traditional scheme of four ages in Indian thought. The merchants, according to the *Brihannaradiya Purana*, would be reduced to the position of servants (*karmopajivin*) and rice-husker (*tandulakar*) in the Kali age. Only a handful number of merchants are explicitly stated in inscriptions in north India during the period from AD 600 to AD 1000. Tamralipta, the premier port not only of Bengal, but also of the entire land-locked Ganga valley, died down in eighth century, mainly on account of the siltation of the river on which it stood. The last known epigraphic reference to Tamralipta is found in an eighth century inscription from the Hazaribagh region in Bihar. The port of Barbaricum in the delta of the river Indus did not enjoy any economic prominence in the early medieval times. The port of Daibul in the same region began to come to limelight as an international port after tenth century. Similarly, the premier port in the Gujarat, namely Barygaza or Broach, had been past its former glory.

The fading out of these three ports could have adversely affected the long-distance maritime trade of north India. All these have been taken to demonstrate the gradual decline of trade and merchants in the economic life of early medieval north India.

The above portrayal of dwindling trade in the early middle ages has been further driven home by the paucity of coins of precious metals. Three outstanding regional powers of early medieval times, namely the Palas and the Senas of Bengal and Bihar (c. AD 750-1200) and the Rashtrakutas of the Deccan (c. AD 754- 974) did not issue any coins. Another major power, the Gurjara-Pratiharas of Kanauj and western India, struck silver coins but of doubtful weight standard and metallic purity. Such coins would have been unsuitable as reliable metallic medium of exchange in long-distance trade because of their questionable intrinsic value which did not match their face value. A notable exception to this declining monetary situation is seen in the issue of quality coins by the Shahi rulers of the Punjab and northwestern India. It has been pointed out that the territory under the Shahi rulers of northwestern India had not yielded any copper plate. Thus some scholars would like to underline that money economy and landgrant economy were mutually incompatible.

In many copper plate grants from the Ganga valley and especially from Bengal, coin terms like *purana*, *dharana*, and *dramma*. occasionally occur. Though these coin terms were known, no actual specimen of such coin has been discovered from the realms of the Palas and the Senas. On the other hand large number of copper plates often mention *kapardakas* or *cowries*. The expression *kapardaka-purana* also figures in these copper plates. The latter term does not point to a particular type of coin, but refers to a *purana* or a silver coin in terms of its equivalence to *cowry*-shells. The traditional arithmetical tables of early medieval eastern India indicates that the ratio between a silver coin and *xt:cowry*-shells stood at 1:1280. In other words 1280 cowries were equivalent to one silver coin. The wide use of the expression *kapardaka-purana* in early medieval inscriptions, hitherto unknown before eighth century, may suggest that *cowry*-shells were the principal medium of exchange. These seem to have replaced the metallic medium of exchange which lost their relevance on account of their questionable intrinsic value. Excavations at Colgong near Bhagalpur in eastern Bihar have yielded large number of *cowries*, thereby providing the material proof of their regular circulation as a medium of exchange. It has been pointed out that *cowries* could have been only a poor and inadequate substitute for metallic money. The transportation of the huge bulk of *cowry*-shells would have created more problems than advantages; in other words, *cowry*-shells are viewed as unsuitable for long-distance commerce. These could be at the best useful for local level trade and were 'restrictive of long-distance trade'. Thus the widespread prevalence of *cowry*-shells as notional currency is interpreted as a further evidence of the decline of long-distance trade. The perception of a 'monetary anaemia' afflicting the erstwhile vibrant commercial economy is strongly present in many historical researches.

Dwindling trade and relative absence of metallic money were not conducive to the large scale production of commodities for exchange related purposes. The result was not only immense dependence on agriculture, but also of a self-sufficient village economy. All the needs of the villages are suggested to have been produced and available in villages which felt little urge for movements of commodities from outside. The relative lack of trade thus brought about self-sufficient villages which were enclosed and stagnant. The lack of coined money could have posed serious problems for rulers to pay salaries to their officers. Under such circumstances, the ruler had to take recourse to assigning land to his officers in lieu of cash. This would give rise to the practice of issuing secular land grants, in addition to grants of lands for religious persons and institutions. The assignment

of service or secular land grants further impoverished the royal exchequer and corroded the central authority. In the absence of trade and paucity of metallic medium of exchange there emerged in early medieval north India an essentially self-sufficient and enclosed village economy. The adverse effects of languishing commerce and 'monetary anaemia' were not thus limited to economic life, but paved the way for a decentralised polity and parcellised sovereignty. It is viewed by proponents of Indian feudalism that languishing commerce resulted in an acute shortage of metallic currency. This ushered in great difficulties of payment of royal functionaries in cash; the outcome of this situation was the practice of giving service-grants (like subsequent *jagir*) to high officers in lieu of cash. In course of time these powerful functionaries not only amassed enormous wealth from the areas assigned to them, but became locally very powerful. This would further undermine the authority of the ruler, the apex political authority. In other words, the ruler gradually suffered considerable loss of his economic and political prerogatives at the cost of these feudatories and vassals. The conditions in economy and polity resulted in the genesis and consolidation of feudalism in India in early medieval period.

As the economy, characterised as feudal, was steeped in ruralism and gave little scope of trade, it is supposed to have been hardly conducive to urban growth. In stark contrast to the wealth of archaeological data on urban centres of early historical period, excavated and explored information about early medieval cities is much poorer. Many of the former urban centres have yielded evidence of their decaying material milieu, haphazard layout and utilization of re-used bricks. These are interpreted as clear signs of deurbanisation over greater parts of the subcontinent, including north India, during AD 600-1000 phase. A Prakrit text mentions that urban centres turned into villages (*nayarani gamabhuayani hohinti*). It has been argued that decline in India's commerce played a crucial role in the urban decay. Urban areas, belonging to the non-agrarian sector of the economy, were linked up with trade centres, and many of urban centres were also major centres of trade and commerce. Analyses of the copper plates of the Palas, Senas and the Pratiharas may indicate lesser references to terms like *nagara* and *pura*. Copper plates are replete with references to *jayaskandhavaras* or victorious army camps. Such *jayaskandhavaras* began to act as politico-military headquarters. It has been inferred that urban centres as areas for exchange and crafts production gradually faded away and were replaced by military and political headquarters. Early medieval north India witnessed the rise of many centres of pilgrimage (*tirtha*) which as sacred centres sometime assumed urban proportions. The historians of Indian feudalism argue that as urban centres lost their primary relevance as trading zones, they became religious centres which would undermine their role as centres of production/manufacture of commodities and exchange. Thus there prevailed, like the monetary anaemia', an urban anaemia in early medieval times. Urban contraction resulted in rural expansion which strengthened the material milieu of the feudal economy of early medieval India. Trade, or more precisely the assumed absence of trade, plays a crucial role in the feudal social formation in early medieval north India. Three areas showed typical symptoms of a feudal economy: Bengal under the Palas and the Senas, the Gurjara-Pratihara kingdom in the the Ganga-Yamuna *doab*, and the Rashtrakuta domain in the Deccan.

14.4.2 Debates on Urban Decay-Arguments Against

The above portrayal of a declining commercial and urban economy in north India during the early middle ages, however, has not gone uncontested. The formulation of the feudal economy in early medieval India has also been critiqued. Many scholars have pointed out factual inaccuracies in the formulation of the feudal economy. Attempts have been made by using various sources, including epigraphic materials, to show that trade did not

alarming decline and that there was no major de-urbanisation over an extensive area. It is beyond any doubt that the practice of land grants, often issued with reference to lands lying in the uncultivated, unsettled forest or fallow tracts, paved the way for unprecedented rural expansion. But does the proliferation of agrarian settlements necessarily imply consolidation of self-sufficient and enclosed villages? Two essential and indispensable requirements of human life, namely salt and iron, were not available locally at each and every village. If these items were to be procured from non-local sources, then serious doubts can be raised about the perception of self-sufficiency and the enclosed nature of early medieval villages.

Presence of Market Places

In-depth studies of land grants reveal that market places were not entirely absent in these records, even in inscriptions of pre-1000 AD days. Inscriptions and textual sources speak of the presence of various types of market places, some of them hitherto unknown prior to AD 600. Thus the term *hatta* or *hattika* frequently occurs in the inscriptions of north India in the early middle ages. *Hatta/hattika* generally signifies a rural level small centre of exchange. The term survives in the modern word *hat*, widely known in Bengal and Bihar. Such rural market centres are periodic in nature in that transactions do not take place there everyday, but only once or twice per week on fixed days. In copper plates which are strongly oriented to the rural surroundings, village level market places like the *hatta* and the *hattika* figure frequently. They are also mentioned in the copper plates as important landmarks in the rural areas. Many such epigraphic descriptions of the *hatta* also speak of the availability of the drinking-water (*prapa*) and resting places (*arama*), feeding houses (*sattra*) close to the *hatta*. In some inscriptions of the Palas, the terms *hattavara* is encountered. It would probably denote a *hatta* more important or larger than an ordinary one. A case in point is probably Devapaladevahatta. It stood close to the famous monastery and university of Nalanda. The *hatta* being named after Devapala (c. AD 810-850), the famous Pala ruler, it is likely that it was larger and more prominent than a simple rural level market place. That there stood a *hatta* in the eastern part (*purvahatta*) of the well known urban market centre at Tattanandapura (Ahar, Bulandshahr district, Uttar Pradesh) is evidently clear from the inscriptions found from there (second half of the ninth century). This *hatta* was certainly not a rural level market centre, but was situated within a large urban trading area. The mention of a *hattamarga* or a street leading to a market place is found in another inscription from Tattanandapura. Thus the term *hatta* could mean a trade centre in an urban area, in addition to its more common connotation of a rural exchange centre. A similar *hatta* was established at the formerly deserted site of Rohinisakupaka in AD 861 by Kakkuka in Jodhpur area of Rajasthan; at this market centre were also settled merchants (*hatta mahajanscha sthapita*).

At early medieval Prthudaka (modern Pehoa, Karnal district, Haryana) took place in the ninth century a horse-fair (*ghotaka-yatra*). The relevant inscription also gives us names of horse-dealers who assembled at Prthudaka. The term *yatra* here stands for a fair which is once again periodic in nature. It is hardly expected that animal fairs would be conducted daily throughout the year. On the other hand it is logical to infer that such a fair would be organised at a fixed time in the year, particularly during some festive seasons. Though periodic in nature, a *yatra* is different from a *hatta* as transactions in the former would not take place once or twice a week, but only once a year. Such an annual fair for the transactions in woolly (?) animals took place in the ninth century Kaman in Rajasthan. The Kaman inscription calls it as *kambali-hatta*.

Details On Horse Fair- Pehwa Inscription

Om! During the increasing, auspicious and victorious reign of the feet of his majesty, the supreme sovereign, superior king of great kings (*and*) supreme lord, the illustrious Bhoja who mediates on the feet of his majesty, the supreme sovereign, superior king of great kings (*and*) supreme lord, the illustrious Ramabhadra, in the year two hundred exceeded by seventy-six, on the seventh (*lunar day*) of the bright half of the month of Vaisakha, (*in figures*) Samvat 276 Vaisakha sudi 7 – on this lunar day specified as above by the year, month and (*civil*) day (*mentioned*) met here in the famous town of Prithudaka at the horse-fair on the *Pisachichaturdasi* the (*following*) inhabitants of Chutavarshika, Bhatta Viruka's sons Vanda and Rajyavala and Valluka, likewise Ranuka's son Rajyasiha; the (*following*) inhabitants of Utpalika, Bhalluka's son Mangaka, Chinha's son Chonaraka; likewise the (*following*) inhabitants of Chikkariselavanapura, Dada's son Kalluka, his son Jayaraka, Vishnu's son Adityaraka, Rajjuka's sons Chinha and Rangaka, Kalluka's son Vamuka; the (*following*) inhabitants of Valadevapura (Baladevapura), Khambhata's son Hodhha, Mriganka's son Viddaka, Kesava's son Dhanuka, Khangaka's son Vamuka, Manikka's son Uehari; the (*following*) inhabitants of Sarankadika, Nara's sons Lohata (or Lahata) and Sankara, Valuka's son Isvaraditya; the (*following*) inhabitants of Siharudukkaka, Ullaka's son Vachchhaka, Jayadharaka's son Ranika, Sura's son Pragada; the (*following*) inhabitants of Traighataka, Dharata's son Chanda, Ekagoraka's son Savva, Devasarman's son Phampha, Vagguka's son Kammika; the (*following*) inhabitants of Ghamghaka, Lallika's son Svamiraka, Simghuka's son Si[ha], Damodara's son Pombha, Halluka's son Davvu,... Kasili, Mana's son Khajji; the (*following*) inhabitant of Asvala-Uhovaka, Usuha's son Vaddha. The foreman of the ...dealers, come from various countries, chief among whom are those mentioned above, grants to the sacred place of famous Prithudaka a charter to the following (*effect*): To the (*temple of the*) god built by the illustrious Guhaditya in famous Kanyakubja, and to (*the temple of*) the god built by Kadambaditya even there in the Gotirtha, and to the (*temple of the*) god riding on Garuda built by Bhuvaka, the son of the Nagara Bhatta Prabhakara on the bank of the Ganges in famous Bhojapura near famous Kanyakubja, and to the (*temple of the*) sacrificial boar built by the same Bhuvaka in famous Prithudaka near the Eastern Sarasvati, we have given on the sale of horses, mares, mules and other animals – in Prithudaka in the case of a purchase by the king as well as in the case of a purchase by the Thakuras, the provincials and so forth, and in Traighataka and other sacred places in the case of a purchase by the king alone – for the sake of spiritual merit two *dharmas* for each animal, as a perpetual endowment; and dividing that into twenty-four shares, we have assigned seven shares to the (*temple of the*) god built by the illustrious Guhaditya, and seven shares to the (*temple of the*) god built by Kadambaditya, and seven shares to (*the temple of*) him who rides on Garuda, and one share to the (*temple of the*) sacrificial boar built by Bhuvaka in Prithudaka, and one share to the temple priest of the latter, and one share to the sacred place of Prithudaka; moreover we have assigned out of the twelve shares into which the one *dharma* given for each horse by the purchasers of horses has been divided, [*six*] shares to (*the temple of*) the sacrificial boar built by Bhuvaka in Prithudaka near the Eastern Sarasvati and to the temple priest of the latter two shares, and to the sacred place in famous Prithudaka four shares. This [*should be agreed to*] by the sellers and buyers of horses, (*and*) the virtuous *Goshthikas* should thus manage on their own part and on behalf of others, according to the rule laid down above, as long as sun and moon exist. Moreover these shares should be divided [*by the Goshthikas*] according to [*the rule*] laid down above.

G. Buhler, "The Peheva Inscription from the Temple of Garibnath", *Epigraphia Indica*, Vol. I, pp. 188-190.

It is almost entirely from north Indian inscriptions that one comes across a new type of market place from the eighth-ninth centuries. This is *mandapika*, literally meaning a covered area. The term in question can easily be equated with *mandis* which abounds in modern times in the Ganga-Yamuna doab, upper Ganga valley and western India. These *mandis* are larger than rural level *hats*, but smaller than markets in large urban areas. One of the earliest references to a *mandi* is seen in the Baijnath *Prasasti* (8th/9th century) in the Kangra region in Himachal Pradesh. At Kiragrama (modern Kangra) there was a *mandapika* where three merchants belonging to a family of merchants donated a cash

of 6 *drammas* (silver coins) out of the daily collection at the *mandapika* in favour of a temple at Baijnath. At Siyadoni (modern Siron) stood another large *mandapika* where the presence of merchants (including salt dealers) and various professional groups is unmistakable from the inscriptions. Inscriptions also suggest that there was a marked concentration of *mandapikas* in Rajasthan and Gujarat from the middle of the tenth century onwards, and especially after AD 1000. The *mandapika* at Naddula (modern Nadole) demands our special attention. Inscriptions from Nadol show that Naddula was initially a village, in fact one village in a cluster of twelve villages (*dvadasagramiya Naddulagrama*). Naddula subsequently emerged as a *mandapika* where considerable trade took place mainly in grains and other agricultural products. Naddula then began to be called a *nagara* or city and ultimately became the political centre of the Chahamanas of Nadole. It appears that Naddula was located almost at the centre of the cluster of twelve villages or was more or less equidistant from those villages. This immensely helped Naddula function as a nodal point where surplus agricultural products from surrounding villages were brought. This paved the way for the establishment of a *mandapika* at Naddula. These factors were instrumental in the remarkable transformation of Naddula from a village to an urban centre and finally to an apex political centre of local power in early medieval Rajasthan. That these *mandapikas* were well connected by trade routes and available transport systems is demonstrated by epigraphic records. Thus in AD 1114 commodities were brought to the *mandapika* at Mangalapura (mod. Mangrol, Gujarat) by oxen (*vrsa*), asses (*gardabha*), and camels (*ushtra*). *Mandapikas* were appearing also in the Kalachuri kingdom in Dabhala (eastern part of Madhya Pradesh). Such a *mandapika* was situated at Bilhari and another at Karitalai. The *mandapika* at Bilhari is mentioned in an inscription of AD 975. The commercial character of the *mandapika* is clearly driven home by the references to merchants assembling there. Many *mandapikas* were known as *sulkamandapikas*, i.e. tolls and customs were levied both in cash and kind at the *mandapika*. The levy of tolls is a clear proof of the commercial transactions at the *mandapika*. The *mandapika* at Nadole was designated as *Srinaddula talapada sulkamandapika*. The *mandapika* in question was officially recognised as a toll-taking centre; moreover its location in *talapada* area (lands fully assessed for revenue) further underlines the strong possibilities of revenue-bearing aspects of the *mandapika*. No less significant is the impressive range of commodities which were brought to the *mandapika* for sale. Large varieties of agrarian products, including grains and green vegetables, salt, regularly appear among the list of items brought to the *mandapika*. Textiles and various types of spices are also mentioned in the list of leviable products. Interestingly enough, pepper (*marica*) was available at the *mandapika* at Bilhari in Madhya Pradesh; pepper is unlikely to have been a local product of this region. It was probably brought from far away Malabar, the area best known for pepper plantation. At Bilhari and also at the *mandapikas* of Sripatha and Vusavata (in Bayana, Rajasthan, AD 955) were sold much costlier items like the horse. The elephant, another precious animal meant for an elite clientele, figures in the list of dutiable items at the *mandapika* at Bilhari. The *mandapikas* thus witnessed transactions in grains, many daily necessity commodities (probably as bulk items), and costlier items like spices and animals like horses and elephants. Some of the *mandapikas*, for instance those at Siyadoni and Bilhari, were designated as *pattanamandapika*. The term may suggest either a *mandapika* in an urban area or a *mandapika* which had assumed an urban proportion. The *Lekhapaddhati*, an early medieval text from Gujarat, uses the term *mahamandapika*. The use of the prefix *maha* clearly demonstrates that at least some *mandapikas* became much larger than their counterparts. These *mandapikas* seem to have maintained crucial trading linkages both with their respective rural hinterland and also with larger urban areas.

Inscription At Siyadoni

1. [Lines 1-4]: Samvat 960, Sravana (*in words and figures*). The whole town gave a field measuring 200 by 225 *hastas* to Sri-Narayana-bhattacharaka, set up by the merchant Chanduka, the son of Sangata, in the southern part of the town.
2. [4-7]: Samvat 964, Margasira va.di. 3 (*in words and figures*). The *Mahasamantadhipati* Undabhata assigned an endowment, securing the daily payment of a quarter of a *panchiyakadramma* and of one *yuga* (?) Sri-Vishnu-bhattacharaka, set up by Chanduka.
3. [7-8]: The same date. The merchants Chanduka, Savasa, and Mahapa, sons of Sangata, gave an *avasika* (or residence) comprising four houses to Sri-Vishnu-bhattacharaka, set up by Chanduka, the son of Sangata.
4. [8-10]: Samvat 965, Asvina su.di. 1 (*in words and figures*). The merchant Nagka, son of Chandu, made an endowment acquired of certain potters, to the effect that the distillers of spirituous liquor, on every cask of liquor, were to give liquor worth half a *vigrahapaladramma* (?) to the god (Vishnu).
5. [10]: The merchant Nagaka, son of Chandu, assigned (an endowment securing) the daily payment by certain sugar-boilers of a *varahakayavimsopaka* (?).
6. [11-13]: Samvat 967, Phalgunava.di. 15 (*in words and figures*). The merchant Vasudeva gave (an *avasika* ?) in the Dosihatta to Sri-Vishnu-bhattacharaka, set up by Vasudeva near (?) the Sri-Vishnu-bhattacharaka set up by Chanduka; and a house of his own, to the (same) god, (for the worship of the sacred fire).
7. [13-15]: The merchant Chanduka gave a *vithi* (or shop) in the Prasannahatta; and the same Chanduka, son of Sangata, gave four hereditary *vithis* of his own to Sri-Vishnu-bhattacharaka.
8. [15-16]: The seller of betel Kesava, son of Vatesvara, gave a hereditary *vithi* of his own in the Chaturhatta to Sri-Vishnu-bhattacharaka, set up by Chandu.
9. [16-17]: The merchant Nagaka, son of Chandu, gave two *vithis*, acquired in the Dosihatta, to Sri-Vishnu-bhattacharaka.
10. [17-18]: The merchant Siluka, son of Mahapa, gave a *vithi* acquired by him to Sri-Narayana-bhattacharaka.
11. [18-20]: Samvat 969, Magha su.di. 5 (*in words and figures*). The merchant Nagaka, son of Chandu, gave a capital of 1,350 *srimadadivarahadrammas*, invested with the distillers of spirituous liquor, who were to pay every month half a *vigrahatungiyadramma* on every cask of liquor (?) to Sri-Vishnu-bhattacharaka.
12. [20-21]: The merchant Nagaka, son of Chandu, gave an endowment realizing a payment of two *kapardakas* on certain *yugas* in the Dosihatta(?).
13. [21-22]: Nagaka gave a *vithi* acquired in the Dosihatta to Sri-Narayana-bhattacharaka.
14. [22-23]: Nagaka, son of Chandu, gave three *vithis* of his own to Sri-Narayana-bhattacharaka.
15. [23-24]: The merchant Bhaila, son of Govinda, gave a hereditary *vithi* (realizing one-third of a *vigrahapaliyadramma*?) to Sri-Vamanasvamideva.
16. [24-25]: Nagaka gave two houses to Tribhuvanasvamideva.
17. [25-26]: The seller of betel Dhamaka gave an *uvataka* bought by him to Sri-Umamahesvara.
18. [26-27]: Samvat 994, Vaisakha va.di. 5 samkrantau. The sellers of betel, Savara, son of Kesava, and Madhava, son of Ichchu, gave an endowment realizing the payment of a *vigrahadrammavisovaka* on every *palika* of leaves to the god (Vishnu), set up by Chanduka.
19. [27]: Savasa gave a *vithi* to Tribhuvanasvamideva.
20. [27-28]: Nagaka gave a *palika* of oil from every oil-mill of the oil-makers (?).
21. [28-29]: Samvat 1005, Magha su.di. 5 (*in words and figures*). The Mahajans in the Dosihatta assigned a monthly payment of one-third of a *dramma* to Sri-Bhailasvamideva, set up by the merchant Vikrama.
22. [29-30]: The Sutradhara Jejapa, Visiaka, Bhaluaka, and other stone-cutters, assigned a payment of one-third of a *vigrahapaladramma* on every *bharana* to Sri-Vishnu-bhattacharaka.
23. [30-31]: Samvat 1008, Magha su.di. 11 (*in figures only*). Kesava, Durgaditya, and other oil-makers, gave a *palika* of oil from every oil-mill to Sri-Chakrasvamideva, set up by Purandara in the temple of Vishnu erected by Chandu.
24. [31-33]: The merchants Mahaditya and Nohala, sons of Pappa, gave an *avasika*, comprising three houses, to Sri-Chakrasvamideva, set up by Pappaka, the son of Dedada.
25. [33-34]: Samvat 991, Magha su.di. 10 (*in figures*). Nagaka, son of Chandu, Dedaika, Vali, and Rudaka, sons of Jaju, and Chhitaraka, son of Sava, gave an *avasika* with the houses and *vithis* belonging to it to the god (Vishnu).
26. [34-36]: Dedaika, Valika and Rudaka, sons of Jaju, gave a *vithi* in the Chatushkahatta to Sri-Vishnu-bhattacharaka, set up by Chandu.
27. [36-39]: Samvat 1025, Magha va.di. 9 (*in figures*). The merchant Sridhara, son of Mahaditya, assigned a quarter of a *srimadadivarahadramma*, paid as the rent of a *vithi* (?) to Sri-Vishnu-bhattacharaka, set up by Mahaditya in the temple of Vishnu erected by Chandu.

K. Kielhorn, 'Siyadoni Stone Inscription', *Epigraphia Indica*, Vol. I, pp. 167-68.

Market places evidently had shops which were known as *vithis* and *apanas*. At Siyadoni some shops were described as hereditarily owned by some merchants (*pitripitamahoparjita*), some others were owned or built by merchants themselves (*svoparjita*). The mention of shops owned hereditarily by traders-possibly for three generations-will suggest the brisk commercial activities in such shopping establishments over a long period. These shops were evidently meant for retail trade.

Though *hatta/hattika* and *pura, nagara* figure in copper plates of the Pala-Sena period (c. AD 750-1200), *mandapikas* are absent in Bengal. Bengal, located in the Ganga delta and watered by many rivers, had several riverine ports facilitating inland riverine communications. Early medieval copper plates from Bengal often mention small boat stations (*nau-danda, nau-bandha*) as landmarks in rural spaces which have innumerable streams and rivulets (*srotasvini, ganginika*), canals, and channels. Of course the most important riverine route was along the Ganga or Bhagirathi on which plied many vessels (*sa khalu Bhagirathipathapravartmana-nauvata*). From the late seventh century onwards, the eastern part of the delta began to have riverine ports. One such port was Devaparvata (modern Mainamati-Lalmai, Bangladesh) which according to copper plates (from seventh to early tenth century) by the river Kshiroda on which plied many boats around the river-port of Devaparvata. Another copper plate of c. AD 971, found from Sabhar (close to Dhaka, the capital of Bangladesh) records an unusual place-name: Vangasagara-sambhandariyaka. Sabhar is located on the river Vamsi and functions as a small inland riverine port. The term *sambhandariyaka* may be taken to mean a place offering adequate or proper facilities (*samyak*) for storage of goods (*bhandara*). The very name Sabhar is suggested to have been derived from the word, *sambhara*, meaning a stock of commodities. There is a strong likelihood that at Sabhar or ancient Sambhara stood a *sambhandariyaka*. This warehousing facility at Sabhar may bring it close to *putabhedanas* of earlier times (see above).

Images of mercantile activities figure in various types of literary texts. The *knivalayamala* of *Girasenasuri* (c. 8th century) offers a lively account of an assembly of merchants (*vanikmeli*) who congregated at the well-known port town of Surparaka. Though the account is probably based on earlier memories, the interesting point is the exchange of experiences of merchants among themselves. The same port also appears in the *Jatakamala* of Aryasura (c. 7th/8th century). At Surparaka, according to this text, lived the Buddha in one of his previous births as a master mariner, conversant with the art of bringing in (*aharana*) and taking out (*apaharana*) ships. These leave an impression of continuity, and no cessation, of commerce, contrary to the notion that commerce was on the wane in the wake of feudal social formation.

The vast plains of north India were well frequented by several overland routes of communication, some of them gaining particular prominence in the early medieval times. Thus Chia-tan (785-805) informs us about a route which ran from Kamarupa to Magadha by touching Pundravardhana (north Bengal) and Kajanigla (near the Rajmahal Hills). A number of overland routes connected Kanyakubja with different parts of India, as Albiruni reported. One such route ran from Kanyakubja to Gangasagara (at the confluence of the Ganga with the sea) through Ayodhya, Varanasi, Pataliputra and Monghyr. Another route starting from Kanyakubja connected Prayaga (Allahabad), then through the Rewa region of Madhya Pradesh reached Orissa and from there extended as far south as Kanchipuram (near Chennai).

The Ganga-Yamuna *doab* was well connected with western India, according to Albiruni. Thus Mathura maintained an overland linkage with Ujjayini and Bayana (Rajasthan) and from both the places it was possible to reach the well known port of Somnath in Kathiawad.

In the twelfth and early thirteenth century copper plates of some Sena kings one notes a new kind of settlement, named *caturaka*. The term *caturaka* is not encountered in the Bengal inscriptions prior to twelfth century. It means literally a place which stood at the convergence of four roads. The *caturaka* was not a village, but it was also not a large urban market area. One such *caturaka* was known as Betadda-caturaka on the river Ganga (*purve Jahnavisima*). This is identified as Betore in Howrah district, West Bengal which came into considerable prominence in the sixteenth century as an inland riverine port connecting the Ganga with the famous port of Saptagram on the river Sarasvati. The beginning of the role of Betore as a riverine port may thus go back to the twelfth century. These inland port towns in the Ganga delta occupied a position intermediate between the rural hinterland and large urban centres and played a role more or less similar to that of the early medieval *mandapikas* of northern and western India.

The above sources may not speak of a slump in trade in north India. Indirect evidence of commerce can also be gleaned from the list of various revenue-collecting officers available in the copper plates. Thus the references to the *hattapati* (officer in charge of *hattas*), *saulkika* (officer in charge of collection of *sulka* or tolls and customs), *tarik* (officer in charge of collection of *tara* or ferry dues), *gamagamika* (officer looking after ingress and egress), *nauvata* and *arddha-nauvata* (senior and junior officers supervising movements of mercantile fleet) cannot but highlight movements of merchants and commodities in north India. This also implies the existence of some routes of communications, especially the overland communication in north India. In the first half of the ninth century Viradharadeva undertook a journey from Nagarhara (Jelalabad, Afghanistan) to Sambodhi (Bodhgaya, Bihar). The inscription which records this also describes Viradharadeva's delight at the sight of many of his country-men at Bodhgaya. This amply demonstrates the regularity and frequency of travel along this extensive overland communication system. This overland route must have been particularly significant for the import of quality war-horses from the north-western borderland of India into the Ganga valley. It is therefore not surprising that the Pala inscriptions tell us about the eagerness of the Pala kings to procure horses from the northern quarters. This is also corroborated by the *Tabaqat-i-Nasiri* of Minhaj-us Siraj who impresses upon us the regular arrival of Arab horse dealers in Nudia (the capital of the Sena king, Lakshmanasena, c. AD 1179-1199). Bengal's linkage with the north-eastern frontier areas and Kamarupa in particular are amply borne out by inscriptions, Minhaj's accounts and Marco Polo's travels (c. AD 1254-1324). Gujarat under the Chaulukya rulers experienced considerable improvements in overland connections. Anahilapura, the premier city of the Chaulukya kingdom (Patan), was well connected with Munjapura, Jhunjhuvada, Viramgam, Wadhwan, Sacla, Vanthali. On the other hand it was also linked up with Varanasi, Prayaga and Dhara (in central India). Important ports of Gujarat, like, Stambhapura or Cambay and Somnatha, maintained effective communications with inland towns, especially those in the Malwa plateau. Tamralipta, the premier port in the east till the eighth century, was visited by merchants from Ayodhya. In AD 1024 the Cola king Rajendra's daring raid from coastal Andhra to Vangala-desa in Bengal clearly indicates the overland linkages of Bengal with Orissa and from then onwards to Andhra. In the far north west, Multan in the Punjab rose to considerable prominence as a major centre of trade which was connected with the Ganga plains and also with

the northwestern borderland of the subcontinent. Multan looms large in the Arab accounts as a major trade centre.

Significant Presence in Maritime Long Distance Trade

The above data and arguments do not suggest a slump in trade in north India during the early middle ages. A careful perusal of available information may not also suggest a languishing trade of north India with areas abroad. For this purpose, the Arabic and Persian texts provide us with significant information. It is surprising that the proponents of Indian feudal formation have generally neglected these sources for the understanding of the long-distance trade of India. The rise and spread of Islam in West Asia, parts of Africa and in the Mediterranean region right up to Spain proved to be conducive to commercial movement. Islam is marked by a distinct orientation to trade and urbanism. The establishment and consolidation of the Abbasid Caliphate in the eighth century facilitated overland communication of West Asia with Central Asia, China and South Asia. But more spectacular developments are noticeable in the maritime commerce. The Abbasid Caliphate was instrumental in increasing the importance of the Persian Gulf (*Darya-i-Akhzar*) with Siraf as the premier port in the northern part of the Gulf. The foundation of the Fatimid Caliphate in Egypt (Misr) in AD 969 led to another major change in maritime commerce. It resulted in the rise of the Red Sea as the principal sea-lane of western Indian Ocean, facilitating thereby sea-borne trade with India and also the Mediterranean regions. The long-distance maritime trade in the Indian Ocean had its western termini either at Siraf or at Alexandria in Egypt and the eastern termini in maritime South-east Asia and also the coast of China. These maritime movements across the Indian Ocean, guided and shaped by the predictable alterations of the monsoon wind system, had to be involved with India which stood at the centre of the Indian Ocean. The very designation of this maritime space as *al bahr al Hind* (the Sea or Ocean of India) strongly underlines the familiarity of Arabic-speaking merchants and travellers with the Indian ports and harbours. Two segments of the bahr al Hind were well known to the Arab authors: bahr Larvi (Lar=Lata or southern Gujarat; the sea of Gujarat, i.e. the Arabian Sea) and bahr Harkal (the sea of Harikela; Harikela stood for the south-eastern part of Bangladesh; thus bahr Harkal denotes the Bay of Bengal). We may recall that in a copper plate of AD 971 the Bay of Bengal has already been mentioned as Vangasagara. Though ports are numerically more in the Deccan and the far south of India, a number of ports are known in north India too from the Arabic and Persian texts. It is true that these texts speak of greater volume and regularity of trade in the post-1000 AD phase, but there are clear indications of India's maritime trade even before AD 1000.

Accounts of the first Arab invasion of Sind in eighth century in the *Chachnama* and the accounts of an Arabic Historian al Baladhuri (d. c. 892 AD) demonstrate the importance of the port of Daybul, located in the Indus delta. Already by this time, Daybul was noted for its maritime contacts with Sri Lanka. The ruins of this early medieval port have been unearthed at the site of Banbhore in Pakistan. The prominence of Daybul continues in the accounts of Arab writers of the ninth to twelfth centuries. In the western sea-board of northern India it is, however, the Gujarat coast that stole the limelight. Though Broach, called Baruz in the Arab accounts, had faded away, a great port came into the commercial scene, viz. Sristambhapura/Sristambhatirtha or modern Cambay. It figures repeatedly in the Arabic accounts of Sulaiman (c. AD 851), ibn Khurdadbih (c. AD 882), al Masudi (AD 915), Buzurg ibn Shahriyar (AD 955), the anonymous author of the *Hudud al Alam* (AD 982), al

Biruni (AD 1034), al Idrisi (AD 1162), Chau-ju-kua (AD 1225), Marco Polo (AD 1295) and Ibn Battutta (early fourteenth century). It maintained contacts with both Persian Gulf ports like Siraf and Hormuz and Aden at the mouth of the Red Sea. Two early medieval Sanskrit texts, the *Vastupalamahatmyam* and the *Jagaducharita*, speak highly of this port as the centre of activities of two premier Gujarati merchants, Vastupala and Jagadu (twelfth/thirteenth century). Cambay, certainly the outstanding port, was, however, ably supported by several smaller ports which could have acted as feeder ports to the principal port of Cambay. These were Somanatha (figuring prominently in a Sanskrit-Arabic bilingual inscription of AD 1264), al Dyb (Diu, mentioned in a twelfth century Jewish trade letter) and Ghogha. The close contacts between Hormuz (in Sanskrit texts called Ardrapura) and Cambay, Somanatha and Ghogha are well documented in epigraphic and literary sources. Ghogha is specifically mentioned as a point of arrival for ships from Hormuz (*hurmujiwahana*). The port of Cambay was also well linked up with a number of ports in the Konkan coast like, Thana, Sanjan and Chaul all of which are mentioned in the Arabic accounts. These ports in Gujarat and the neighbouring north Konkan coast also appear in Indian textual sources and in inscriptions, generally labelled as *velakulas* or ports.

Attention now may be turned to the ports on the Bengal coast, the major outlet for the land-locked Ganga valley to the sea. It is true that nothing is heard about the active role of the great port of Tamralipta after the eighth century AD. One, however, cannot also miss that as early as in the first half of the seventh century Hsuan Tsang was impressed with the sea-borne connections of Samatata (eastern extreme of the Ganga delta) with certain areas in South-east Asia. This was happening when Tamralipta was at its glorious best. That Samatata-Harikela region was emerging as a major point of contact with maritime South-east Asia in late seventh century will be evident from the accounts of Itsing (AD 675-95 in India). The Arab accounts, from the mid-ninth century to early fourteenth century, speak very highly of a port in the kingdom of DHM (pronounced as Dhaum, i.e. Pala king Dharmapala), thereby locating it in the Bengal delta. This port is Samandar. The name is probably derived from the term *samudra* or sea. Ibn Battutta new it by the name Sudkawan. It was located at the mouth of a river and close to it was an island, which according to al Idrisi (AD 1162) was full of merchants of diverse countries. Idrisi also informs us that the port was located close to a creek or inlet (*khawar*) which facilitated ingress and egress of vessels. Ibn Battutta undertook a journey from Sudkawan far up in the north to Habang which is identified with Habiganj in Bangladesh. He undertook a riverine journey, sailing along the Blue river. This river is generally identified with the Meghna. The various literary accounts about Samandar/Sudkawan have led to its identification with a port located near modern Chittagong (Chattagram). In fact, the area had come to be known as *navachattamandala* in two vase inscriptions, respectively of the eighth and the tenth centuries. The decline and loss of Tamralipta seems to have been considerably compensated with the rise of a new port in the easternmost part of the delta. Samandar, according to the Arabic texts maintained commercial linkages with Serendib (Sri Lanka), Uranshin (Orissa), Ganja (Kanchipuram in Coromandel). Ibn Battutta, though belonging to a later period, speaks of the voyages between Sudkawan and the Maldives. We are not sure about Sudkawan's connections with South-east Asia. But it is well known from a copper plate from Nalanda that the king of Java, Balaputradeva, requested the reigning Pala king, Devapala (AD 802-37) to grant five villages to the Nalanda monastery; the request of the Javanese king was duly honoured. This is clear signal of the regular cultural contacts between Bengal and maritime South-east Asia. Such cultural

contacts appear to have been situated in frequent commercial contacts between the two areas. The significant point is that the Arab authors speak of the availability of fine quality textiles, Qamaruni aloe wood, rhinoceros horns and swords at the port of Samandar which was certainly the point of shipping of these items. Qamaruni aloe wood, standing second only to the aloe wood of Multan, was not a local product of Bengal or Samandar itself. It was brought from Kamarupa along the river to Samandar. The rhinoceros horn too appears to have reached Samandar from north-eastern parts of India. The sword was probably a manufactured item from Anga (eastern Bihar) which was famous for the making of this weapon. Textiles were in all probability local products of Bengal which earned sustained fame for the production of finest quality cotton textiles. The port of Samandar, therefore, commanded an extensive hinterland. As we have earlier pointed out, smaller and inland riverine ports in the Ganga delta (for instance, Devaparvata and Vangasagarasambhandariyaka) are likely to have provided crucial linkages between the premier port in the Bengal delta and the interior. There is little to dispute the brisk long-distance maritime trade in early medieval Bengal. It is difficult to subscribe to the perception of a languishing long-distance trade in early medieval Bengal.

Existence of Strong Merchant Community

Our sources also underline the diversities of merchants. While older terms like *vanik*, *sarthavaha* and *sresthi* continued, there appeared new types of merchants. A tenth century inscription from western India speaks of *sresthi-sartha*, who was possibly a money merchant as he was found to have minted silver coins. At the famous *mandapika* of Siyadoni we note the active presence of a salt-dealer (*nemakavani*), whose father too was a salt-dealer. He was prosperous enough to have provided considerable patronage to a number of temples in Siyadoni. Though individual merchants do not figure in large numbers in inscriptions of early medieval Bengal, a *vrddhasartha* appears in one donative record of late tenth century. The term *vrddhasartha* may literally denote an old merchant; it may also stand for a senior trader (cf. the term *vadduvyavahari* in sooth Indian records). Inscriptions from Gujarat and Rajasthan frequently refer to rich donations by merchants to religious and cultural centers. An insightful probe into early medieval inscriptions from Rajasthan highlights the growing importance of a number of local merchant lineages, e.g. Dhusara, Dharkata, Uesavala/ Oisavala (later day Oswals), Srimali and Pragvata. Merchant-donors often highlighted their genealogy at the time of making donations with a view to underlining that they belonged to a status-group and were not upstarts. A particular type of merchants began to figure in inscriptions from Gujarat after AD 1000. They are called *nauvittakas*, not encountered hitherto before. The term indicates a merchant who derived their wealth (*vitta*) from ships (*nau*); in other words, it denotes a ship-owning merchant. The term has a close correspondence to the Persian/Arabic word, *nakhuda*, i.e. *khuda* or lord of *nau* (ship). The two terms became frequent enough in coastal Gujarat to be abbreviated to *nau* and *nakhu* in inscriptions. Some merchant millionaire of Gujarat, like Vastupala and Jagadu, invested in shipping business, though they were not primarily ship-owners. There is little doubt that the *nauvittakas* and *nakhudas* were very wealthy.

Significant Flow of Metallic Money

The data and arguments presented above on merchants, market places, commodities, ports and routes of communication do not portray the image of a languishing trade, including long-distance commerce, in early medieval north India. It will be logical here to look into the problem of the relative lack of metallic currency in early medieval

India. The wide prevalence of cowry-shells in eastern India, especially Bengal, does not necessarily indicate that these were indicators of transactions within a restricted commercial circuit. Cowry shells are not locally available in Bengal. Arab accounts of 12th, 13th, 14th centuries and the descriptions of Ma huan (early sixteenth century) amply demonstrate that cowry shells reached Bengal from far away Maldives. These were brought in shiploads from the Maldives to Bengal which exported rice to Maldives. Cowry shells cannot be therefore restrictive of long-distance trade, as these were well integrated into the overseas trade in the Indian Ocean. ne: Cowry shells were shipped as bulk items and functioned as small exchange and ballast in the Indian Ocean maritime economy.

While the Palas and the Senas of Bengal are not known to have struck coins, this does not, however, prove the non-minting coins in Bengal. Sustained researches for the last three decades very effectively demonstrate that in the south-easternmost parts of Bengal (the Samatata-Harikela zone) were continuously issued excellent silver coinages from eighth to the thirteenth centuries. This demands a close scrutiny. The last gold coinage of ancient Bengal cannot be pushed beyond late seventh century. These were imitations of Gupta gold coins of *suvarna* standard, but heavily debased. However, from the eighth century onwards began to be struck high quality silver coins, generally weighing 8 grams. The obverse of these pieces has the figure of a recumbent bull and the legend Harikela; the reverse has a tripartite symbol. No name of the issuing political authority is seen on these coins, which carry the name of the region only. We have already pointed out that Harikela denoted the Noakhali-Chittagong area of Bangladesh, to the east of the river Meghna. The importance of Harikela as a zone of commerce has already been underlined. These coins have some affinities to the similar silver pieces issued by the Chandra rulers of contiguous Arakan. Palaeographical analysis of the script of the legend Harikela suggests that these inscribed coins belonged to the eighth century. More or less at the same time also appeared similar silver coins with the legend Pattikera inscribed on the obverse side. Pattikera, like Harikela, refers to a locality, corresponding to Paitkara, Comilla district, Bangladesh. The silver pieces of Pattikera were influenced by the minting tradition of the Harikela silver coinage. Silver coins of high quality (with silver content as high as 90%) continued to be minted in Harikela after the eighth century, but with some significant changes. The later Harikela silver pieces became broader in flan and thinner. Legends and devices appeared only on one side, the reverse was left totally blank. The obverse shows the figure of the recumbent bull, the tripartite symbol and the legend Harikela. The legend Harikela, in the later silver pieces, has been palaeographically assigned to the period from ninth to twelfth/thirteenth centuries. The later Harikela silver pieces were therefore in circulation from the ninth to the twelfth/thirteenth centuries. The most significant change, however, is visible in their metrology. These pieces were struck on two different weight standards. The first weight standard ranged between 2.3800-3.3600 grams; the second type of weight standard ranged from 0.8392 to 1.9912 grams. Both the types were much lighter than the first series of Harikela coins which weighed around 8 grams. The lighter coins corresponded to the well known Indian *karshapana* standard (32 *ratis* or 57.6 grains) of 3.73 grams. These later Harikela silver pieces could very well correspond to the coin-terms like *purana*, *dramma*, *dharana*, repeatedly figuring in the Pala-Sena inscriptions. On the other hand, the later Harikela silver pieces have clear similarity with the reformed Arab *dirham* silver currency of post-tenth century. Excavations from Mainamati (Comilla district, Bangladesh) have yielded a gold coin of the last Abbasid Caliph, al Mustasim al Billah (AD 1247-1258; In 1258). The Harikela coins, being akin to *puranas* of the Pala-Sena records, could

also be easily exchanged with and converted into *cowry* shells. The monetary scenario in south-eastern Bengal fits in well with the information on brisk trade through the port of Samandar. The above statements negate the widely held perception that Bengal had little precious coinage in the early medieval times and therefore experienced a sharp slump in its trade. The above survey also demonstrates that issuance of landgrants and coins were not mutually incompatible in a given area in early medieval India.

It is significant that there are several early medieval coin hoards in northern India, especially in the Ganga-Yamuna doab area, which till early eleventh century was dominated by the Gurjara-Pratiharas. Recent analysis of coin hoards, mostly containing *dramma* pieces, 'demonstrates that the volume of coinage in circulation in North India c. AD 600-1000, was comparable to that of the Kusana, Sultanate and Mughal period, and clearly superior to that of the preceding Gupta and the succeeding Rajput periods'. No shortage of currency in the Gurjara-Pratihara kingdom (late eighth to late tenth century) is visible. Thus neither in eastern India, dominated by the Palas and Senas, nor in the Gurjara-Pratihara realm, there is valid empirical grounds to uphold the conclusion that early medieval north India experienced a 'monetary anaemia' and languishing trade in the early middle ages, especially c. AD 600-1000.

Growth of Towns

If it is difficult to substantiate any crisis in trade and commerce of the early medieval times and a sharp fall in the number of coins in circulation, it will be relevant to examine whether north India witnessed widespread urban decay. A major impediment to the study of urban centers of the post-Gupta times is the lack of archaeological materials. Little attention has so far been paid to explorations and excavations of early medieval sites, as the principal thrust is on the early historical urban centers. Hsuan Tsang's accounts point to the decaying conditions of cities like Vaisali, Pataliputra, Kusinagara, Sravasti and Kausambi. These cities connected by overland routes in the Himalayan foothills and the Nepalese *terai* probably experienced a decline. But this however does not suggest a general decline of all major urban centers. A few cities of early historical times did continue beyond AD 600, evident from available archaeological materials. Thus Ahichhatra (Bareilly district Uttar Pradesh), originating in the early historical times, offers an unbroken sequence of occupation right into the early medieval phase. No desertion of the site is noticeable at the Purana Qila site in Delhi which continued uninterrupted between the Kushana and the Turkish rule. Archeological remains of the post-Gupta phase are available from Atranjikheda, a leading urban center of early historical times. Similarly the excavations at Rajghat near Varanasi clearly show the continuity of occupation at this urban centre during AD 300-700 and 700-1200 phases. Remains of structures at Ahar have been dated to the period between ninth and twelfth centuries, implying thereby the existence of an urban centre. ed:

The regular mention of *pura*, *pattana* and *nagara* in inscriptions of early medieval times also point to the urban tradition. Some new urban centers also came up in north India in the early medieval period. Ten inscriptions, ranging in date between AD 867 and 904, speak of the burgeoning city of Tattanandapura. It was also known as a *pattana* which clearly distinguished it from rural settlements like a *grama* and a *palli*. Its well laid out character is evident from the references to its small or narrow lanes (*kurathya*), wide roads (*brihadrathya*) and *hattamarga* (roads leading to the market centre). The *pattana* also had *avaris* or shops and *grihas* or

residential structures. An *avari* or shop is clearly mentioned to have consisted of three burnt brick rooms. Burnt bricks were also used for the construction of *grihas* or dwelling houses. The impressive size of the urban centre of Tattanandapura (Ahar) is unmistakable as it covers an area of 3800 acres. At Siyadoni, already discussed in the context of *mandapikas*, one encounters *aparasaraka* (houses with a porch or vestibule), *avasanika* (dwellings) and *grihabhitti* (house site). That there were several *hattas* in Siyadoni has already been pointed out. Another town existed at Gwalior under the name Gopagiri or Gopadri. Inscriptions indicate the presence of important royal functionaries like the *kottapala* (chief of a fort) and *baladhikrita* (a military commander) at Gopadri where *sresthis* and *sarthavahas* also were active. At many of these new *pattanas* or *puris* one notes the active role of various craftsmen: oilmillers (*tailikas*), florists (*malakaras*), and distillers (*kallapala*). At these centers existed important shrines where converged merchants, administrators, craftsmen and religious personalities. Thus these centers often combined economic, political and cultural functions which rendered them with considerable complexities as urban areas. We have already pointed out how some of the *mandapikas* in north India assumed urban character. The transformation of Naddula from a village to a *nagara* and then finally as the political centre of the local Chahamanas rulers has already been discussed. Trade seems to have played an important role in the making of Naddula as an urban centre. In eastern India, the early historical city of Pundranagara, represented by the remains at Mahasthangarh, does not indicate any discontinuity in its urban traditions in the early middle ages. Moreover, a few new cities also came into existence in early medieval Bengal: for instance, Ramavati—named after Ramapala, identified with the site of Amati; the city of Lakhnauti, mentioned by Minhaj-us Siraj was situated in Gaur and established by and named after Lakshmanasena, the late twelfth century Sena king of Bengal. These data may not portray widespread de-urbanisation in north India, particularly during the AD 600-1000 phase.

Besides the empirical statements on early medieval urban centers another point requires serious consideration. The principal factor behind the assumed decay of cities appears to have been a slump in long-distance trade after AD 500. The historiography of Indian feudal formation also suggests that after AD 1000 there was an urban revival in north India. It is implicitly indicated that increasing Arab trade with India favoured the spurt in urbanism after AD 1000. In other words, the growth and decay of urban centers of early India, from this point of view, are explained in terms of external trade of India, in other words, in terms of some external stimuli. It is interesting to note that the genesis of early historical urbanism is sought in the availability of iron technology and the resultant agrarian surplus. In other words, commerce including external trade is not projected as the primary cause for the emergence and proliferation of urban centers in early historical times. But the decline of the same cities is explained in terms of the assumed slump in trade. If agrarian growth is considered conducive to city formation then there should be logically no hindrance to it in early medieval times also. There is an overall agreement among scholars that the early middle ages witnessed unprecedented agrarian expansion in India. This would facilitate the availability and procurement of the vital agrarian surplus which is a major pre-requisite for city formation in early India. Hemachandra, the famous Jaina author of late eleventh and early twelfth centuries, observed that the villages often resembled cities (*gramaschapurasannibha*). A typical case in point could have been in this context the village of Naddula in Rajasthan. Either some early medieval villages became large enough in area to have assumed an urban

appearance, or agrarian expansion paved the way for greater concentration of population in some villages which consequently underwent a change in their character. It has been rightly observed that many urban centers of early medieval times were strongly integrated to their respective local or regional roots. On the other hand cities of the early historical times grew mainly by following the pattern of cities of middle Ganga plains. Middle Ganga plains thus played the role of an epicentre to early historical urbanization. Early medieval cities had no such epicentre. This gave them a distinctive character; that is why cities of early medieval times are thought by some scholars to have belonged to the third phase of urbanization in India.

14.5 SUMMARY

The period heralds the decline of the Roman (c.A.D. 250) and the Kushana empires (c. AD 262) effecting India's flourishing long distance trade. However, the merchant communities continued to be active during this period and the guilds flourished. The references to the *sarthvaha* and *nagarsresthis* appear frequently in the inscriptions. The evidences are also replete with information on markets. Seaborne contacts with Malaya Peninsula and South China Sea continued unabated. The minting of the finest gold and silver coinage during the Gupta period is also the indicator of flourishing economy of the period. The period also saw continued urban growth.

There is a long drawn debate among the scholars whether there was urban decay or there existed considerable growth during the Gupta and the post Gupta periods. Those favouring the theory of urban decay argue that on account of the decline of trade with the Roman empire, and the Huna inroads adversely affected the trading activities in India. The period saw sharp decline of the growth of urban centres; trade also declined; there was also near absence of metallic money (gold and silver) instead there increased the usage of cowrie shells indicating the decline of long distance trade for cowries could only largely be used for smaller transactions. Thus they emphasized that there was an emphatic decline in the long distance trade. Instead land grants increased manifold, decrease in trading activities gave way to self-sufficient village economy that ultimately created the conditions for the rise of feudalism in India.

However, those who contradict the argument they insist that the picture presented was too gloomy. They emphasize that neither the market places disappear altogether nor does there was a slump in trade in North-India. Rather rise of the Islam paved the way for brisk commercial activities in the region. Bengal continued to enjoy superiority in trade and commerce. References to *vanik*, *sarthavaha* and *shresthi* continued. The argument that there was a distinct decline in the metallic money, however, does not indicate the decline in trading activities for the cowries that were used for trading in Bengal in large number were itself not the product of Bengal rather brought to Bengal from as far as Maldives. Harikela continued to enjoy status of high zone of commercial activities during this period. We get good amount of high quality silver coins struck in this area. Even the coin-hoards dominated by Gujara-Pratiharas demonstrate the large volume of coin circulation in North India. To add to this growth of urban centers also continued unabated. There is no doubt that the old centers showed signs of decline but there emerged many new instead. The period also experienced the 'unprecedented agrarian expansion'.

14.6 GLOSSARY

Abbasid Caliphate

In AD 750, the Umayyad Caliphs were replaced by the Abbasid. In AD 762 they moved the capital from Damascus to in Syria to the New City of Baghdad in Iraq. The Abbasid ruled all over western Asia and North Africa from AD 750 until about 1000, when they began to weaken. At first North Africa broke away and formed the independent kingdom under the Fatimids. In AD 1258 the Abbasid dynasty ended.

Al Babelhun Arakan

Arakan is surrounded by India in the North, Burma in the East and Bangladesh in the West. The mountain range called Arakan Roma (Rakhaing Roma) acts as a barrier against inter-communication between the people of Burma and Arakan. It is bounded on the southwest by the Bay of Bengal. Arakan is presently under the Union of Burma.

Fatimid Caliphate

The Fatimids ruled over North Africa, Egypt and Palestine from the 10th to 12th Century A.D. The Fatimids claimed to be descendants of Fatima, the daughter of Muhammad, and wife of Ali, the fourth Caliph and first Shia Imam. The ultimate goal of the Fatimids was to replace the Abbasid Caliphate of Baghdad with their own when Caliph Ubayd Allah proclaimed himself Caliph at Cairo in 909 in opposition to the Sunni Caliph of Baghdad. They established a new sea route to Asia via Red Sea, instead of the earlier more frequented route via Persian Gulf.

Gurjara-Pratihara

The Dynasty was founded by Nagabhata I in the 8th century. The kingdom reached at its peak under king Bhoja (836-90) and Mahendrapala (890-910). It had its capital at Kanauj. The dynasty was weakened by repeated attacks of the Rashtrakutas in the 10th century and its power completely broken when Mohamed Ghazni sacked Kanauj in 1018 A.D.

Huna

They were nomadic and pastoral people from Central Asia. They were Mongolian in appearance. They enjoyed military superiority due to their rapid horse power. The Huns appear in history in 3 c. BC when the Great Wall of China was erected to exclude them from China. The Hun kingdom was centered in modern Hungary. Attila (AD 434-453) was their most powerful king. Hun's rule extended

from the Rhine across the north of the Black Sea as far as the Caspian Sea. The Guptas also fell prey to the Huna inroads in AD 480. They overran the whole of North India. They succeeded for a brief period of 30 years to establish their kingdom in Malwa around AD 500 under the leadership of Toramana. His son and successor Mihircula conquered North India but soon driven into Kashmir by Yashodharman where he died in about AD 542.

Malay Peninsula

It is what is today Peninsular Malaysia and Ocean of adjacent islands of southeast Asia including the east coast of Sumatra, the coast of Borneo, and smaller islands that lie between these areas. It lies between the Andaman sea of the Indian Ocean and the strait of Malacca on the west and the Gulf of Thailand and the South China sea on the east. The northern part of the Peninsula forms a part of Thailand; the southern part constitutes west Malaysia, the Malayan part of Malaysia.

Red Ware

A type of a pottery red in colour but not painted. It is baked to red. It was more common in coastal Gujarat and Indus delta to south-west of Iraq.

Sasanid Empire (226-651 A.D.)

They established an empire roughly within the frontiers achieved by the Achaemenids, with the capital Ctesiphon. The dynasty was founded by the king Ardashir I who was the vessel of Parthian ruler. Shapur I (241-272) inflicted crushing defeats on Romas twice later he also attacked the Kushanas and occupied Peshawar, the capital of Kushanas. The last Sassanid ruler was Yazdgerd III (632-636). The Arabas took Ctesiphon and in 651, the last Sassanian king died as a fugitive.

Western Kshatrapa Rulers

A Saka ruling house ruled over Western India and Malwa.

14.7 EXERCISES

- 1) Analyse the role of inscriptions and coinage in assessing the development of trade and commerce during AD 300-1300.
- 2) In the light of Hsuan Tsang's account critically examine the commercial activities during AD 300-1300.
- 3) Discuss the debates among the historians over the issue of urban decay. In your opinion which argument stands out more convincing and why?

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UNIT 15 EXCHANGE NETWORKS, MERCHANT ORGANISATIONS AND URBANISATION: SOUTH INDIA

Structure

- 15.1 Introduction
- 15.2 Market Centres, Trade Networks and Itinerant Trade
- 15.3 Regional Developments
 - 15.3.1 Deccan-Karnataka
 - 15.3.2 The Konkan Coastal Trade and Voyages
 - 15.3.3 The Andhra Region
 - 15.3.4 Kerala
 - 15.3.5 The Tamil Region
- 15.4 The Trading Organisations of South India
- 15.5 Weavers, Textile Production and Trade in South India
- 15.6 Summary
- 15.7 Glossary
- 15.8 Exercises
- 15.9 Suggested Readings

15.1 INTRODUCTION

The early medieval economy of south India was predominantly agrarian, with an initial phase of agrarian expansion (6th- 9th centuries AD) It has been suggested that this was brought about by the practice of land grants, in which the *Brahmadeya* and the temple as the two major forces of integration, were the foci of rural organisation (see Unit 13 of the present Block). At the same time, the need for exchange points and increase in commercial activities led to some of the *Brahmadeyas* and temple centres to expand their economic role thereby incorporating trade, craft and commercial activities and creating urban space for all such newly emerging economic groups. Political and/or administrative centres were also the foci of urban activities and attracted heterogeneous population, both as consumers of commercial goods and as users of money, i.e. coins which were royal issues and also possibly the currency of the merchant guilds, although the latter is not clearly or directly attested to in inscriptional records. This was the second urbanisation for the south Indian regions.

The phase of urbanisation with which we are concerned here was of a different nature, and was *sui generis*, consequent upon the development of an agrarian order (See Unit 13 of the present Block) developing between the 6th to the 9th centuries AD, i.e. the first phase of the early medieval period. This process, which was spread over the whole peninsula, was, however, not uniform in all the south Indian regions. The Deccan i.e. Karnataka and the Andhra regions differed considerably in the nature of agrarian organisation, although the land grant system was a widespread institutional means for the extension of agriculture and agrarian organisation. These

regions do not have continuous plains except in the delta regions of the Krishna and Godavari and in some pockets of the interior river valleys. Agricultural activities were more intensive in the delta regions, while large parts of the plateau and hilly areas remained predominantly pastoral and/or agro-pastoral and dependent on hunting activities.

The early medieval urbanisation in the Tamil region was a re-urbanisation brought about by agrarian expansion and organisation of peasant micro-regions like the *nadu*, with the emergence of the *nagaram* or market for the peasant region. It manifested itself in a new set of urban centres between the 8th and 12th centuries, representing an intelligible sequence of change, first by providing an agrarian base and large surpluses to be channelled into trade. The proliferation of such market centres together with the movement of larger trade organisations like the Ayyavole led to the emergence of urban centres and inter regional trade networks and communication (for details see our Course EHI 03, Block 1 Unit 4). There are significant variations in the nature, category and hierarchy of urban centres, depending upon ecological and cultural differences. Regional studies of urban centres are, therefore, essential for providing correct overall perspectives. Such studies are available only for a few regions like Rajasthan and Central India in the north and the Tamil region in south India. For Karnataka and Andhra, such studies are in their initial stages. For instance it is not yet clear as to whether agrarian or peasant regions like the *nadu* of the Tamil country evolved systematically in these regions and whether they initiated trade centres like the *nakhara* or *nagaram* in the early medieval times.

15.2 MARKET CENTRES, TRADE NETWORKS AND ITINERANT TRADE

Early medieval urbanisation shows a phenomenal increase and proliferation of urban centres of relatively modest dimensions. These are the market centres, trade centres (fairs—*Santa/Santai*) which were primarily nodal points of the exchange network. The range of interaction of such centres varied from small agrarian hinterlands to regional commercial hinterlands and to inter-regional contexts and contexts beyond the borders of India. However, by and large the early medieval urban centres were far more rooted in their regional contexts than the early historical urban centres.

The need for marketing facilities and development of local exchange brought into existence market centres, which were points of exchange for a specific region or small agrarian hinterlands. This is best illustrated by the *nagaram* of South India, substantial evidence of which comes from Tamil Nadu and to a limited extent from Karnataka (*nakhara*) and Andhra region (*nagaramu*). It served as the market for the *nadu* (K.R.Hall, 1980) or *kurram*, a peasant region of Tamil Nadu. Some of them emerged due to the exchange needs of the *nadu*. A fairly large number of such centres were founded by ruling families or were established with royal sanction, as for example under the Cholas. They were named after the rulers, a feature common to all regions in south India, with the suffix *pura* or *pattana*. However not all such *nagarams* were commercially of equal significance. *Nagarams* located on important trade routes and at the points of intersection by itinerant traders developed into large towns, both in terms of their size and volume of trade and commerce. They were ultimately brought into a network of intra- regional and inter-regional trade as well as overseas trade through the itinerant merchant organisations and through royal ports and royal interests in and policy of fostering long distance trade. Such a development occurred more or less uniformly throughout peninsular India from the

10th century AD when South India was drawn into the wider South Asian trade, which was revived in the 10th century and in which all the countries of South Asia, China and the Arab countries came to be involved. Between the 10th and 12th centuries AD South Asian trade provided the impetus for the development of commodity production and exchange, growth of towns, both interior and coastal. The *nagarams* of the Tamil region linked the ports with political and administrative centres, which were consumer points and with the craft centres in the interior. The movement of the itinerant traders played a major role in this network.

Major craft centres which developed in response to inter-regional trade were textile and weaving centres in all the three culture regions of south India—Karnataka, Andhra and Tamil Nadu. Some of the craft and commercial centres of the early historic period survived till the early medieval period and were brought into the processes of re-urbanisation which linked them with the new socio-economic institutions of the period.

15.3 REGIONAL DEVELOPMENTS

Different levels of urban centres developed in South India. However, these varied from region to region in their function and importance as also their relationship to larger exchange networks.

15.3.1 Deccan-Karnataka

In Karnataka the *nagarams* served different functions as points of exchange in trading networks and as regular markets for agrarian/peasant regions. However, the uniform feature in all such *nagarams* (*nakharas*) is that they either had or acquired a basic agricultural hinterland (through grants to the local temples) for the non-producing urban/craft/trade groups living in such centres. Markets in these centres were controlled by traders headed by a chief merchant called *pattanasvami*, the lord of the town.

In Karnataka, the steady increase in towns from the 7th to the 12th centuries shows a proliferation of commercial centres with a concentration of such centres in north west Karnataka, Konkan coast and the commercial districts of Bijapur, Dharwar, Belgaum and Shimoga. In the trade with the west i.e., Arabia, Persian Gulf and beyond, the west coast of peninsular India played a consistently dominant role even from the early historical period. Several ports such as Thana in Maharashtra; Goa; and Bhatkal, Karwar, Honavar and Mangalore in Karnataka developed during the revival of long distance trade between the 10th and 12th centuries, with evidence of coastal shipping and ocean navigation. The use of money on a large scale in commercial transactions was generally on the increase throughout south India during this period, particularly in the Deccan and Andhra regions.

Epigraphy being the major source of information, most studies have relied entirely on inscriptions for categorising and locating the types of towns which emerged in various regions. In Karnataka, the terms used for towns of different types are *Rajadhani*, *nelevidu* and *pattana* or *nagara*. While *nelevidu* was usually the headquarters of a local/provincial ruler, *pattana* or *nagara* refer to commercial towns. Some indication of the nature of town planning and habitation is available for Venugrama or Velugrama, the present Belgaum, where separate quarters existed for foreign and local merchants. Belgaum was ancient Venugrama with early Jaina associations. It is said that Belgaum provided for 4000 “burghesses”, probably not

the medieval European type of burghesses, but for several villages of the region, which provided for the agricultural and trading requirements of this city. That such cities also had *geris* or quarters for various artisanal and trading communities is also attested to by the epigraphic records. Large urban centres like Belgaum had migrants from other regions, such as Tamil Nadu (Tigulas), Kerala and Lata or Gujarat, Bengal and even Kashmir and Ahichchhatra in Uttar Pradesh. Many of these towns e.g., Lokkigundi (80 Km from Badami) and Belur (34 km from Hassan) were also frequented by the Ayyavole (itinerant) merchants.

Transport and communication were facilitated through construction of roads in north west Karnataka, where Terdal (Bijapur district), Lokkigundi and Belgaum emerged as important trade centres. Highways and Trunk roads came up linking Karnataka, Andhra and Tamil Nadu and earlier trade routes survived well into early medieval times. On the northern and southern banks of the Kaveri, in its middle reaches (Kongu region) arose a number of exchange points between Karnataka and Tamil Nadu such as Talakkad (near Mysore) and Mudikondan (Thiruvavur district).

Wider trade networks also existed between Karnataka, Andhra and Tamil regions. The presence of Kannada, Tamil and Telugu merchants is well attested in several towns such as Belgaum (Karnataka), Peruru (Nalgonda district- Andhra Pradesh) and the coastal towns of Visakhapatnam and Ghantasala in Andhra. The Andhra coast concentrated on the southeast Asian trade with Motupalli, Visakhapatnam and Ghantasala acting as major outlets. Market towns of inter-regional importance are represented by places like Nellore, Draksharama, Tripurantakam and Anumakonda in Andhra Pradesh.

Guilds

The Merchant Guilds of medieval south India comprised many groups and the Karnataka inscriptions mention the *settiguttas*, *nanadesis*, *banajus*, *virabananju*, *mahanagara*, *ubhayanadesi*, *mummuridandas*, *tanda*, *nakhara*, *nadu settis*, *paradesigalu*, *sthanabanajigaru*, *muvattarum-bidina settiyaru*, *astadasapattanigaru*, *nadus*, *gavares*, *gandhigas*, *gatrigas*, *nagara mahajana*, *vaniga mahajana*, *samasta-desi*, *biradaru*, etc. It is not clear as to whether they were a regular part of the guilds or local groups, who were occasional participants in the itinerant trade which moved through the different regions of south India.

A fair number of references to guilds occur in Karnataka inscriptions such as the *sreni*, *kottali* (*gottali*), *samuha*, *samayengal*, *hittu* or *pittu*, and *okkalu* which appear to be agricultural guilds. The *Ugura* 300, *kuruba senigas*, *tambuliga*, *gale* 300, *billa* 300, (toddy drawers), *medaru*, *mottakara*, bamboo makers, *bojangas*, *aravattu okkalu* point to the existence of professional or occupational groups perhaps as organised craft groups within a settlement. However, larger intra-regional organisations of craftsmen also begin to appear in the inscriptional records such as the guilds of *telligas*, *gottali*, *jagati samayengal* or *pattasaligaru*, artisans, goldsmiths, carpenters, *chippiga gottali* (tailors), *jeda kottali* (Weavers), stone cutters, *kanchagara gottali*, *beruttambar*, *kammata* (mint), *gana okkalu* (oil press with hand or bullock), *gana mettuvaru* (treading oil press). It would hence be reasonable to infer that there was a gradual diversification of production activities and craft production was being recognised as economically significant and their groupings must have enabled the processes of manufacture and trade in which the merchant organisations seem to have promoted such specialisation and diversification.

The guilds acted through the *pattanasvamis* or *vaddavyavaharis*. The guilds seem to have crystallised as sub-castes. Among the main crafts mention may be made of oil mills, sugar cane, betel processing, salt manufacturing, bamboo working, making metal images of deities, musical instruments, lamps, vessels etc. related to temple and rituals. The textile industry seems to have been the most flourishing, the *maggadere* or loom tax being common in all parts of the Deccan, such as the Hassan, Kadur, Bangalore, Mysore, Shimoga, Chitradurga and Raichur districts. Innumerable varieties of cloth are known such as *patta* (silk), *sire* (long cloth – sometimes *sari*), cotton, *teresire*, *hodake*, *nulu* (cloth of cotton thread), *uttama ponbatte* (gold coloured silk cloth), *kuttida nulpatta dara patta*, *puttiya patte*, *sattigeya hanjara* and so on. The Spinning process is known from the detailed references to the wheel (*ratne*), spindle (*kadiru*) and lower planks (*adiya halige*). Perfumery and incense (*dhupa*) manufacture is mentioned in the *Manasollasa*, which also refers to leather work for seats (*asanas*), jewellery (*manigara*), gold smiths, and silver-smiths and bangle making. Carpentry, Pottery, Tailoring, Smithy and Dyeing were other occupational activities apart from the art of Sculpture and other Fine Arts.

Minting

Minting, especially of the die-struck coins, was made by the *kammatakaras*, while the *savukattukaras* trimmed the coins into uniform shape and size and weight in places like Sudi, Gobbur, Balligave Lakkundi, etc. No regular banking and credit were followed for money lending did not find much favour with people. Deposits were made usually with the temples and the interest was utilised for worship. Thus the temple's role in commercial activities was significant. Interest was invariably in kind, particularly paddy, although money interest was not unknown. Annual interest often accumulated as *toduvaddi* paid in the form of *pana*, *haga*, *visa*, or *bele* and the principal being in the form of *gadyana*, *pon* or *hon*.

The marketing services were provided by the merchants and vendors in weekly fairs held by the *pattanasvamis* and others as an act of *dharmā*. Among the shops the privileged ones were the *manyadangadi* and temple shops or *devarangadi*. Others like the *karadangadi*, *angadimane* or *malige* represent the wholesalers.

Commerce, inter-regional and intra-regional, and pilgrimage added to the proliferation of towns and trade centres and at the apex of the urban hierarchy stood the *Rajadhani pattanas* like Kalyani and Dvarasamudra. Arasiyakere and Balligave were commercial centres which also served as administrative centres. Notable among the inland towns were Paithan, Ter or Tagara, Kalyana, Nandgad, Valaipatna, Pandiyur, Kuduregundi (Hassan district). Vaijyanatipura, Puligere, Mudubidire and others.

Coastal Trade

Trans-oceanic contacts were on the increase and ports like Bhatkal, Basrur, Barakur, Karwar, Honavar, Kasargod, Kumbala, Mangalore, Sirur, Sadasivagad, Malpe, Ankola, Mirjan developed on the Konkan and Kanara coasts. Honavar was one of the major ports. There was regular coastal traffic and periodical long distance traffic for the unloading and collection of goods at the coastal towns brought into bigger ports like Honavar. Kasargod was of greater importance for Muslim merchants. Mangalore was the biggest town for Arab travellers.

Arab writers refer to articles of export such as rice, pepper, silk, coconut, bananas, teak, aloe, amber, bamboo, camphor, cardamom, cloves, mango, sulphur and myrobalan. Marco Polo lists the imports such as copper, brocades of gold, silk, and drugs. Horses, elephants, pearls, cloth, musk, and sandal from Gandhara, Turushka, Simhala, Chola, Magadha, and Maleyala were other important items of trade, if one were to take the inscriptions of the itinerant traders into consideration.

Commodities like teak, coconut, spices (pepper and ginger) and textiles are found in one of the most impressive lists in an inscription of AD 1204 from Belgaum, which witnessed a major convergence of many types of merchants in north Karnataka. Items of trade also included regular consumer goods like paddy, rice, black pepper, asafoetida, green ginger, turmeric, betel leaves, areca nuts, coconuts, palm leaves, grass, sugarcane, coarse sugar, plantains and myrobalan. It is not clear which of them were transported by coastal crafts. The coastal network for trade in both agrarian products and manufactured ones apart from luxuries was brisk and impressive.

15.3.2 The Konkan Coastal Trade and Voyages

Foreign trade received a setback especially after the decline of maritime trade in the early historical period. Conventional narratives refer to trade routes (overland and riverine), commercial centres, professional bodies of merchants but much less is known about coastal networks, which seem to be rarer. It was only after AD 1500 that the importance of the Indian ocean in Asian and Middle eastern trade seems to have been recognised. For example, the Konkan coast, former Aparanta i.e., the Maharashtra coast (North and South Konkan) and its importance is known to classical sources. However, the interlinkages between the ports of northern and southern Konkan are not clearly known in the early period. The term Konkana becomes more prominent only in the early medieval period. Kamkam in the Arabian texts is invariably equated with the kingdom of Balhara i.e., the Rashtrakutas. The distinction between north Konkan and Tulwan (Dabhole to Goa–Juwah Sindapur) was not known in the 4th and 5th centuries AD. From the Badami Chalukya period (6th-8th centuries AD) interest in controlling certain parts of this coast increased especially after the conquest of Lata (south coastal Gujrat) by the Chalukyas. Henceforth coastal linkages between the northern Konkan coast and the Gujarat-Kathiawad coasts developed and coastal voyages became regular.

The early medieval period witnessed the emergence of more and newer ports in the Konkan littorals than in the early historical period. A great number of ports on the Konkan coast appear from the 9th century AD which are mentioned in the Arabic and Persian sources. Kolhapur is known from the Jewish letters of merchants as an important business centre. A number of harbours from north to south are mentioned such as Samyana/Sindan (=Sanjan in Thana district), Srasthanaka (Thana), Cemuliya/Saimur (Chaul in Kolaba district), Nagapura (Nagav in Kolaba district), Balipattana (Kharepatan in Ratnagiri district) Gopakapattana/ Gove (Goa), Chandrapura/Sindapur (Chandore to the south of Goa). Sindapur is prominently referred to in the Arab sources. Gove of the Kadambas was an important port and capital.

Arab accounts such as those of Sulaiman and Ibn Khurdadbeh (9th century) give interesting facts about the trading network connecting Konkan and Malabar and with Cambay (Kanbaya), corroborated by the Persian geographical text *Hudud al Alam* (AD 982). Surparaka i.e. Sopara near Mumbai was also known to foreign accounts. The long coastal voyages from Konkan through Malabar to Srilanka

established links with the interior trading and craft centres. Hence the Silaharas, the most formidable power on the Maharashtra coast, tried to establish close control over the whole Konkan coast.

Till the 11th century AD the ports of north Konkan were more important, but from the 11th century the situation changed with the southern Konkan ports also becoming prominent, particularly Balipattana mentioned in the epigraphic records of the Silaharas (present Kharepatan in the Ratnagiri district). Coastal voyages between Balipattana and the area around Goa connected Chandrapura and Cemuliya (Chaul) to Balipattana. Balipattana was the point of convergence of vessels near Goa and those from the north of Balipattana. Tolls on vessels at Balipattana yielded considerable revenue. Exemptions were given to encourage commercial links with the two important harbours north and south. The development of coastal trade in the northern sector of the Konkan littorals, with Balipattana in a more prominent position, appears to have resulted because of the gradual spread of agrarian settlements, diversification of crops, proliferation of crafts and growth of commerce in Karnataka during early medieval times.

Sindapur, which had close connection with Goa, is known from the navigational manual of Arabian navigator Ahmed ibn Majid (the celebrated *muallim* of the 15th century). Under local Kadamba rulers Gopakapattana, Gopapura and Gove (Goa) emerged as the most important port. References to pilgrimages from Goa (by Kadamba rulers) to Kolhapur, Somanatha, on the Kathiawad coast (1038 and 1125) i.e. from south Konkan to the Kathiawad coast (Saurashtra) via Thana in the 11th century, to Arab Muslim merchants rescuing a Kadamba ruler from shipwreck and becoming even administrative heads in Goa point to its importance. The term *Nauvittaka* interchangeable with the Arab *nakhuda* (master of the ship) evidently refers to a ship owning merchant. A *mijigiti* (masjid) built by him was maintained by tolls at Goa from vessels from Gurjjara, Saurashtra, Lata, Konkan, etc.

Linkages between Manjrur, a leading port in the northern part of Malabar and Kathiawad and voyages through Konkan coast to Gujarat, are attested by the Cairo Geniza records of Jewish merchants, which prove the role of Jewish traders in the trade with Aden. Tinbu a ship owner (*nakhuda*) is known from a Jewish letter of AD 1145. Ships plying between Aden and India had to encounter piracy on the Konkan coast. Tinbu's shipping business spanned from Manjrur to Tana along the Konkan littorals. Early Indian merchants also participated in shipping enterprises but the data is meagre. The *Nakhuda* Mahruz Jacob brought a letter to his brother-in-law in AD 1145 from Manjrur, referring to the coastal voyage from Manjrur to Thana. Kanbaya (Cambay) also formed a significant part of this coastal network and linkages with Mangalore and other ports in the Malabar littorals. Reference also to Mulaybaar and to Kollam indicates that the voyages from Somanath in Kathiawad assumed considerable regularity from 11th century onwards.

The early medieval sources are silent about the types of vessels which were known to the *Periplus* such as *Trappaga* and *Kottyamba*, which correspond to the references in the Jain text *Angavijja* (4th century AD). *Trapyaka* and *Kottimba* were coastal crafts, which must have plied from Cemuliya and Chandrapura to Balipattana. The picture about the coastal crafts is hazy, textual and epigraphic references being meagre. Visual representations on *Viragals* or hero stones in the context of battles and in the caves in Borivli, near Bombay, show some varieties of crafts made of planks sewn together. They may also have been used in the battles between the Silaharas and Kadambas of the 12th century. Smaller boats carrying

soldiers and large ones carrying passengers and cargo are referred to in the Jewish letter. Epigraphic data is available on a community of ship owning merchants in early medieval Konkan. The *Mahamatya* was a high ranking officer, and under the Silaharas an officer called *Vasaida* was also a *nauvittaka* (The Arab sources refer to the *nakhuda*). They combined commercial and administrative roles.

The monetary scenario does not seem to correspond to the information on brisk trade due to the relative lack of metal pieces from mid-8th century to the end of the 10th century AD. While the Rashtrakutas had no definite dynastic coinage, the Arabic *drammas* must have been in use. The Silaharas issued the *gadhiya paisa* type i.e., silver coins. Gold coins appear from the 11th century (under the Kalachuris, Kadambas and Western Chalukyas). There seems to have been unhindered movement of merchants and merchandise along the coast despite risks and uncertainties. Unlike the spirit of adventure involved in long distance trade, the journeys along the coast were relatively more sedate and safer. There was continuity in this traffic, although shifts and alterations even within the overall sedate nature of commerce in the Konkan coast, led to the emergence of newer ports like Balipattana. Sanjan under the Rashtrakutas was a well known port in north Konkan. Linkages between the Malabar littorals, Konkan and Saurashtra were unbroken from the early historic to the early medieval and well into the early modern times.

15.3.3 The Andhra Region

Exchange networks developed in Andhra from the early historical times mainly due to the opening up of the peninsula to the north Indian trading circuits. Both inland and maritime trade, particularly long distance trade with the western and south east Asian regions stimulated the growth of commerce and urban activities. On the contrary the early medieval urban processes in Andhra were *sui generis* and were brought about by the agrarian expansion of the period comparable to other regions of south India. Craft production and development of towns and cities, including ports, were thus built into the general socio-economic transformations of the period. The demand for luxury goods in addition to regular consumption of daily requirements led to the development of industries such as metal industry. Mining for gold, iron, copper, brass and diamonds was done in several parts of the Deccan, while zinc and tin probably came from southeast Asia. Much of the information on the metal crafts comes from the 10th century onwards and more particularly during the Kakatiya period (11th-14th centuries AD). The Kakatiya inscriptions refer to the Pancalohala Beharamu, a community named after the metal trade. Apart from the royal families as the main promoters of these crafts, the temples were recipients of gifts of jewellery and ornaments for the deities. The 16th century texts such as Vallabharaya's *Kridabhiramamu* and Srinatha's *Palanativiracaritra* and the Draksharama temple inscriptions (AD 1144) mention the royal patrons and temples as the major consumers of such luxury items and give the names of the ornaments. Copper and bronze images were produced for the temples and temple *rathas* represent the best of the carpentry work of the times, *ratha* becoming an important processional chariot of the temple, especially from the post- Kakatiya period.

The second major industry of the Andhra region was the production of oil, gingelly being the most common among the oil seeds. Production of sugar and jaggery was also an important craft well attested in inscriptions. Later date epigraphic records confirm the development of these crafts and by the Vijayanagara period they attained significant proportions. Textile industry was, however, the foremost in medieval Andhra with its substantial black soil (e.g. Guntur district) cotton producing areas

occurring in the whole region. The best and delicate fabrics of Andhra were known to Marco Polo and other medieval travellers. Other manufactures included salt production, etc.

The artisan community of blacksmiths and metal workers known as the Pancanamuvuru lived in separate quarters and grants of land to these communities were common. They also participated in gift giving and construction of *mandapas* etc. in temples (e.g. the Edavalli, Guntur district inscription of AD 1257). Oju, a suffix to the names of artisans/ architects who built temples, was common even from the 7th century onwards. A later *prasasti* of the artisan community found in a 15th century inscription from Amaravati refers to the origin of the *Pancananamuvuru* from the legendary Visvakarma. The Panchalas of Karnataka (1372 AD) also traced their descent from Visvakarma, the celestial artisan who was well versed in the *Sastras* and *Puranas*. More elaborate *prasastis* occurring in the Vontimetta inscriptions describe them as the refuge of the whole world and as the lords of Vara Pemdota with their own banner (Garuda), musical instruments, golden palanquin, sword, fan, crown etc. The term Akkasale also refers to the artisanal community. Similar *prasastis* were adopted by the Telikis (an organisation of oil merchants in Andhra; the Lords of Bezwada – Oil Mongers and traders), the Penugonda Vaisyas (Lords of Penugonda – Penugonda was a centre of big traders and hence called Lords) and Balanja merchants.

The corporate activities of these communities are better known only from the inscriptions of the 14th-15th centuries (e.g., Alangudi inscription, Tanjore district refers to the Rathakaras, who are said to have belonged to the *anuloma* and *pratiloma* castes). They included goldsmiths, silversmiths, blacksmiths, carpenters, stoneworkers and painters. An *inavari* (tax on a community) levied on *rathakaras* of several *nadus* is known from several inscriptions. In Andhra, an undated inscription from Udayagiri records the remission of such taxes to the treasury of the temple (15th century or later?). Organised territorially from the 14th-15th centuries, the composite artisan community great influence over society. Even from the 13th century they have greater visibility in the Hoysala inscriptions of AD 1291 and 1342 from Bangalore district. Honours came to be conferred on them increasingly from the Vijayanagar period.

The Teliki Vevuru (1000 families) of Vijayavada was another organisation of importance and is prominently mentioned in inscriptions from AD 1071-1120 (i.e. from the period of Kulottunga I, the Chalukya-Chola king) and such texts as the *Manuvamsapurana*. They had played a significant role even from the period of the Eastern Calukyas of Vengi. Subsequently *Dharmasasanas* were issued in their favour by kings who were pleased with the community. The Teki plates of AD 1084 refer to the *Telukule settis* of different places and the honours conferred on them. Mythological accounts of their origin attempt to connect them with Ayodhya and locate their original habitation in the north. The Bapatla inscriptions of AD 1163 and 1164 record their gifts of gold for lamp to the Bhavanarayana temple underlining their corporate character as a *samaya*. The Nadendla and Bezwada inscriptions contain *prasastis* giving them a high status. They were also regarded as *Calukyarajyamulastambhayamanulu*, i.e. generals of the army.

The 11th-12th centuries represent a period of moderate long distance trade activities in Andhra. For this it is claimed that the political atmosphere was not conducive. But internal trade was prevalent on a limited scale. Merchants often acted as bankers, for example Chanda Bhima Poti *setti* acted as a banker to Velanati Kulottunga

Coda Gonkaraju (1157). Capitals of subordinate chiefs and chieftains such as Vengi, Gudimetta, Nadendla, Dharanikota and Nellore attracted merchants. Among the temples fostering trade were the five *aramas* (Bhimapura, Gudipudi, Palakonalu, Draksharama and Amaravati) as also Mallesvara at Bezwada and Mahasena at Chebrolu which were centres of pilgrimage. Pilgrimage centres included the more famous Simhachalam, Bapatla, Ghantasala Srisailam, Ahobalam and Tirupati. In the 11th-12th centuries towns grew around such temples. The Lords of Penugonda, Tamil merchants and merchant organisations in Andhra including the 500, Manigramam, Anjuvannam (Mallam inscription) were fairly active. However, a spectacular growth under the Kakatiya king Ganapatideva (1199-1261) opened a new epoch in the trade of Andhra by encouraging sea-borne trade and by renovating the port of Motupalli, Guntur district and by issuing an *abhaya sasana* for all foreign merchants. This led to freedom from oppressive taxation and from piracy. Fixed duties on articles of trade such as sandal, camphor, pearls, ivory, silk, thread, coral and spices enabled regular movement of goods and merchants. The means of communication were also improved. Marco Polo refers to this port as Mutfili. The Motupalli inscription (Guntur district) of AD 1244 records both the imports and exports of this town. (See page 117 of the present Unit for the extracts from Motupalli inscription)

The general prosperity of the Vaisya community from this period is reflected in the *Vaishya Purana*. Penugonda and 17 other towns constituted the original habitat of Vaishyas of 714 *gotras*, each with a *nakaram* with a *nakarasvami* at its head. Komatis, the traders, on whom stories abound in the *Vaishya Purana*, are an important group mentioned also in some inscriptions from Ghantasala.

Studies on the economy, society and polity in Telingana during the 11th-14th centuries have increasingly shown that Telingana was a major region of trade potential under the Kakatiyas, in whose period this relatively dry and lake irrigated region was consciously developed through agrarian expansion and organised trade. Later it was this process which enhanced the importance of Andhra as a whole in the inter-regional and long distance trade networks, due to royal policy of encouragement and patronage.

Professional groups also figure in greater frequency in epigraphic and literary sources as craft production increased and was further diversified in this period. Crafts groups are referred to as *Panchalohadhipatilu*-workers in five metals—gold, silver, copper, tin and lead, *Salivaru*—weavers, *Vaddavaru*—stone cutters, *Kase*—mason, *Vadrangi*—carpenter, *Kammarilu*—blacksmith, *Kummarilu*—potter; *Musaravaru*—persons who manufacture and sell crucibles and *Telikivaru*—oil crushers and *Akkasalavarau*—goldsmiths. They were socially and economically well established in the Telingana region in the 12th century as followers of hereditary crafts (*astadasapraja*) and as an organisation of crafts groups looked after the redistribution of the manufactured items. Works like the *Kridabhiramamu*, *Prataparudracaritra* and *Siddhesvaracaritra*, written after the Kakatiya times, perhaps in the 15th-16th centuries make references to various craft groups or communities like the Padmasale—cotton weavers, Pattunese *salevaru*—silk weavers, Visvakarmavamsajulu and others. Varieties of oil pressing devices (*Ganugu*) such as *sempagenune* and *kranuganune* used by the *Teliki vevuru* (oil pressors) are mentioned in the *Kridabhiramamu*, which also describes process of oil pressing by an ox tied to a beam. The same work also refers to perfumed oil. The *Sutradhari* or architect was of considerable importance topping the list of the artisanal groups and descendants

of Visvakarma. Skilled in the building of *prasadas* or *places*, well versed in the *Vastu Sastra* etc. the architects designed mansions and temples of the Nagara, Kalinga, Dravida and Vesara styles. All artisanal groups followed their *Samaya Dharma* or community code of conduct, prescribing punishment according to it for non-conformation to its code.

In craft production, apart from those of agricultural implements, the making of weapons (axe), *Ganugu*—oil crushing machine, *maggamu*—wooden looms, bullock carts and boats were significant. The making of armoury, jewellery and other luxury items, which demanded skilled and organised production also became important. Notable references to *Vadrangulu* or carpenters who made furniture and ivory (*dantamu*) workers are also known.. The dependence of craftsmen on agriculture is underlined by the fact that in most cases they were given land for their service in a locality in lieu of payment. The increase and diversification of craft production was a result of traders' interest in promoting production of specific commodities for inter-regional and long distance trade from the 12th century and more importantly during the Kakatiya period. This seems to have attained greater autonomy from the agricultural associations moving towards a more monetised exchange system. However, monetisation was generally on a low key till the Vijayanagara period.

These processes are reflected in the development of weaving as the major craft. The *Salivaru* were both manufacturers and traders in cloth. Varieties of cloth are known from such texts as the *Simhasana Dvatrimika* (Telangana), *Haravilasamu* and *Basava Puranamu*, which refer to printed cloth, silk and wool. More than 37 varieties including Chinese silk (*Cheeni yugalam*) and designed and patterned cloth are mentioned. The association of weavers was called *Saliyajanalalu*. The advance in the conditions of the artisans is indicated by the Macherla inscription of the 12th century.

Organised trade and greater interaction between the traders and artisans also meant the introduction of greater government control over it through customs and tolls with officers like the *Sunkadhikarulu*, *Sunkaverggade* and *Nayaka* monitoring the movement of trade. All *angadulu*, *angadi veedhi*, or *hatta margas* as also the *Santas* organised by merchants along with the *Santa nagaramu* came under supervision and a separate tax called *addavatta sunkamu* (a kind of toll) came to be levied.

The Warangal fort inscription AD of 1228 (Ganapatideva) records gifts of *ayamulu* made by different trade organisations. Prices of standard commodities were set and were not allowed to undergo fluctuation. The *Sakalaniti Sammatamu* advises the king not to allow the merchants to deal in foreign items if they increase the price of articles even when the king buys them, to punish merchants who try to enhance the rates arbitrarily. Cheating in weights and measures was checked by the movement of spies of the king. The Motupalli inscription was an *abhaya sasana* attempting to standardise levies on trade, at least external trade. The earlier Panugal inscription of AD 1124 gives details of *Siddhayamu* (sales tax) and also *angadi sunkamu* or *malige sunkamu* and how they are to be collected. The Motupalli inscription of AD 1244 records articles of import and export and some of the items of trade were *kari* (elephants), *turaga* (horse); *kanaka* (gold), *ratna* (gems), corals, copper, zinc lead, and silk thread etc.

TRANSLATION OF THE MOTUPALLI INSCRIPTION

- (Line 135) By this glorious *Maharaja* Ganapatideva the following edict (assuring) safety has been granted to traders by sea starting for and arriving from all continents, islands, foreign countries, and cities.
- (Line 140.) Formerly kings used to take away by force the whole cargo, viz. gold, elephants, horses, gems etc., carried by ships and vessels which, after they had started from one country for another, were attacked by storms, wrecked, and thrown on shore.
- (Line.146.) But We, out of mercy, for the sake of glory and merit , are granting everything besides the fixed duty to those who have incurred the great risk of a sea-voyage with the thought that wealth is more valuable than even life.
- (L.151.) The rate of this duty (is) one in thirty on (all) exports and imports.
- (L.154.) On one tola of sandal, 1 pagoda $\frac{1}{4}$ fanam.
- (L.155.) On 1 pagoda's value of (country) camphor, Chinese camphor, and pearls, $\frac{3}{4}$ and $\frac{1}{4}$ fanam.
- (L.157.) On 1 pagoda's value of rose-water, ivory, civet, camphor-oil, copper, zinc, riseya (?), lead, silk-threads, corals, and perfumes, 1 $\frac{1}{4}$ and $\frac{1}{8}$ fanam.
- (L.162.) On 1 pagoda's value of pepper, $\frac{3}{4}$ and $\frac{1}{8}$ fanam.
- (L.163.) On all silks, 5 $\frac{1}{2}$ fanams per bale (?*svarupa*).
- (L.165.) On every lakh of areca-nuts, 1 pagoda 3 $\frac{1}{4}$ fanams.
- (Verse 28 f.) In the Saka year eleven hundred and sixty-six, named Krodhin, at the great Desyuyakkondapattans (also named Mottuppalli, Ganapatideva set up for the sake of glory (this) edict-pillar, which resembles a staff for the support of the eternal (law of) justice (*dharma*) which is stumbling in the mire of the Kali age.

E. Hultzsch, 'Motupalli Pillar Inscription of Ganapatideva; AD 1244-45', *Epigraphia Indica*, Vol. XII, No: 22, pp. 196-97.

The *Nagarmu*, a local organisation which regulated local trade was not similar to the self-governing organisation called *nagaram* in the Tamil region under the Cholas. It was an integral part of the *astadasapraja*, in which are listed the *mahajanans*, *nagaramu*, *kampulu*, and *balinja settis*. The distinction that is made between the Telugu nakaramu and Arava nakaramu in the Peruru inscription may however indicate the presence of two groups the Tamil *nagaram* and the Telugu *nagaram* in that centre.

The trading community was known by terms like the Vaisyajanalulu and Komatis. The Komatis were best known as grocers, merchants and money lenders as referred to in the 16th century *Vaishya Puranam*. The *Settis* and Komatis were associated with the *dasabandha* grants of land and maintained gifts to temples.

The larger guild organisations such as the *Ayyavole*, *Pekkandru*, *Nanadesi* (from different regions), *Paradesi* (foreigner who were part of the guild), *Ubhaya Nanadesi* and *Svadesi* (local) have their own *prasastis*, such as the *Ayyavole* and *Pekkandru* in Telingana. There were traders specialising in the sale of particular commodities like areca nuts, perfumes, betel leaves and so on. With a well organised internal structure known from the Alampur inscription of AD 1303, a gradation of status and titles, depending upon the nature, items and volume of exchange, was upheld. Some held posts of administrative importance, e.g. the office of *Bhandagaradhyaksha* (Head of the store – of goods and perhaps also treasury) held by a *setti* is mentioned in the text *Haravilasamu*.

Coins such as *mada*, *gadyana*, *cinnamu*, and *visamu* are assigned to the Kakatiyas and king Ganapatideva is credited with coins bearing the legend “*dayagaja Kesari*” and the symbol of boar as the emblem of the Kakatiyas.

The Kakatiya period is marked by greater intensity of urban processes and hence several towns emerged with the suffixes *puri*, *nagaram* and *pattana*. It was not the mere presence of crafts and trade but also mainly the presence of guilds that marked the towns. Such centres of manufacture and exchange are often mentioned only in the 15th and 16th century literature. Categories like temple towns, royal towns or political centres can be identified where the most common economic activity related to manufacture and exchange. They were also centres of surplus appropriation. The temple’s wealth and economic activities involved different professional groups, the temple representing the spatial context for urban growth, especially those in big pilgrim centres. In political centres the concentration of wealth, accumulation of surplus and its redistribution to different functionaries of the state created urban space. Prior to the 11th century, however, craft and trade remained localised. Hanumakondapura, the political seat of the early Kakatiyas, became a big commercial centre due to its strategic location. From the 10th–11th centuries, under the Chalukyas of Kalyani and later under the Kakatiyas, royal incentive led to the growth of such centres. Peruru in Nalgonda district was another town and a port in the 11th century. From the 12th century, due to a conscious royal policy of encouraging trade and the movement of itinerant merchant groups, the pace of urban growth increased.

The size and intensity of trade and craft activity is reflected in the number of towns with Orugallu(Warangal), the Kakatiya capital at the apex of what may be called a hierarchy of urban centres. The capital had the earliest fort known to south India with a temple and huge tank all of which are described in the 15th-16th century literary works, the *Kridabhiramamu*, *Prataparudracaritramu* and *Siddhesvaracaritramu* on the glory of the town. Also known as Ekasilanagaramu, it had different quarters (*vadas*) such as the *akkalvada* and *vesyavatika*, and for the *Telikis*, *kampulu*, *madaras* (basket makers), *moharis* (tailors) etc. who were organised caste wise with a main street and bazaar leading to the Rajamargamu or royal highway. Brisk trade, mobile population such as travellers and visitors, routes to other towns and craft production and commercial centres made Orugallu the leading city.

Other centres with characterisation of both rural and urban centres and full fledged commercial centres such as Polavasa Pattana (12th century under western Chalukyas), capital of the Polavasa chiefs and subordinates of the Western Chalukyas, attracted itinerant trade bringing the Ayyavole 500, Ubhayananadesi, Mummuridandas and others. Several towns emerged in the Karnataka and Andhra regions, of which Alampuri, Magatala Govindapuram(Warangal dist), Marutadu, Panugallu in Nalgonda dist, Motupalli in Guntur district and others in the Khammam, Mahbubnagar, Karimnagar districts are also known.

The economic position of traders and craftsmen not only improved considerably but also changed due to the emphasis on commodity production from the 13th century, leading to new links with wider networks of south Asian and other neighbouring regions, which intensified under Vijayanagara.

15.3.4 Kerala

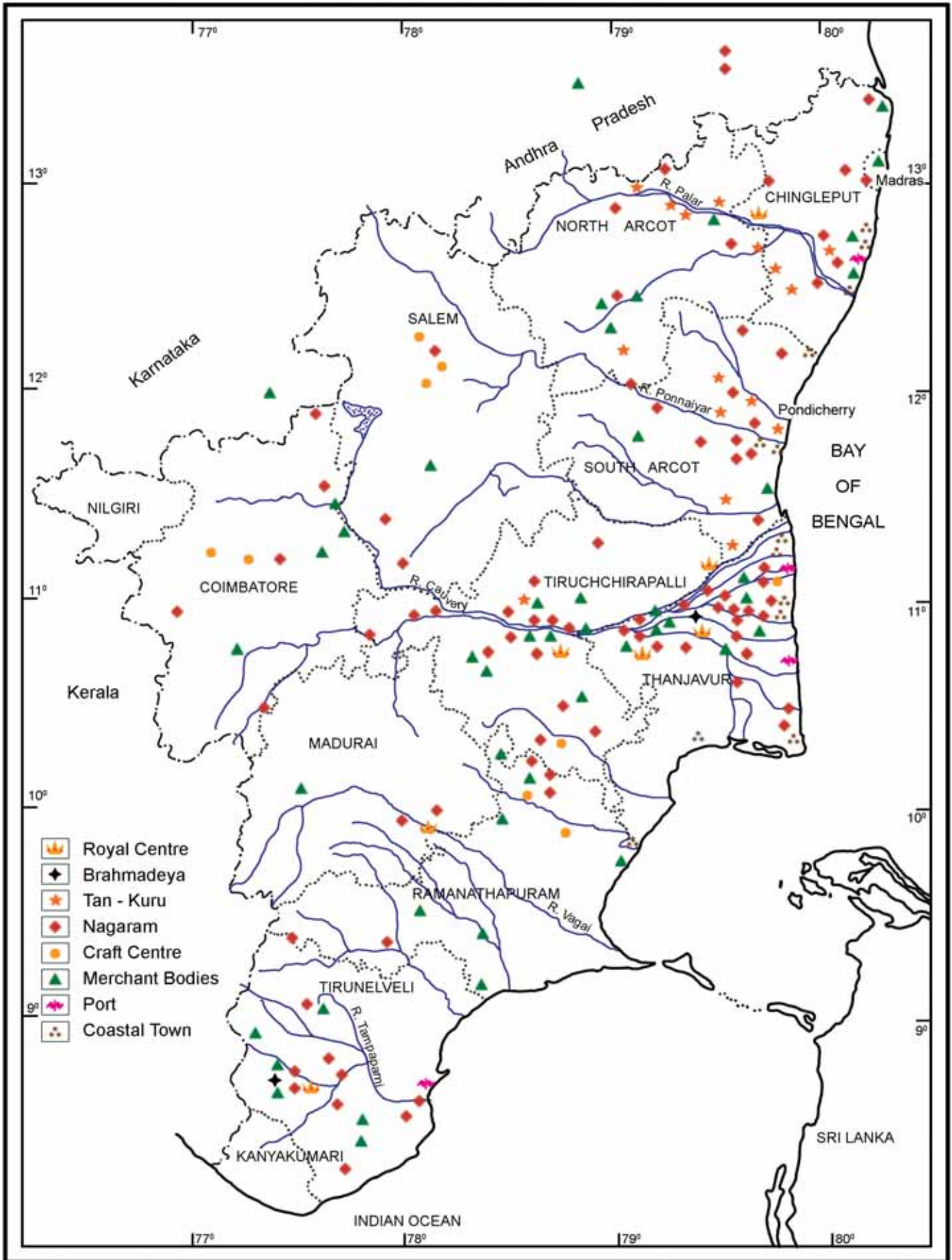
Kerala developed contacts with the west and foreign traders like the Jews, Christians and Arabs were given trading towns (i.e. centres with major trading activities given

to them for settlement and trade) under royal charters. Other coastal towns emerged such as Kolikkodu, Kollam etc. which became entrepots of south Asian trade. The Anjuvannam was a trading organisation more often met with on the Kerala and Kanara coast in the 9th-10th centuries and even later, the Hanzamana of the 15th-16th century inscriptions in South Kanara probably representing the *Anjuvannam* of the early medieval times. The location of such trading groups and of Arab horse dealers from the Malaiyala region enhanced the importance of the coastal towns in Karnataka and Kerala, as also the presence of the *Ayyavole* referred to in an inscription of Sultan Battery (15th-16th centuries) near Kozhikode.

15.3.5 The Tamil Region

It is in the Tamil region that the processes of the development of early medieval economy, particularly trading activities and urban development, are best illustrated in the rich epigraphic records of the Pallava-Pandya and Chola periods. Starting with the systematic development of an agrarian order through institutions like the *Brahmadeya* and the temple during the 6th-9th centuries, the emergence of the *nagaram* as a marketing centre for the peasant regions called the *nadu* met the exchange needs of the *nadu* as a peasant region, which not only assisted in the exchange system of the *nadu* but also acted as a meeting point for the inter *nadu*-exchange and inter regional exchange. Subsequently it also enabled the movement of goods in long distance trade carried on by itinerant trading organisations. It was a gradual expansion of a trading network for which the Tamil region provides the most significant evidence in different phases. Though not all such *nagarams* became major urban centres, many of them located on trade routes and distribution points intersecting with the itinerant trade of the Tisai Ayirattu Ainnurruvar (Nanadesi, Valanjiyar and Ayyavole), Manigramam and Anjuvannam evolved into big towns and cities apart from the capitals and ports of the ruling families. All these centres came to be linked through a large exchange network into a web of commercial activity with the west Asian and south Asian (Srilanka) and southeast Asian regions, where the inscriptions of the itinerant trading organisations appear from the 11th century AD. The urban centres which developed as a result of increasing non-agricultural or craft production and trade had the *Brahmadeyas* and temples, apart from royal centres, as their focus and arose in nodal points. Some of them developed from clusters of *Brahmadeyas* such as Kudamukku-Palaiyarai in the Kaveri delta, Kancipuram in the Palar-Ceyyar valley and Ambasamudram (Mannarkoyil and Tiruvalisvaram) in the Tamraparni-Ghatana valley. They are mostly multi-temple or pluralistic centres, each temple marking the growth of the town and its economic importance. Others were sacred and/or pilgrimage centres with huge temples, which attracted trade and commercial activities. The ports like Mamallapuram, Kaverippumpattinam, Nagappattinam were royal ports conspicuously promoted by royal patrons, where evidence of long distance trade is marked by the presence of foreign agents (e.g. from China at Nagappattinam) and royal functionaries interacting with each other. The exchange of embassies with China by the Chola rulers and the abolition of tolls (Sungam), building of religious institutions like the Buddhist vihara at Nagappattinam were acts of deliberate royal policy for promoting trade. The Chola royal expeditions to south east Asia, especially Srivijaya also were aimed at creating facilities for the south Indian traders, whose presence in these regions and as far as China was commercially significant.

The rural-urban continuum (i.e. without the town-country dichotomy but with a gradual transformation towards urban forms and activities) is best illustrated by urban processes in the Tamil region where the economic activities of the *Brahmadeya*



Tamilnadu: Non-Agrarian Configurations c. AD 1300; Champakalakshmi, R (1996), *Trade, Ideology and Urbanization: South India 300BC to AD 1300*, New Delhi, OUP, p.245.

and temple centres, marked urban growth in the core regions with the emergence of clusters of *Brahmadeyas* and temple centres. Some of them were administrative centres and hence political processes and/or commercial importance also added to the urban character of these centres. Such core regions were Kumbhakonam, Ambasamudram and Kancipuram. Some of the major *Brahmadeyas* expanded into pluralistic settlements and were made into Tankuru or Taniyur (independent settlement or revenue unit) with an agglomeration of *pidagais* (hamlets) and *nagaram* (market) and craft production centres.

Nagaram

The proliferation of the *nagaram* kept pace with the increase in commercial activity in three phases under the Cholas (most conspicuously in the middle Chola period – AD 985-1070). The networks and centres model developed by W. Skinner for China has been influential in the studies of the Tamil *nagaram* by Kenneth R. Hall. At least one *nagaram* per *nadu* has been identified. The *nagarams* were potential centres of urban growth, yet only those on trade routes and in political and commercial centres grew into large urban centres. *Nagarams* became part of a wider network of inter-regional and overseas trade from the 11th century. A unique feature of this network was the *Erivirappattanas* or chartered (i.e. with royal sanction (or charter) to be made into a protected mercantile town) mercantile towns of the Tamil region. These were protected by armed mercenaries and began to appear from the 11th century as protected warehouses and distribution centres for the itinerant trading organisations. Numismatic evidence shows a partial monetisation of the economy from the 10th century and more significantly from the 11th century. Specialisation in marketing and trade led to the emergence of organisations like the Saliya *nagaram* (weavers-cum-traders), Sankarappadi *nagaram* (oil mongers-cum-traders) and Paraga *nagaram* (foreign traders). The *Vaniya nagaram* dealing in oil was a wider organisation of oil-mongers and was composed of merchants from various regions, comparable to the Teliki of Vijayavada in Andhra. Trade in horses, another specialised occupation, was almost entirely in the hands of merchants from Malaimandalam (Kerala) throughout the medieval period. Trade in Arab horses was conducted mainly through the western ports from Gujarat down to Kerala and the Tamil region depended on Kerala merchants to procure and transport them. There was a close nexus between some of the crafts groups such as weavers and trading organisations. The joint donations of the Cittira Meli Periyannadu and Tisai Ayirattu Ainnurruvar in several centres of trade have a special significance as marking the institutionalisation of the coming together as a forum by the agricultural guilds and commercial guilds in the 12th- 14th centuries to make special grants to the temples in such points of commercial activity, when the Chola power was on the wane or had already declined creating a new context in which such organisations were gaining greater importance in south Indian and south Asian trade.

Trade Routes

Regions like Pudukkottai and Ramnatahapuram, Salem and Coimbatore lay on ancient trade routes linking Karnataka and Kerala with Tamil Nadu and further south to the Mannar gulf leading to Sri Lanka. Their commercial importance dates from the Sangam age, marked by the distribution of early Tamil Brahmi inscriptions and Roman coin hoards apart from Punch-marked coins (for details see Map 2, Unit 10). They continued well into the medieval times and facilitated the movement of trade from the western coast to the eastern coast. The emergence of coastal towns such as Tiruppalaivanam, Mayilappur, Mamallapuram and further south the

southern ports of Kaverippumpattinam, Nagappattinam (on the Chola coast), Tondi, Kayal and other towns on the Pandya coast would also indicate a coastal route. Tondi (Tittandatanapuram) was an important coastal town where several merchant groups like the Anjuvannam, Manigramam and Samanta Pandasalis entered into an agreement for the levy of certain taxes for endowments to the local temple. The Kamudi and Piranmalai inscriptions of the 13th-14th centuries refer to 18 pattinams, 32 valarpurams and 64 kadigaittavalams, all of which indicate the rise of several towns, representing coastal towns, fairs and market towns of different degrees of importance in the trading network of south India. In the Kongu region, in which Mudikondacolapuram was a major trade centre, several towns south and north of the Kaveri emerged with the increasing movement of merchants, who made grants to local temples. Perur was a considerably important and large town where merchants with the title Chakravarti exercised great influence.

Craft Production

Areas of craft production are difficult to locate. However, traditional textile and weaving centres have continued down to modern times (Chingleput, Coimbatore, Madurai, Salem, Tanjavur, Tirichirappalli and Tirunelveli districts). Weaving as an industry was systematically promoted by the rulers of south India from pre-Chola times. Special care was bestowed under the Cholas on old weaving centres and encouragement given to settlement of weavers in new areas. There were many cotton producing areas near which weaving centres appeared. But Kancipuram as the major centre received special attention from the Cholas. Madurai was equally important. Eventually Kanci came to represent the venue of the Mahanadu or corporate organisation of the weavers, which controlled the production and marketing of cloth and its trade.

Craft production was more intensive in the Kongu region, where 12th–14th century inscriptions indicate large-scale artisan (Kammalar) activity and participation in important civic duties, receiving special privileges. As interdependent economic groups the trading organisations and artisanal groups acknowledged their mutual benefits by the traders along with other local elite, conferring special privileges on the artisans and giving special asylum to them. In Erode a refugee centre was provided by the trading organisations to the artisans in late 11th century AD. The Right and left hand division of caste/professional groups (*anuloma Rathakaras*) also enabled the artisans to acquire gradual enhancement in status also by participating in gift giving and temple building activities and consecration of images.

A series of salt manufacturing centres on the east coast from Marakkanam down to Vedaranyam in Umbala nadu also emerged under the Cholas. However salt manufacture was organised by the state and the state functionaries organised the revenues due from it to the local temples. Salt was carefully excluded from the *nagaram*'s jurisdiction, the *nagaram* exercising the right of fixing and assigning taxes on all commodities except salt.

15.4 THE TRADING ORGANISATIONS OF SOUTH INDIA

The trading or merchant community was generally known as the Balanjas, who claimed to be the protectors of the Vira Balanja Dharma (*banaju, banajiga, Vaniga*, etc.) or code of conduct and traded in the South Indian regions and beyond in the eastern countries such as Burma, Malaysia and Sumatra. In Karnataka the 500

Svamis of Ayyavole originating in Aihole in the 8th century AD, moved into other areas and by the 10th century appear in the Tamil region on the main trade routes. They acquired an elaborate ring of epithets like Ubhaya Nanadesi, Mummaridandas Ainnurruvar, Svamigalu. Pekkndru, Nanadesi Pekkndru (and Gavares). An elaborate *prasasti* in the Tripurantakam inscription of AD 1292 adopts the usual pattern, tracing their mythical origin from celestial beings, praising the personal virtues of the members in glorious terms, their high principles and honesty, conduct, to which Marco Polo provides additional testimony, their devotion to deities, respect to brahmanas, outdoing the brahmanas, social status, claims to mobility upto the Ksatriya and Brahmana status and their affluence and influence.

Their activities increased by the 12th century AD (Belgaum inscription of AD 1134), their presence in many *nagaras* and *gramas* attested by their inscriptions in Bijapur, Belgaum and Dharwar districts. Even after the 12th century i.e., from the 13th century (Kakatiya period) to the fall of the Vijayanagara empire their inscriptions are found in the Deccan and Andhra regions but with lesser visibility due to changes in the nature of trade and other entrants into the South Asian trading network. A graphic picture of their activities is found in the inscription of Belgaum, AD 1184, travelling by land and water, penetrating into many regions with their articles of trade like superior elephants, well bred horses, large sapphires, crystals, pearls, rubies, diamonds, lapis lazuli, onyx, topaz, carbuncles, coral, emeralds, karkketana, and various articles of lesser value. Apart from hawking and peddling, they also had also extensive dealings in foreign trade.

The Tamil merchants who called themselves *Tisai Ayirattu Ainnurruver* hailed from several parts of the Tamil region and played a significant role in overseas commerce especially with Sumatra and Burma. They made gifts of tolls (*Sunka*) to various temples in Andhra and the Tamil region. Apart from the luxury items like precious and semi-precious stones, they also traded in agricultural products like grain and gram and oil i.e. gingelly, cotton, yarn and cloth. Their influence and role in the collection of tolls (*Sunka peta sunkam santas*) is conspicuous in the 12th 13th centuries and more so in the late Kakatiya and post- Kakatiya periods. *Sunka* was the main tax levied on items of various description collected at different centres of trade activity. They followed the *Samaya Dharma* punishing those who went against the *Dharma* and rewarding persons for meritorious services and conferring honors/titles like "Prithvi Setti". The *Mahanadu* of merchants often met in the *mandapas* of temples.

It is not easy to comprehend the nature of the relationship among the different merchant guilds. Nor is it clear as to whether a hierarchy of such organisations evolved during the early medieval times. The Ayyavole 500 with their *Virasasanas* seem to be the most important of these organisations and could well have been at the apex of the itinerant trading bodies. That these merchant moved in groups of trading caravans (*Satu* in Telugu and *Sattu* in Tamil) is also referred to by Ferishta (c. 1560-1620) and Ibn Battuta (d.1377).

The inter-regional movement of goods was controlled by these organisations and we find the Ayyavole 500 in south Karnataka calling themselves the southern Ayyavole and the Tisai Ayirattu Ainnurruvar moving into the Andhra region regularly from the 11th century. Tamil merchants are visible in the trade of Andhra from the 11th to 13th centuries. Inscriptions refer to the Colamanadalamuna *vyapari* and the Visakhapatnam inscription of the period of Kulottunga I calls the place by the name Kulottungacola Pattana and Colapandya pura, where the Five Hundred and the Anjuvannam were present. The port of Motupalli (Desi Uyyakkonda pattana), a

trading emporium, emerged under Kulottunga, the Chalukya-Chola ruler and was promoted systematically under the Kakatiya Ganapati Deva, (1190-1252) with his *Abhaya Sasana* of AD 1245. Ghantasala also known as Chola Pandyapura was a 12th century nakaramu.

From the mid-twelfth century onwards there are definite indications of increased participation in foreign trade judging from the overseas imports in south India in the late 13th and 14th centuries AD. The Chinese trade missions to South India under the Yuan dynasty underline the importance of South India and its overseas trade in the Chola and post- Chola periods. Changes in the commodities of maritime trade from luxuries to necessities such as dyes, cotton yarn, textiles, processed iron, pepper, and horses become more prominent in Ayyavole inscriptions. How these goods came to South India for trans – shipment and who the shippers were, are not known. The guild inscriptions suggest that they sent their agents quite far abroad and established trading stations (e.g. Takua Pa – *Manigramam* (in Malaya peninsular) and Pagan – *Ayyavole* (in Burma, Myanmar. The first indicates the place and the second represents the guild.). Merchants had access to kings and the Chola invasions of Sri Lanka involved such interaction. The external policy of the Cholas was designed to favour the expansion of overseas trade interests from which both the Chola ruler and the merchant derived benefit. These expeditions were not for plunder and loot but trade figured as an important factor in framing the Chola policy and the Chola rulers had links with the merchant community for mutual benefit. In northern Srilanka Chola inscriptions are found from Mantai to Trincomallee, Polonnaruva being the main centre.

Chola occupation of northern Srilanka may have been a hurdle in the links of Srilanka with southeast Asia, especially the Sinhalese links with Java and Bali. Srilanka was rich in precious stones such as rubies, topaz and sapphire. Arab works like “*Ahbar as Sin wa’l Hind*, a collection of travel stories, and that of Ibn Khurdadabih refer also to pepper, perfumes, musk, diamonds and precious stones, aloes, gold and pearls, some of them like aromatics being imported to Srilanka. The Gulf of Mannar rich in pearls and Mantai (Mahatitta) in northwest Srilanka was the point of ingress for the Cholas, the latter being one of the great emporiums of the early medieval period comparable to Siraf on the Persian gulf. Pepper was highly priced in China and in the west and the demand had grown in the 13th century.

The Chola and southeast Asia trade links are attested to by the Nagappattinam records of the early 11th century and Kamboja’s gifts to Chola kings and the Chola missions to China (AD 1077). Rajendra’s expedition to southeast Asia was a coastal voyage to *Kadaram* or *Srivijaya*.

Chola raids were meant to “protect Indian commercial interests from interference by Srivijaya”. Like the Sung emperors of China or the rulers of Srivijaya in southeast Asia, the Cholas both solicited and sought to foster foreign trade and to establish trading rights for the Tamil speaking merchants in those areas. The Srivijaya inscription of Canton, if it has been interpreted correctly, gives an unusual inside look at the sub-surface diplomacy that preceded the commercial moves of the Cholas at Canton. (It records a donation on behalf of Kulottunga I, to the Taoist monastery in Canton). By AD 1088 the Ayyavole guild was established near Barus in Sumatra. The Chola rulers were personally interested in sharing the profits of maritime trade.

Inscriptions from Piranmalai (latter half of the 13th century), Koilpatti (Trichy district-1305), Tiruvarankuricchi, same district, record the imports and exports. The goods mentioned in them include arecanuts, pepper, myrobalans, iron, cotton, thick cloth, thread, wax, yak's tail, camphor oil, civet, horses, elephants, camels?, aloeswood, sandalwood. In the Sung maritime trade the main commodities were cloves, frankincense, gried galangale, abaca cloth, umbrellas, swords, bottle-gourd, edible date, medicinal rhubarb, slaves, peafowl, benzoin, putchuk, margosa bark, melons, gardenia flowers, coconut, cardamom, lacquer ware and a host of other things. Common commodities in the Chinese and south Indian lists are identifiable. Sandalwood and camphor were two articles of great demand in the Indian Ocean trade. Aromatics were also an important item as there was constant demand for expendable, sacred items. Frankincense was the only item coming from west Asia, while the bulk of the aromatics came from southeast Asia.

The *Ayyavole* inscriptions mention a vast range of commodities exported from the Pandya kingdom. The Kayalpattinam and Tittandatanapuram (Tondi) inscriptions of 14th century on the east (Pandya) coast of Tamil Nadu refer to the trading organisations and stockists of goods, such as the *Manigramam* and *Samanta pandasalis*. In Andhra the Chintapalle inscription (Guntur district) of the Chagi chief and the Motupalli inscription (AD 1184) of Ganapati Deva refer to the same regional inflow and outflow of goods of maritime trade.

The ramifications of this trade covered a wide spectrum of regions and commodities from China through southeast Asian countries, Srilanka and south India to the west Asian regions. Further, the Gujarat coast, which linked most of the Indian trade with West Asia, had regular sea traffic connecting it with Hormuz and other central Asian regions and North China. South Indian merchandise also used this important channel for its trade. Marco Polo refers to the importance of this trade to China in pepper, precious stones and pearls. Ma'bar, the Pandya region, sent envoys to China (1283 and 1284) and envoys from China reached Kollam (AD 1279), a major port on the west coast.

The overseas commerce primarily that of west Asia and Egypt (Cairo) and China, was mainly from west coast with Kollam as the major port. The Geniza documents and Jewish letters contain impressive evidence of the links with the Mediterranean regions- Italy, Sicily, Morocco and Lebanon.(Syria). The Egyptian corporate association called the Karimi dealt in pepper and spices. By the 13th century they obtained their eastern commodities from Indian traders of Gujarat and south India during the Chola, Pandya and Kakatiya periods and also from the island of Sinhala. The Sung and later Yuan rulers of China encouraged this trade. The Indian subcontinent drew in gold, silver and copper in payment for many of its exports. In China payment in kind was advocated. The Geniza documents show that Jewish merchants trading with south India had to make payment in gold to offset their unfavourable trade balances. Spices to Egypt led to a constant flow of gold to India from Europe and Egypt (the Venetian sequins of the Vijayanagar period). But the horse trade was a major currency drain and this aspect of the outflow of gold from, especially in the post- Chola period, is an aspect of economy which needs more intensive study.

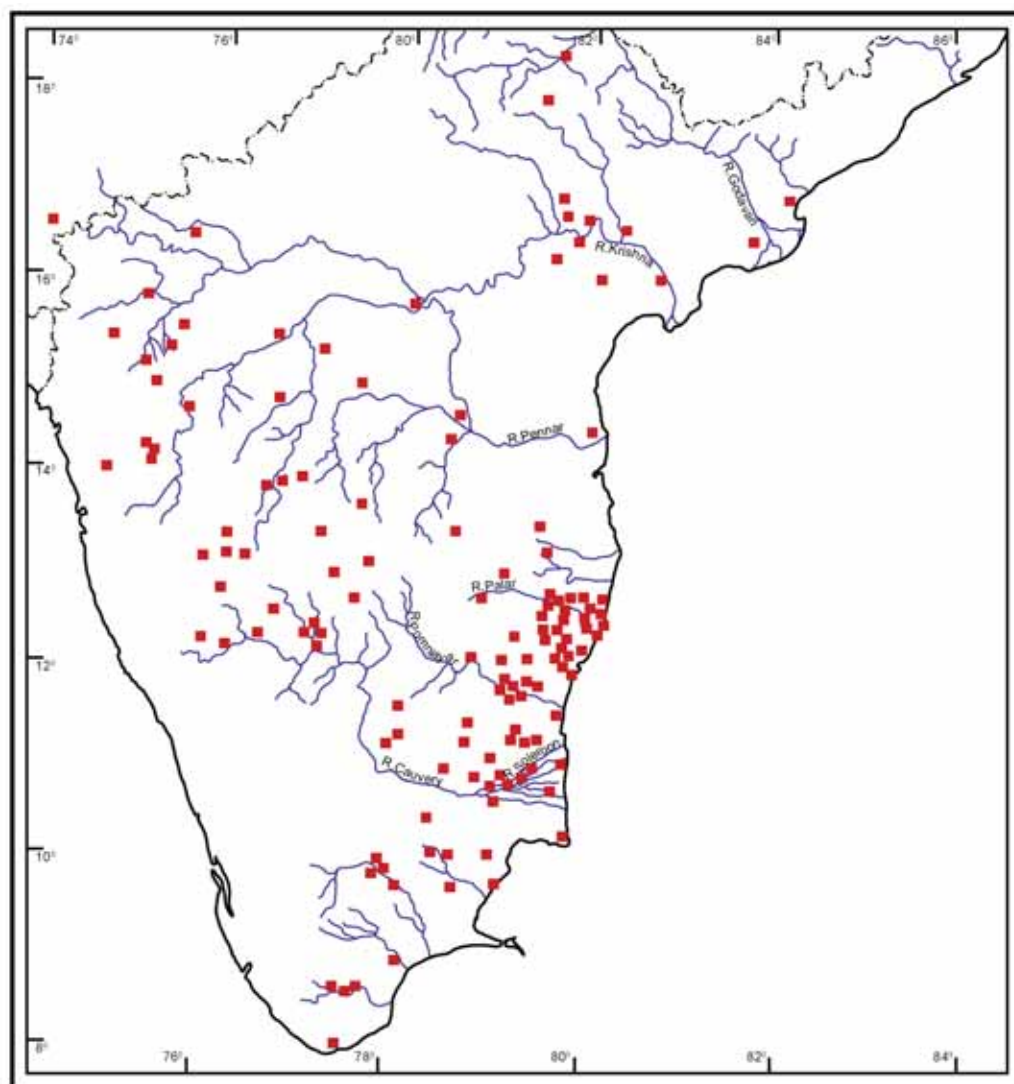
The commodities handled by *Ayyavole* and *Manigramam* thus include a wide variety of goods such as textiles, iron, aloeswood, (Agaru- Aghil), areca nuts and betel nuts, bdellium, camphor, civet, cotton and cotton fabric. Spinning and weaving technology were hence consciously developed and Southeast Asia became a major market for Indian textiles. The brisk trade in cotton is known from the Chinese accounts.(Patula-14th century). Textiles were also a major export to the western

markets. Horses were always imported from Turushka, Kamboja and Yavana countries, although the rearing of horses was not understood in south India. The Motupalli inscription (Meera Abraham, p.170) refers to many items. Iron and steel wootz was exported from many parts of south India. Indian steel out of which the famous Damascus sword was made was one of the most important exports from India as seen in the Geniza records. Musk, myrobaln, pearls, pepper, putchuk rose water, sandalwood, wax and honey and silk- varieties were also traded in, while Chinese silk was imported into Chola and Pandya countries.

15.5 WEAVERS, TEXTILE PRODUCTION AND TRADE IN SOUTH INDIA

Textile has been the major craft in south India since the early centuries of the Christian era and continued to be so till modern times. In the early medieval period this craft developed in various regions not only due to its importance for all strata in society but due to royal patronage, elite demands and the needs of the temple, the focus of all economic activities.

Traditional centres of weaving have more or less continued down the centuries from the early medieval times. The criteria for their location were availability of raw materials, e.g., cotton, in areas rich in black soil, easy availability of vegetable dyes



Weaving Centres in Medieval South India AD 1000-1500; Vijaya Ramaswamy, (1985), *Textiles and Weavers in Medieval South India*, OUP, New Delhi, p. 7.

and mordants, skilled labour, transport and marketing facilities and proximity to the ports. Areas of black soil such as Coimbatore, Madurai and Ramanathapuram and Tirunelveli districts in Tamil Nadu; Chirala, Guntur, Ellur etc. in north Coromandel (Andhra Pradesh) and in Bijapur, Dharwar and Belgaum (Karnataka) are dotted with weaving centres.

Weaving Communities are known by different names such as the Devangas, originally from Andhra and Karnataka regions, who later moved into the Tamil country in the Vijayanagara period, the Kaikkolas of Tamil Nadu known from the 7th century, the Saliga community or Sale or Saliya in all the three regions often classified as Padma Sale and Pattu Sale. (Sanskrit Salika meaning weaver), the Jedara caste of weavers, mainly in Karnataka., the Senigar in Andhra and Karnataka regions.

In the Tamil country the Saliya were a superior class of weavers while the Kaikkolas were primarily soldiers in the Chola period and members of the special troops of the kings. They pursued weaving side by side with soldiering and in the Vijayanagara period they became full fledged weavers. They claim to be the soldiers of Virabahu, the divine lieutenant of Kartikeya. The Devangas claim descent from the soldiers of their patron deity Chaudambika. Weavers had separate quarters in the Tirumadaivilagam or temple square often called the Kaikkola-t-teru. The Saliyas were higher in status closely associated with temple administration and as suppliers of cloth to royal families and social elite.

Textile varieties included pudavai (long pieces of cloth), *vetti* and *uttar(i)* yam (male garments) as mentioned in Chola inscriptions. The headgear in cloth was specially woven for the temple honours and for the higher social groups, apart from the gold coloured silk cloth for the deities and royalty (*pumpattigal kattida nulpattu*). The *Kanchuk* was a stitched garment (blouse or shirt-like garment) worn mainly by the lower strata of society. Tunnakkarakar is a term referring to tailors known even from the post-Sangam epic i.e., the *Silappadikaram*. *Tayyan* or one who stitches and *tayyal*=stitch, *peruntunnan*, *ratna tayyan* are other terms referring to the tailoring class. Corporations of tailors known as *gottali* or *kottali* are also mentioned in the Karnataka inscriptions.

Muslins and chintz, mainly woven, were produced in Masulipatam. The *Manasollasa*, a 12th century compendium of the Deccan (Rastrakuta period), refers to *vicitra* or chintz, cotton (*karpasa*) and silk (*pattusutram*), tie and dye- tantu-banda etc. The Jaina work in Tamil called *Jivakacintamani* talks about the pumpattu, paccilai pattu, which are varieties of silk. The pattavala pattu (patola) is mentioned in an inscription of the 12th century from Coimbatore and the 14th century inscriptions from Warangal also mention paccai pattu and dasari pattu (tassore?), tassore known also from the *Mitakshara* of the 12th century.

In the dyeing and printing of cloth, vegetable dyes and wooden blocks were used such as kusumba- red safflower, nili (indigo), manjishta (madder, the red dye) and caustic agents or purifiers such as arishta, kadukkai (myrobalan). The *Manasollasa* refers to the varieties of dyes used. With the increasing demand for textiles, taxes on weavers and dyers also came to be increasingly referred to in inscriptions from the 12th century AD in all the south Indian regions.

The growth of textile technology during the early medieval times is indicated by the terms referring to various instruments and tools such as the shuttle, ginning in a gin, pinjana or batting instrument, spindle for spinning, some of which are known from

literary works like the *Abhidhanachintamani*, and occasionally referred to in inscriptions. The spinning wheel with the crack handle was introduced only in the 14th century by the Turks. The vertical loom was the primitive type (Jambir inscription-Shimoga district AD 1184). That horizontal looms were also used is seen in the songs of the Kaikkola community called the Nainar Kuttar. The draw looms of the Chinese and also Middle East seem to have been familiar, especially the Persian manner of weaving by the Muslims. The patterned loom or achchu tari was known in south India from the 11th century onwards as referred to in an inscription of Tiruvottur datable in the reign of Rajaraja I (985-1014).

Textile was transported on pack bullocks, wooden carts and head loads (talaikkattu) in internal trade to the weekly Santa weeks market. Leading textile manufacturing centres in the south were Shiyali, Arantangi and Kumbhakonam in the Tanjavur district, Sivagangai and Tiruppattur in the Ramanathapuram district, Sadras and Kancipuram in Chingleput district and Mayilapur in present Chennai. Madurai was an important cotton producing and weaving centre with the Pandya port Korkai in the Tirunelveli district. In north Coromandel, Motupalli was well known for its silk yarn and cloth. The Venetian traveller- Marco Polo praises the delicate buckram and muslins of Mutfili or Motupalli, which received a special charter from the Kaktiya king Ganapatideva for its promotion as a major trading centre.

In north Karnataka several centres such as Saimur, Honavar, Bhatkal, Barkur and in South Karnataka Mysore, Shimoga and Chitaldurga, (inferior cotton), Terdal in Bijapur Mangalore in south Kanara are well known. Ibn Battuta (AD 1342-45) refers to several places under the Honavar rulers (sultans) known for their silk and fine linen. Chinese silk came to the Karnataka ports (China and Mahachina). Abdul Feda (13th century), Chau Ju Kua, a Chinese traveller of the same period and Marco Polo refer to silk and chintz and other fabrics. State patronage to trade was consistent particularly under the Chola Kulottunga I, Kalachuri Bijjana and Kakatiya Ganapati, whose abhayasana to traders by sea and arriving from all continents, islands, foreign countries, and cities was meant to promote major exports, including textiles. There was more export trade than internal trade in textiles.

The commercial organisation for textile trade was in the hands of merchant corporations. (*nagaram*, *Tisai Ayirattu Ainnuurravar*, *Manigaramam*, *Valanjiyar*, *Anjuvannam* and *Pekkandru*, etc.). That there was specialisation in different aspects of textile production and sale is indicated by independent associations of cloth merchants as the one in Kancipuram, which often organised a mahanadu for the textile traders. The merchants had exclusive quarters such as kurai vanigar and Aruvai Vaniya ceri. The Piranmalai inscription of the 13th-14th century AD refers to many of them. Textile however was not a monopolistic item of trade. It is well known that merchant organisations had their own regiments for protection. There were Cilai Cettis of different mandalams such as Jayankonda Chola Mandalam, Kongu Mandalam and Malaimandalam (Kerala) in the Tamil region. The Saliya chettis of Chidambaram had a special status in the town with their own Saliya *nagaram*. References to Saliya Samayangal (Organisations) occur in Kalachuri inscriptions from the Belgaum (AD 1224). Brokers- taragu kasu (brokerage fee) in late Chola inscriptions included the Kurai taragu ayam also.

Taxation on the textile industry included taxes on looms (tari irai, tari kadamai in Tamil), Magga dere in Andhra and Karnataka and other levies such as achchu tari on patterned loom, tari pudavai, panjupili, parutti kadamai, pattadai nulayam. On dyers a tax called kaibanna or bannige is known from the Kannada inscriptions. In

the 12th 13th centuries. The incidence of taxation was regular and was levied in cash or money (Vijnanesavara's *Mitakshara* 's references to panam, varahan and madai). Instances of protest against high taxation were common in the 13th century under Hoysalas which increased in the Vijayanagara period. Privileges and large scale concessions were given as a conciliatory measure by the kings i.e., the state.

The strong Devanga organisation in Karnataka (Devanga Puranam) and Mahanadu in Kancipuram (Colan Purva Pattayam) at the close of the 13th and '14th centuries AD. and the Saliyas functioning as temple managers and administrators under the Cholas show the nature and degree of influence that the weavers gradually acquired in society and *vis a vis* the state. The Kaikkolas are more visible later and as service groups to temples i.e., devaradiyar. Land and other gifts were made by them to the temples. Origin myths associating them with deities like Karttikeya and Goddesses (Amman) like Kamakshi Chamunda etc. point to their enhanced ritual status. Monetary donations to the building of temples or shrines in a temple and consecration of images such as those of Siva, Parvati, Pillaiyar and Kartikeya and service to temples as accountants (e.g. the Uragam in Kanchi) mark the increase in the economic importance of the weavers and their status in society.

Land ownership and caste suffixes like Kaikkola Mudalis and titles like Pidaran, Kani yatci and Kudi Kani enjoyed by weavers also indicate their enhanced position in a predominantly agrarian society. Temple honours and use of symbols like sangu and tandu were the social privileges enjoyed by them. The tradition of consecrating to the temple the first girl born in their families as dancers and the male members being given the right to sing the *Tevaram* or the sacred hymns (Ponnambala Kuttar nainar). The weavers also came to be classified under the Idangai- Valangai paradigm. In the Virasaiva or Lingayat community artisanal castes including weavers were given equal importance with other members (Jedara Dasimayya). Weavers had a strong position also in Tenkalai Srivaisnavism with rights to perform rituals in the temples.

15.6 SUMMARY

Agrarian expansion and general reliance on agrarian sector was the chief feature of the economy. These were instrumental in giving rise to a new phase of urbanization in south India. Tamil Nadu particularly experienced 're-urbanization' through the growth of *nadus*, *nagarams* and organization with wide networks such as *Ayyavole*. As compared to early historical urban centres, during this phase, urban centres developed deeper roots within the regions. Presence of increased number of guilds suggests the 'diversification of production activities'. Among various crafts textiles occupied the foremost place, though in the Andhra region mining was also a major craft industry. There was regular coastal traffic along the entire littoral, particularly the Konkan and Malaya region emerged into prominence during this period. At local levels, local bodies like *nagarams* in Tamil Nadu and *nagaramu* in Andhra region were active in organising the trade. Merchants involved in brisk trading activities throughout the period. They used to move in trading groups (*caravans*). State tried to standardize levies on external trade, particularly in the Andhra region. We get the references of a large number of taxes levied on textile craft production. Heavy burden of taxation at times resulted in protest.

15.7 GLOSSARY

Kongu Region	Region of ancient Tamil Nadu in South India. It comprises of the present Coimbatore, Erode, Salem, Karur and a part of Dindigul districts of Tamil Nadu.
Cairo Geniza Records	Archive of ancient Jewish manuscripts found in synagogue of Fostat-Cairo. In the 1890s the material was removed to Bodleian Library, Oxford University, London.
<i>Sui Generis</i>	Self generated or the processes originated and developed on their own and not due to outside influence.
Composite Artisan Community	It followed different crafts but were organised into a large crafts community by the 14th century A.D. Hence, wielded considerable influence.
<i>Virasanas</i>	Inscriptions of guilds that begin with a <i>prasasti</i> describing their brave and heroic deeds as itinerant traders, who were also good fighters.

15.8 EXERCISES

- 1) Analyse the role of *nadu*, *nagaram* and *nakhara* in the growth of urbanization in south India.
- 2) To what extent second urbanization was the result of agrarian expansion in south India? Examine.
- 3) Critically examine how the process of re-urbanisation in south India got linked up with temple-economy?
- 4) Epigraphy was the main source of information to study the process of urbanization in south India. Comment.
- 5) Discuss the role of merchant guilds in the growth of craft, trade, and urbanization.
- 6) Write a note on the growth of textile industry in south India during 6-9th centuries AD.

15.9 SUGGESTED READINGS

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M.A. History

List of Courses

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Block-wise Course Structure

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UNIT 16 AGRICULTURAL PRODUCTION

Structure

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16.1 INTRODUCTION

Agriculture and environment are closely related and interdependent. It will be interesting to find ‘what role did environment play in steering the contemporary medieval economy, particularly the production process?’ In the Indian context the question becomes much more relevant considering that Indian economy was largely dominated by agriculture all through its history. David Ludden has mentioned in Block 1, in fine detail the question of regions and environment and how the topography was influencing the cropping pattern and agricultural production. Here, in this Unit the attempt is to go deeper into the issue within the framework of the ‘medieval age’.

It is generally acknowledged by scholars that during the pre-colonial period in spite of colonisation and wars resulting in deforestation, to a certain extent, there was ‘harmony’ and ‘equilibrium’ between man and environment. Cutting of forests and export of timber was ‘sustainable’. The cutting was limited largely to the extent nature was ready to replenish. But during the colonial period that balance got disturbed. However, recent researches emphasize that even earlier the picture does not seem to be as ideal as it is projected. For fuel and building material timbers from neighbouring forests were regularly supplied and forest were cut. Advancing armies brought no less harm to the existing forest line apart from clearances for agriculture.

The impact of riverine changes was no less important in our period of study. Richard Eaton has analysed in the context of Bengal the impact of riverine changes in the

Bengal Delta. He suggests that during the medieval period, there was sharp eastward movement of Bengal's major river systems. The main channel of Ganga, Bhagirathi-Hooghly, in West-Bengal gave way to the present Padma-Meghna system resulting in rich deposition of silt that made the culture of wet-rice possible in the region. As a result east Bengal attained unprecedented agricultural growth. The process began sometime in the 15th century but got intensified after late 16th century.

Ludden and Eaton's researches clearly point out how environmental changes influenced the agrarian economy of the subcontinent. However, it is equally important and interesting to find how human interventions were decisive in altering the existing environment. We will come to these issues of and on during our discussion on specific agrarian issues in this Unit.

Let us first begin our discussion on the nature and pattern of agrarian resources during the medieval period.

16.2 PATTERN OF RESOURCE USE

By the term resource use in the context of agriculture we imply the 'means' that were instrumental in the process of agricultural production. Land, of course, occupied the foremost place in this context. Besides land, 'working capital' was another important component of it. Working capital represents ploughs, bullocks, etc. The third factor was the capacity and capability of the peasants to organise the cultivation. Here, peasant himself along with his family members occupied foremost place in the production process particularly in the medieval context when the cultivation was largely based on 'individual peasant farming'. Further, the role of hired labour and tenants-at-will was equally significant.

16.2.1 Land

Land was available in *abundance* all through the medieval period. Thus, the high land:man ratio was an important feature of the medieval agrarian structure. Though it is very difficult to assess the actual size of landholdings per *asami* (household) during the Sultanate period, some regional studies pertaining to the Mughal period do shed some light. Dilbagh Singh (1990) has calculated for eastern Rajasthan the size of landholdings per *asami* as high as approximately 90 *bighas*.

Since land was in *abundance* it was the state's concern to keep the peasant tied to the land. Aurangzeb in his *farman* (royal decree) to Rasikdas (1665-66) ordered that if the peasants have fled the *amils* (revenue collectors) should try to bring them back. All through the state's interest was to expand the cultivation for the purpose of increasing its revenue resources.

Bullocks constituted a major working capital during the medieval period. S. P. Gupta has calculated for eastern Rajasthan that there was on an average 3.31 bullocks per peasant, indicative of a favourable cattle population during the medieval period. In the Maratha country villages, particularly frontier villages, had to constantly face the problem of cattle lifting that in turn created problems to cultivate the land.

Another important aspect relating to resource use was the capacity of the peasant to possess the ploughs. The more the ploughs in his possession the more the *jots* (ability to cultivate) he could manage and the higher would be his status in the village hierarchy. S. P. Gupta (1986) has mentioned as much as 9 ploughs in the possession

of a *patel* (village headman) of *pargana* Mauzabad in eastern Rajasthan as against the maximum of one or two held by the poor peasants.

The availability of animal power was another important factor instrumental in the extension of cultivation. Abul Fazl, court chronicler of Akbar, records the number of cattle allowed tax free for each plough was 4 bullocks, two cows and one buffalo. While in 1924-25 in Uttar Pradesh average number of cattle per yoke was 2 bullocks, 1.1 cows and 1 buffalo suggests the availability of higher stock of cattle in c. 1595. It also suggests the greater capacity of peasants to plough. (Irfan Habib, Cambridge, 1982)

For eastern Rajasthan Dilbagh Singh (1990) has assessed that a plough possessed the capacity to cultivate around 50 *bighas* of land. However, *Haqiqat-i Suba Bihar* mentions that the official perception of the Mughals in this regard was that one plough was sufficient for twenty *bighas* of well cultivated land after that new plough should be issued for any further addition. In spite of variation in assessment Dilbagh Singh's analysis for eastern Rajasthan 'that there was a broad correspondence between the extent of cultivation and the number of ploughs and oxen available in a particular village' holds good. Dilbagh Singh mentions that there was considerable reduction in cultivation in *parganas* Amber and Gaji Ka Thana (eastern Rajasthan) on account of lesser availability of the animal power.

16.2.2 Extent

Delhi Sultans, particularly Alauddin Khalji and later Muhammad Tughluq experimented with measurement of the agricultural land. Abul Fazl provides us in great details the statistical information with regard to the extent of cultivation. It is interesting to note that for measurement both *kharif* and *rabi* crops were measured separately. Suppose, in a village both *rabi* and *kharif* crops are harvested then that village land was calculated twice.

Abul Fazl's *arazi* (measured area) figures probably comprised not only the gross cropped area as W. H. Moreland has pointed out, but also included current fallows, cultivable waste and parts of uncultivated waste as rightly pointed out by Irfan Habib (1963) and Shireen Moosvi (1987). Shireen Moosvi has calculated that Ain's *arazi* figures included around 10 per cent of the uncultivable waste. Dilbagh Singh and S. P. Gupta's calculation for eastern Rajasthan show that the range of waste land varied from 7-20 per cent. This could be *basti* (habitation), forest, *nullah*, *nadi*, tank, garden land or hills. Shireen Moosvi for Akbar's period and S.P. Gupta for eastern Rajasthan have pointed out that the total cultivated area was around 50-65 per cent of the measured area. B.L. Bhadani's (1999) statistics for western Rajasthan also suggests that the area under cultivation was almost 'half of the area surveyed.' However, K. K. Trivedi (1998) argues for *suba* Agra that the measured area was approximately 55 per cent out of which only 50 per cent was under cultivation.

Shireen Moosvi has calculated the average rate of extension of cultivation at 0.23 per cent as against 0.21 per cent rate of growth of population during c. 1600-1871. She has compared the gross cultivation in c. 1595 with that of c. 1910 agricultural statistics and concluded that the average extent of cultivation comes out to be 47.35 per cent i.e. it was almost half of what it was in 1910. Irfan Habib (Cambridge, 1982) has assessed that average yields per head under the Mughals were probably much higher than what it was in c. 1900. K.K. Trivedi's study on *suba* Agra also points out that in case of food crops the yields were 20% higher in 1595 as compared to 1892 statistics. Shireen Moosvi, however, argues that yields per acre between c. 1540-1870 for major food

crops remained practically the same; in case of cash crops there was relative decline in their output. South India also records high level of productivity during this period. But there occurred sharp decline in the productivity during the 19th century in the region.

In Marwar region, on account of aridity, there was tendency to leave the cultivated lands fallow for approximately three years to regain fertility. This led B.L. Bhadani (1999) to conclude that probably there was tendency to shifting cultivation in the Marwar region. A.V. Desai has stretched the argument for Ganga-Yamuna *Doab*. But Shireen Moosvi (1987) rejecting Desai's formulation argues that it 'was confined to some scattered non-contiguous pockets which were not geographically or ecologically distinct in any sense from the tracts around them...'

High productivity largely depended upon irrigation facilities and quality of the soil. Harbans Mukhia argues that generally speaking cultivation during the medieval period confined largely to the 'most' fertile plains. High yields for various crops entered in the *Ain-i Akbari* (c. 1595) led K.K. Trivedi (1998) to conclude that in *suba* Agra 'the cultivation was normally confined to fertile land.' Chetan Singh (1991) also points out that in Punjab the extension of cultivation was largely occurred only in 'agriculturally developed areas' during the 17th century. The availability of good quality water equally affected production. Yields under saline water could possibly be good but oily and extra saline water was not useful in terms of productivity.

One reason for the large scale expansion of cultivation was distribution of secular (*jagir*) and religious (*madad-i maash*) grants. Each *madad-i maash* grant was normally consisted of 50 per cent *banjar* (waste) or *liak uftada* (cultivable waste) under the Mughals. In Maharashtra Shahji's Poona *jagir* initially was a desolate country infested by 'wolves, wild beasts and robbers.' Dadoji Kondadev implanted Malves (hill tribe) to clear the land and got them settled in the region by giving permanent rights over the land they cultivated.

The pattern of productivity on irrigated and dry land varied from region to region. In Kashmir the average output of *abi* (irrigated) land was six times higher than yields of the *khushki* (unirrigated) land. In Maharashtra cultivable land available was very little. A.R. Kulkarni (1969) has brought out that in village Menoli (Vai *taluka*) cultivated land was just 16 per cent of the total village land while availability of irrigated land was even much less. It constituted only 1 per cent in village Nayagav, *pargana* Sirval (modern Bhor *taluka*). However, Bhimsen, writing in 1658, mentions about Aurangabad that 'the region is very thickly populated and not a single piece of land was to be found there which was without cultivation.'

Dilbagh Singh's study on eastern Rajasthan shows that there was distinct decline in agricultural production in post 1750s in the region that resulted in growing 'poverty and indebtedness' of the *raiya*s (peasants). In *pargana* Chatsu in 1763 *raiya*t possessed 350 fields out of which they sold off 175 to *Mahajans*, 'a number of them reduced to the status of share croppers and wage earners.'

16.2.3 Forest Clearances

Clearing of forest line for the purpose of agrarian expansion was a common feature during the medieval period. The history of development of agriculture is history of forest depletion. The growth of one form of sustenance (agriculture) resulted in depletion of another form of sustenance (pastoral/forest economy). The beginning of our period saw vast expanse of forest cover in the Gangetic plains. The forest

cover drastically changed by the close of the seventeenth century. Armed power went hand in hand in the process of extension of cultivation by clearing forests. Armed band accompanying woodcutters was a common feature in north India during our period of study. In the Ganga-Yamuna *Doab* we get frequent references to peasants/rebels taking refuge in the forest. Balban harshly dealt with such uprisings of the Mewatis and the Kateharias (Katehr region, modern Rohilkhand) and cleared the jungles of the nearby areas where they took refuge and established forts with Afghan garrisons. The fourteenth century historian Zia Barani observes:

Towards the first year of his (Balban's) reign he employed himself in harrying the jungles, and in routing out the Miwattis, whom no one had interfered with since the days of Shamsuddin...

In the year of his accession, the Sultan felt the repression of the Miwattis to be the first of his duties, and for a whole year he was occupied in overthrowing them and in scouring the jungles, which he effectually accomplished. Great numbers of Miwattis were put to the sword. The Sultan built a fort at Gopal-gir, and established several posts in the vicinity of the city, which he placed in the charge of Afghans, with assignments of land (for their maintenance)...

After the Sultan had thus routed out the Miwattis, and cleared away the jungle in the neighbourhood of the city, he gave the towns and the country within the *Doab* to some distinguished chiefs, with directions to lay waste and destroy the villages of the marauders, to slay the men, to make prisoners of the women and children, to clear away the jungle, and to suppress all lawless proceedings. The noblemen set about the work with strong forces, and they soon put down the daring of the rebels. They scoured the jungles and drove out the rebels, and the *ryots* were brought into submission and obedience...

While the Sultan was engaged in these duties news arrived from Kateher that disturbances had broken out...he gave them (soldiers) orders to burn down Kateher and destroy it...The whole district was ravaged, and so much plunder was made that the royal army enriched, and the people of Badaun even were satisfied. Woodcutters were sent out to cut roads through the jungles....

Zia-uddin Barani, *Tarikh-i Firuz Shahi*, Elliot, H.M., and John Dowson, *The History of India as told by Its Own Historians: The Muhammadan Period*, Allahabad, Vol. III, pp. 103-106.

Nurul Hasan has brought to notice with regard to *suba* (province) Bihar that during the reign of Shahjahan most of the *zamindaris* originated in *bankati* or land populated after clearing forests.

From the time of Shah Jahan, it was customary that wood-cutters and plough men used to accompany his troops, so that forests may be cleared and land cultivated. Ploughs used to be donated by the government. Short-term *pattas* [documents stating revenue demand] were given, [and these] fixed government demand at the rate of 1 *anna* per *bigha* during the first year. *Chaudhuries* [intermediaries] were appointed to keep the *riaya* [peasants] happy with their considerate behaviour and to populate the country. They were to ensure that the *pattas* were issued in accordance with imperial orders and pledged word was kept. There was a general order that whosoever cleared a forest and brought land under cultivation, such land would be his *zamindari* ... Ploughs should also be given on behalf of the State. The price of these ploughs should be realized from the *zamindars* in two or three years. Each *hal mir* (i.e. one who has four or five ploughs) should be found out and given a *dastar* (sash or turban; i.e. mark of honour) so that he may clear the forests and bring land into cultivation. In the manner the people and the *riaya* would be attracted by good treatment to come from other regions and *Subas* [provinces] to bring under cultivation wasteland and land under forests.

Nurul Hasan's translation of *Haqiqat-i Suba Bihar* (Berlin.Ms., Pertsch 505, now in Marburg, Germany) *Medieval India - a Miscellany*, Vol.1, Aligarh, 1969, pp. 237-238.

The cleared tracts were entrusted as *pattas* upon those involved in the clearances thus the new *zamindaris* were created in the region. There was sharp increase in cultivation in Bihar on account of clearance of forests for agriculture. The land south of Munger was largely a forest belt inhabited by tribals. Sher Shah with the help of his Rajput and Afghan soldiers suppressed the tribals (Cheros/Kharwars?) adjoining Sasaram and cleared the jungles and tried to expand the areas under cultivation. Sher Shah also sent Khawas Khan and Darya Khan to win over the tribal tracts across the Son river in Palamau and cut down the jungles of Jharkhand in huge quantities (AD1538). There were also Rajputs who fled from north and central India created new settlements in the Jharkhand and Chotanagpur plateau called *bhums* (Singhbhum, Birbhum, Barabhum, Sikharbhum, Manbhum, etc.). Many *zamindaris* were established. Raja Bahroz Singh of Kharagpur (1631-76) brought enormous quantity of land under plough in this region by clearing forests. Aurangzeb granted Kunda (in Hazaribagh) to Ram Singh in *ghatwali* (service tenure) tenure to guard the passes. The Mughals granted a *jagir* (revenue assignment) to the Lokragarh-Khetauri Rajput family of Manihari Godda. Chandels conquered the tract of the Bhuiyas and founded three kingdoms Gidham, Khaira and Kharagpur. With these conquests Koeri, Kurmi, and Muslim peasants also migrated along with them. They formed their own settlements (*bhums*) like Brahmanbhum, Gopibhum, Bhangibhum, etc. Thus helped in reclamation of land and extension in cultivation in the tribal areas of Jharkhand and Chotanagpur regions and sowed the seeds of settled agriculture in the tribal regions.

16.3 QUESTION OF PRODUCTIVITY

Productivity is closely related to the nature of the availability of soil in a particular region. The quality of soil in turn depended upon ‘other’ factors – rainfall pattern, availability of irrigation channels and nature of mineral deposits in the soil. Closely related to soil are famines. Its frequency and dreadfulness is largely determined by the availability of natural resources and how well the area is equipped to handle the natural disasters.

Let us review the pattern of availability of natural resources during the medieval period in the subcontinent and how far it affected and determined the pattern of agricultural production in the region.

16.3.1 Soil

Depending on the nature of soil and local conditions, while taking up the assessment Mughal rulers adopted ‘indigenous methods of the classification of lands’. In *Suba Bihar* the lands were classified under the heads *kahelfi* (irrigated) and *kanhel* (tank irrigated lands; also known as *talabi* in certain areas). *Bhoor* was sandy soil generally yielded *kharif* crops. The other two major land classifications were *bangur* (upland) and *khadir* (low land). *Khadir* crop was generally uncertain. Similarly, as compared to arid regions alluvial soil does not require deep ploughing.

Under the Mughals land was divided into *polaj*, *parauti*, *chachar* and *banjar*. *Polaj* never allowed to remain fallow and less labour was required for cultivation. *Parauti* was left out of cultivation for sometime to recover its strength for cultivation. *Chachar* lay fallow for three or four years. *Banjar* remained largely uncultivated for five or more years. Even some of the *banjar* tracts remained barren permanently particularly in a desert and hilly tracts. For assessment *polaj* and *parauti* lands were further divided into *abi* (irrigated, watered through channels), *chahi* (well irrigated), *nahari* (canal irrigated lands), *barani* (unirrigated; depended on rainfall),

and *sailabi* (flooded or kept moist by rivers; inundated). *Subas* of Delhi and Oudh particularly possessed *sailabi* lands fed by their chief rivers Ganges and Yamuna. Crops on *sailabi* lands equally possessed the danger of being destroyed by excessive river floods. On certain *sailabi* tracts production of three crops was possible. *Barani* lands were divided into two: *Duhur* (also *dahri*, *chikanawat*) – low lying; overflows by rivulets and often under water for one to two months; *katli* – land around river banks. *Sailabi* lands were most suited for rice. *Barani* lands largely produced jowar, bajra, lahdarah, and moth. *Ain-i Akbari* mentions the soil of Ajmer as largely sandy. Kashmir had three types of lands – *abi* (irrigated), *lalmi* (rough), and *chalkhair* (bushy).

There were many regional variations of soil types. In the Maratha territories rain fed land was known as *jirayat* while land enjoyed irrigation facilities was called *bagait*. Alluvial soil, to be found along the rivers was known as *malai* or *malav*. Plains generally possessed black soil while in the hilly tracts red soil was commonly present. In the Konkan region black soil was rare and mostly the soil was reddish brown. Alluvial soil was available only along the river banks. In this region lands were of two types – *malvarkars*, where plough could be used; another type was *dongrivarkas*. These were steep slopes where cultivation was possible only through manual labour. In south India land was of two types – *nancai* (wet land i.e. irrigated) and *punca* (dry lands; unirrigated).

India was known for its fertility of soils. Both, from the point of view of crops sown and lands left fallow Indian soils' fertility stand unquestioned. Indian soils have unbroken record of yielding two or at times three to four crops a year. Manuring in the form of animal droppings was available in abundance on account of the presence of cattle population in good numbers. Further, as Harbans Mukhia has pointed out, the high fertile property of river waters, particularly of the Ganga basin, resulted in deposition of 'fertile silt in the river valley with each annual inundation' as the major factor keeping in the fertility of river basin soils naturally intact.

16.3.2 Famines

Famines used to occur at regular intervals. It were often the result of scarcity of rainfall (*barani*) or caused by excessive rains. There occurred severe famine in Delhi during Iltutmish's reign. The famous famine of 1326-27 during Muhammad Tughluq's reign completely devastated the *Doab* region. In 1631 floods led to extreme famine situation around Surat. A year preceded to it was a drought year. Thus during 1630-32 Gujarat saw unprecedented famine resulting in the loss of 3 million lives. Locusts also used to harm the crops quite often. In 1675 though rain was sufficient crops were destroyed by locusts in Marwar region. B.L. Bhadani's (1999) study shows that from late 17th century onwards famines became more frequent a phenomenon in Marwar region. Let us find out state's response to tackle the crisis and the relief measures undertaken by the state.

Barani in his *Fatawa-i Jahandari* suggests that 'The King can help the people by reducing the land tax (*khiraj*) and the poll tax or by advancing them loans from his treasury by making a gift of what he can do to the poor and needy. He can direct the cash loans to be advanced to merchants so that they may import from other countries and sell it to the *raiya* at the cheapest possible rates. If the famine is more severe, the King can remit the land tax and poll tax altogether and issue a general order to the rich men of the kingdom asking them to take charge of the poor and destitute so that the people may not perish in every tribe or locality.' (Rashid, 1964)

Alauddin during famine made it mandatory to purchase the grains only to meet the immediate needs. Muhammad Tughluq laid out elaborate instructions, both long term and short term, to handle the problem. To provide immediate relief during the *Doab* famine he distributed gifts from the treasury. Ibn Battuta (d. 1377) informs us that he ordered 'that all the inhabitants of Dihli should be supplied with six months 'sustenance' to distribute six months provisions to the families living in Delhi. He abolished, as a relief measure, all duties on foreign goods coming to India. Wells were dug up at the state's initiatives. Seeds were distributed to the peasants. As a long term measure Muhammad Tughluq ventured to bring huge amount of land under state's direct cultivation with direct financial support by the state. Muhammad Tughluq also chalked out a farsighted master plan. He suggested that in the famine prone areas alternative form of crops might be cultivated. Firuz's canals also brought great relief in the areas.

Abdullah in his *Tarikh-i Daudi* records that during famine Sikandar Lodi (1489-1517) took *zakat* (transit duty) in kind. Sher Shah, conceived the plan of storing the grain for any 'unavoidable circumstances'. *Tarikh-i Afghan* mentions that even he ordered to extract and collect 10 *istar* per *bigha* to be collected from the peasants for storage. As a result grain became cheap and one does not record any famine during Sher Shah's reign.

The impact of famine was devastating. Prices used to mount all time high. We get frequent references to people resorting to eating flesh of dead animals. Famines accompany death and destruction causing health hazards in the region. Famines often resulted in loss of cattle, inadequacy of man-power, and in the migration and dislocation of the peasant population. In 1630 famine people from Rajasthan migrated to Patna where Hiraji Sah provided them with shelter and fulfilled their basic needs. Migration of peasants towards places like Burhanpur, Agra, Mathura, and Malwa, etc. was a common feature during famine occurrences in Rajasthan. *Amil of pargana* Naraina informs that 1665 famine forced *riaya* (peasants) to migrate to the territory of Malwa. He tried to bring back the migrants, but found many had died, some turned to labourers. He assured that he was trying to bring back their relatives and other peasants to rehabilitate the villages. Gujarat famine (1630-32) not only caused dislocation of population but also its impact was so devastating that there occurred changes in the cropping pattern. Peasants abandoned cultivation of cash crops (cotton and indigo) to food crops.

16.4 TECHNIQUES OF PRODUCTION: CROPS

Indian agriculture during the medieval period was not static. New techniques were constantly being evolved and adopted in the field of agriculture and drastic changes took place not only in terms of techniques involved but also in the patterns of crops grown. (for techniques see Unit 23, Block 5).

16.4.1 Cropping Pattern

In north India there were two crop seasons – *kharif* and *rabi*. In Rajasthan it were known as *siyalu* (autumn) and *unhalu* (spring). In south India on the basis of specific variety of rice cultivation there existed two crop seasons *kuddapah-kar* and *samb-peshanam*. Otherwise in case of other crops there was complete absence of crop seasons. Duarte Barbosa (c. 1518) commented on Malabar that here, 'everything is produced in every month of the year.' In south India particularly black soil areas contained enough moisture that made possible agricultural production all the year round. Certain crops (sugarcane, indigo, etc.) required one year to mature, while gestation period for some (betel-vine, etc.) was three years. Some crops were sown together but harvested at

different periods of time. As for multiplicity of crops, Indian peasant stood next to Chinese. *Ain* records as much as 40-45 crops sown. The cultivation was largely *do-fasli* (double cropping) unlike the European single crop production. As a result larger agricultural surplus was available as compared to their European counterparts. Ibn Battuta (d. 1377) also observes double cropping, a norm in India. He remarks, 'The Indians sow twice a year. When the rain falls in their country in the hot season they sow the autumn crop, and harvest it sixty days later. When they harvest these sixty days after sowing then, they sow the spring cereals...They are sown in the same ground where the autumn crops are sown for their land is generous and of good heart. As for rice, they sow it three times a year, and it is one of the principal cereals in their country'. Sujan Rai Bhandari (1695) informs us that in certain cases in Punjab even three or more crops were cultivated. But some areas like western Rajasthan (Bhadani, 1999) on account of aridity even the areas containing sweet water wells were not enough for double cropping. In Rajasthan double cropping was possible only in clayey soils, in lighter soils it was rather rare. Crops grown on rain fed tracts fetched low prices as compared to the crops required artificial means of irrigation. For Maratha region, however, A.R.Kulkarni (1969) concludes that only in the *Des* area where black soil could be found rotation of crops was possible. Along the coastal regions where soil largely contained marine deposits was favoured for garden crops. Where irrigation facilities were available second crop was possible otherwise in the Maratha region usually one crop was raised.

During the medieval period there was tendency to encourage cultivation of high grade crops replacing the inferior ones. Muhammad Tughluq asked the peasants to grow high grade crops – wheat replacing barley, sugarcane replacing wheat, and cultivation of date and grapes in place of sugarcane. Aurangzeb also clearly emphasised in his *farman* to Rasikdas (1665-66) that attempt should be to switch over from inferior (*jins-i adana*) to high grade crops (*jins-i ala*).

The medieval peasant did possess the knowledge that some crops are beneficial to the soil. Pulses like mung, urd, and peas were grown with foodgrains mainly with a purpose to enrich soil fertility L.A. Alaev (Cambridge, 1982) confirms the prevalence of crop rotation in South India. Some crops particularly cash crops and *rabi* crops required more ploughing and artificial means of irrigation in comparison to food crops. That is why in more arid regions like Rajasthan generally bajra, jowar, etc. were produced.

We do get references to mixed crops. The practice of growing mixed crops was known in Mughal India. Bajra was usually mixed with one or the other leguminous crops (mung, urd, moth, etc.). Similarly, there are references to the production of gochani (wheat mixed with gram), *bejhari*, etc. Moth in Rajputana and gram in Punjab and Haryana belt were always grown alongwith foodcrops and rarely single.

16.4.2 Crops

Cropping pattern still continued to be the same in the Gangetic plains. Largely wheat, barley, gram, pulses, sugarcane, cotton, oil seeds (sesame, mustard, etc.), etc. were grown in the tract. Barley was the major crop grown in Rajasthan. However, it was not the favoured crop in the regions of Bengal, Bihar and Assam.

Gram was extensively produced in western Rajasthan but later its production declined sharply. Bhadani (1999) tried to draw parallel to the extensive cultivation of gram during the 17th century to its great demand by the Rajput soldiery for cavalry.

In southern part of India rice was the staple crop of the region on wet lands (*nancai*). Other important crops grown in south India were cholam, ragi, varagu, sesame, flax,

groundnut, cotton, etc. In medieval Orissa, Kashmir, and Assam also rice was the staple crop, though wheat, barley, pulses, gram, etc. were also produced in the region. In Kashmir almost 2/3rd of the land was covered under paddy cultivation grown on *abi* (irrigated) land. Bihar was also known for its rice production. However, in Rajasthan rice was not at all produced.

The areas flanking the Western Ghats were famous for the production of spices. Besides, spices other items of production were aniseed, cumin, coriander, caraway, dit, etc. Long pepper grew wild in the forests of Champaran (Bihar). Abul Fazl mentions it fetched as high as 16 *dams* (40 *dams* = 1 rupee) a *ser* (40 *sers* = 1 maund).

Opium was produced largely in the regions of Malwa and Bihar. Nainsi and Peter Mundy (1655-56) record that opium, cotton and indigo were also grown in the Merta region (Rajasthan).

During the medieval period san/sunn-hemp dominated over jute in terms of production in Bengal. The latter could achieve greater importance only in the 19th century in Bengal at the expense of rice and sugar. It was also produced in Ratnagiri district in *abundance*, used largely for making fisherman's nets, ropes, etc.

Coffee (*qahawa*) was a known drink among the elites. It was largely imported from Arabian peninsula and Abyssinia. A coarse variety of it was produced in southern Maharashtra. Kashmir was known for its saffron.

The 17th century marked by the introduction of various new crops viz. maize, potato, sweet potato, tobacco, groundnut, chilly, and tomato.

Ain does not list maize among the crops for which cash revenue rates are provided. It appears to be a late introduction from the new world. Use of the word *makka* suggests its travel from the Red Sea route. Though we do get references to its cultivation in the 17th century from eastern Rajasthan, Maharashtra and the Deccan probably its extensive cultivation started from the nineteenth century onwards. (Habib, 1963)

Chilly was introduced in India during the 17th century, but its spread became more common during the mid-18th century only.

Use of tobacco spread phenomenally fast. Anand Ram Mukhlis (18th century) observed a large quantity of tobacco grown in the Sambhal region. Alexander Hamilton visiting Orissa in 1708 referred to the production of tobacco at Balasore.

Among the garden crops Ibn Battuta (d.1377) speaks high of mangoes. Bernier (1656-68) is full of praise of the mangoes of Bengal, Golconda and Delhi. The entire Konkan coastal belt produced mangoes, coconuts, betel-nuts, betel-vine, areca-nuts, palm, pineapple, jack-fruit, sweet potatoes, etc. *Des* gardens in Maharashtra with irrigation facilities were famous for production of grapes, betel leaves, figs, etc. Alberuni found the use of betel-leaf (*pan*) fairly widespread in India. Amir Khusrau (13th century) in his *Aijaz-i Khusrawi* mentions as much as 42 varieties of it. Bihar was known for the production of *Maghi pan*. Hajipur (Bihar) was acclaimed for the production of jackfruit. In *sarkar* Tirhut, *suba* Bihar orange grooves extended as far as 30 miles.

Pineapple, a native product of the new world, introduced in India by the Portuguese. It rapidly spread almost all over the region. Papaya and cashew nuts were other introductions from the new world.

It is interesting that fruits were largely seed grown. Turks introduced grafting technique (for details see Unit 23, Block 5) that provided great boost to the growth as well as

quality of certain fruits particularly oranges. Using grafting techniques various fruits from central Asia began to be cultivated during the 17th century (sweet cherry, apricot, kola, *narangi*, *sanglara*, etc.). However, melons were produced by importing seeds from Central Asia. Bernier mentions that 'there are no means of procuring good ones, and sowing it in ground prepared with extraordinary care, in the manner practised by the grandees. Good melons, however, are scarce...' Initially use of grafting was the royal preserve. Shahjahan lifted ban on restriction of the use of grafting techniques, thus its use filtered down to the masses.

During the 13th century production of grapes was not as widespread as at the turn of the century. Muhammad Tughluq encouraged peasants to shift to production of grapes. We hear Firuz Tughluq planted several varieties of it in his 1200 orchards around Delhi resulting in sharp decline of its prices. Shams Siraj Afif mentions its prices as 1 *jital* (copper coin) per *ser* while wheat could be bought at 8 *jitals* a *man* (= 40 *sers*) during Firuz Shah's reign.

Production of fruits and vegetables was largely confined to the vicinity of the urban centres. In north India Mali caste specialised in its production. In medieval period there developed tradition of maintaining orchards. But it were largely maintained by the emperors or the nobility. State's approximate annual income from royal gardens in the Deccan during the late 17th century was Rs.557,586.

Commercialization of Agriculture

Irfan Habib argues that the state's insistence to collect revenue in cash and also to gain profit was the major factor behind the commercialisation of agriculture during this period. An alternative opinion is that there is plenty of evidence of prevalence of money and exchange in the rural economy prior to the state's demand of revenue in cash. However, this action of the state would certainly push commercialisation in the agricultural sector. At any rate the cultivator also benefited from it either by selling his produce in the market or by producing high value crops. The peasants responded to the needs of the market. Cotton was one of the crops produced keeping in view the demand of its final product, the textiles, outside the local market. Sugar, both, candy and powdered was produced for the market. Indigo was one of the most important of the commercial crops in demand. Indigo cultivators from Sehwan in Sindh who used to export their product to the middle east had to face lot of difficulty when the demand declined sharply in 1640s. Tobacco, though a 17th century incorporation, also got commercialised very fast. Thus considerable amount of agricultural production was actually 'commodity production'. Irfan Habib (1968-69) argues that the cultivation of cash crops required larger investments and it was beyond the affordability of an ordinary peasant. Thus he links the commercialization of superior agriculture to *khwud-kashta* cultivation. He says that '*Khwud-kashta*, organised for commodity production, comes closest to capitalist farming.'

16.4.3 Means of Production

We have scanty information on the types of tools used for agricultural operations. However, wooden tools were more commonly employed in comparison to iron. European travellers mentions the use of wooden plough but iron ploughshare (*phal*), though for sandy and light soils hard wood ploughshare was also in use. In the Deccan and south India particularly in the black soil regions heavy plough drawn with the help of 2-3 and at times 4-5 pairs of oxen was used. But plough used in the wet lands was smaller and light. Indian plough was without mould boards for its usage was hardly suitable to Indian conditions. It involved threat of mixing saline and acid substances. Similar was true of the use of less depth plough. That reduces water retention and threatens fast drying of the soil.

Cattle manuring was most common. In western Rajasthan we do get references to flocks of sheep kept on the fields for two-three nights. Commenting on the situation in south India L.A. Alae (Cambridge, 1982) mentions that to fertilise the soil approximately a flock of 1000 heads (of sheep and goats) spending 5-6 nights on a *kani* (=1.32 acres) was required. Since it involved high payments to the herdsmen, only the higher strata could afford it. In the Deccan and south India wet lands and black soils hardly required manuring instead red soils called for its usage.

Generally the technique used for rice cultivation was transplanting of seedlings in cluster of 3-5 plants. It used to take three to four months to be ready for harvesting. For broadcasting, dry as well as sprouted seeds were used in south India.

16.5 TECHNIQUES OF PRODUCTION: IRRIGATION

While *kharif* crops largely depended on the monsoons/rains, *rabi* crops heavily relied on the availability of the artificial means of irrigation in north India. Babur laments the absence of 'running waters'. He emphasised the fact that crops were mainly dependent on rainfall and some other artificial means of irrigation. We do get frequent references that bad monsoon or excessive rains resulted in migration of the peasants. In contrast to Babur Zain uddin Khawaf (*Tuzuk-i Baburi*) highlights the presence of rivulets from the rivers for irrigation purposes. *Ain* records a number of *mahals* (smallest unit for revenue assessment) and villages located on river/stream banks largely using water from them for irrigation. As compared to the north, rainfall pattern in south India was much more evenly distributed on account of south-western and south-eastern monsoons. Further, in south India 'dry cultivation' (based on artificial means of irrigation) was more common as compared to north India. Though extensive irrigation ventures were undertaken by the rulers, elites as well as villagers, hardly much care was taken for its maintenance.

16.5.1 Well

The most common means for irrigation was from wells. Muhammad Tughluq granted loans to the peasants for digging up wells. Babur notes the prevalence of both the Persian wheel in Lahore and Dipalpur and indigenous *charas* in the region east of Yamuna (see Unit 23, Block 5 for the techniques used in both the *charas* and Persian wheel). The *charas* (in Gujarat called *kosa*) could work both on the well and on the river banks. *Rabi* crop largely depended upon artificial means of irrigation. In his *farman* to Rasikdas *karori* (revenue collector) (1665-66) Aurangzeb also emphasised that the old wells fallen out of use should be repaired and that new wells be dug at different places for extension of cultivation and production of *jins-i kamil* (high grade crops). The *baoris* (step-wells) were also used for irrigation purposes. Muhnot Nainsi, *diwan* of Raja Jaswant Singh (AD 1638-78) in his *Marwar ra Pargana ri Vigat* mentions two types of wells used for irrigation – *kosita* (shallow; largely *kuchcha* wells) and *kohar* (deep; largely brick lined wells). *Kachcha* wells generally outnumbered *pakka* wells.

Irfan Habib argues that the introduction of Persian wheel resulted in increase in productivity in the region of Punjab. Chetan Singh (1991), however, questioned the effectiveness of Persian wheel in the region. He says that Persian wheel had its own limitations. It was not very effective where water table was very low. Beyond ten meters its use becomes less economical. That is why in certain areas of Punjab *charas* continued to be more effective where water has to lift from great depth. Manucci (1656-1712) records *charas* as the prominent mode in the environs of Lahore. Advantage with *charas* was, Chetan Singh argues, its low cost and use of less animal power. It is interesting, however, that Muhnot Nainsi records the opposite what Chetan Singh is arguing. He mentions that

charas (kosita) was used upto the depth of 15-45 feet and Persian wheel (*arhat dhibra*) operated on the depth ranging from 42/45-84 feet. It is interesting to note that in eastern Rajasthan there is no reference to Persian wheel instead *charas* was the most common device used to lift water from wells for irrigation. Probably 'prohibitive cost of the system placed it beyond the reach of Indian cultivator' as rightly pointed out by Irfan Habib.

In Maharashtra land irrigated by wells was called *motasthal*. However, well irrigation in this area was not a common feature as in Rajasthan and the Mughal territories. Similar was the case in south India. Nonetheless, for irrigating garden crops wells were often used.

16.5.2 Tanks, Dams, and Reservoirs

Use of dams for irrigation purposes was widespread during the medieval period. Babur equally acknowledged the use of lakes, tanks, ponds, and reservoirs for irrigation purposes. Zainuddin Khawaf refers to *jalthas* i.e. lakes and ponds in some cases extending from 1-3 *kuroh* (2.5-7.5 miles). These were particularly useful for irrigating vegetable fields and orchards. Babur records that where proper channels were not available people themselves used to carry water in pitchers to irrigate plants. However, such cumbersome method could possibly be used to irrigate small plots.

Dams were used efficiently to utilise the flood waters. Chandella dam of Muzaffarpur village, tehsil Chakiya, district Varanasi, Uttar Pradesh that survived till 1954-56 utilised efficiently the flood water flowing into Chandraprabha river used for irrigating vast tract of Chandraprabha-Karmanara *Doab*.

Raja Bahroz Singh of Kharagpur (1631-76) erected a dam, Bhimbandh (south-west of Kharagpur). It utilised the rain water from the hills. He chalked out an interesting plan of distributing rain water. Large channels on raised platform were erected to carry out water from the dam. Such was the distribution that water was made available throughout the year. Another similar reservoir *raja rani* was erected by Bahroz on the eastern side of Kharagpur hills to utilise rain water for irrigation. The water remains in the reservoir all the year round and it is still in use for irrigating paddy fields.

In the Maratha territory irrigation by aqueduct, known as *patasthal* was a common feature. Villages used to store rain water in the dams to be used for irrigating their fields through aqueducts. However, rivers and streams usually dry up in the summer and the method was not at all useful for irrigation in the summer.

Tanks and reservoirs were also used to irrigate fields. K. K. Trivedi has pointed out the presence of tanks in almost every village in Agra *suba*. In Marwar we do hear of the construction of large number of tanks Sur Sagar, Farasat Sagar (AD 1607 by Maharaja Sur Singh), Vasant Sagar, etc. by rulers and nobles. These tanks required regular cleaning. Abul Fazl records when Akbar visited Merta he ordered a reservoir to be cleaned which was earlier used for irrigation purposes.

The most popular forms of artificial means of irrigation in south India were reservoirs, tanks and dams. However, construction of it involved huge amount of money that made individual efforts impossible. Invariably, one finds largely the involvement of either the entire village or group of villages or else elite or the state. Vijayanagara rulers took special interest to lay vast network of tanks in their territory. The earliest record of tank construction by the Vijayanagara ruler is of 1369 when Bukka I's son Bhaskara Buvadura (Prince Bukka) brought the water of Maldevi river for irrigation. The tank is still used for irrigating fields. The tank is seven miles long and two and half miles broad. He also ensured the water supply at Penukonda by digging a channel and connecting it to a tank.

Porumamilla Tank Inscription AD 1369

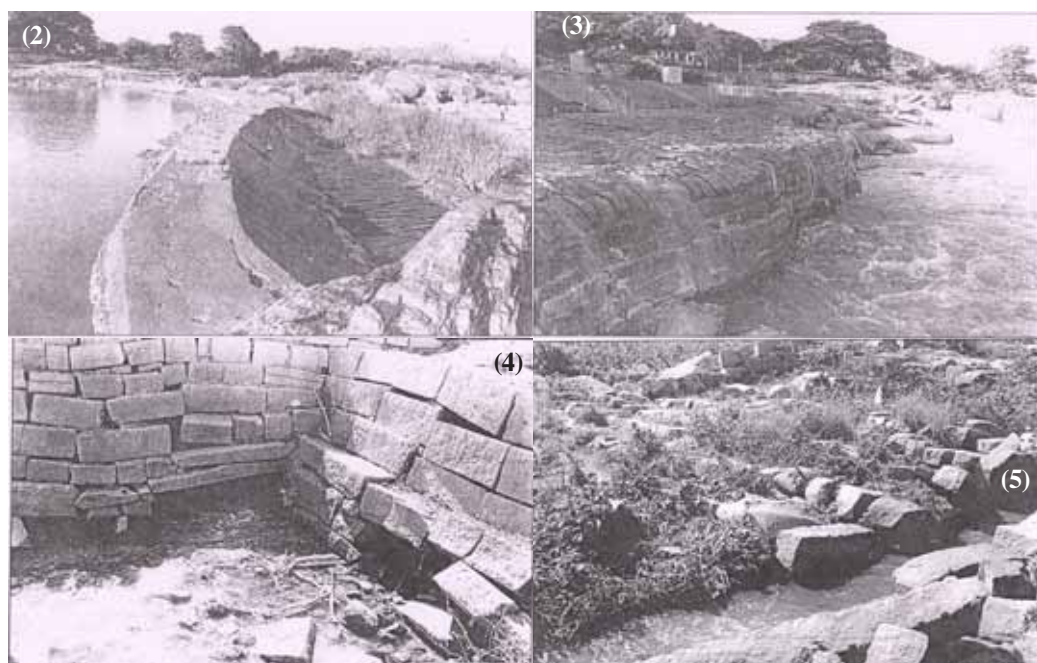
- (V.6) May Achyuta (Vishnu) protect the three worlds, freed from misery..., because there was altogether no such (merit) to compare with (known till then) as (that accruing) from the establishment of a tank.
- (V.9) A son, a literary composition and a tank, (hidden) treasure, a Siva temple, a forest (-grove), a Brahmana-village: (these) seven (kinds of) offsprings are the best.
- (V.28) Having thus heard the supreme reward, king Bhavadura, the pious soul; commenced to make the earth tank-nourished (tatcka-matrika).
- (L.48) Its procedure (was as follows):
- (Vv.29-31) It (i.e. the tank) is situated in the country to the south of Sriparvata (Srisaila), the great sacred place of pilgrimage; the yojanas to the east of the sacred place (tirtha) called Ahobala; in the division of the gentle blessed Siddhavata-natha; two yojanas to the west of his (capital) Udaya-giri; and to the east of the flourishing city of Porumamilla. I shall (now) describe in this edict the sequence of the period of construction of the tank:-
- (Vv.32-35) In the second half of the creator's life-time, in the Sveta-varaha Kalpa, in (the age of) the Vaivasvata Manu, and in the 28th Yuga, - in that divine part of the country - in the first quarter of Kali, after the lapse of four thousand, four hundred and seventy - (in figures) 4470 - years of mortals, and also after the (lapse) of Saka years measured by the number of the earth (1), the Namdas (9), the eyes (2), and one (1) - (in figures) 1291 - in the (cyclic) year Saumya, in the month called Karttika, on the fourteenth (day) of the bright half, on the auspicious day of Guru combined with Pushya, when there was Karkataka lagna, under the influence of well-chosen auspicious planets,
- (V.36) Of the tank constructed (at the above specified time and place) according to (the requirements of) the Sastra I shall in the edict describe the twelve constituents (amga) for the benefit of future kings:
- (V.37) (i) a king endowed with righteousness, rich, happy (and) desirous of (acquiring) the permanent wealth of fame, (ii) and Brahmana learned in Hydrology (pathas-sastra), (iii) and ground adorned with hard clay, (iv) a river conveying sweet water (and) three yojana distant (from its source), (v) the hill parts of which are in contact with it, (i.e. the tank), (vi) between these (portions of the hill) a dam (built) of a compact-stone wall, not too long (but) firm, (vii) two extremes (srimga) (pointing) away from fruit (-giving) land (phal-sthira) outside, (viii) the bed extensive and deep, (ix) and a quarry containing straight and long stones, (x) the neighbouring fields, rich in fruit (and) level, (xi) a water course (i.e. the sluices) having strong eddies (bhrama) on account of the position of the mountain (adri-sthana), (xii) a gang of men (skilled in the art of) its construction, - with these twelve essentials an excellent tank is easily attainable on (this) earth.
- (V.39) While (i) water oozing (?) from the dam, (ii) saline soil, (iii) (situation) at the boundary of two kingdoms, (iv) elevation (kurma) in the middle (of the tank) bed, (v) scanty supply of water and extensive stretch of land (to be irrigated), (vi) and scanty ground and excess of water: (these are) the six faults in this (connection).
- V.40) Devoid of faults and adorned with a multitude of good qualities, renowned in the world by the name Anamtaraja, this endless ocean, of which the water is sweet, was founded by king Bhaskara.(V.41) (There were) one thousand labourers (working) at the tank and dam every day, and a hundred carts (were employed) for the masonry work of the sluice and wall (bhrama-bhitti).(V.42) And this most excellent tank was completed in two years. There is, to be sure, no limit at all to the expenditure of money and grain in this (connection).
- (V.43) The measurements in terms of rekha-damdas of the height, the width, and the length of the dam together with (the portion of) the hill (included in the) dam, are here given:
- (V.44) The dam, having eddying waterducts (i.e. sluices) (and) protected by Vighnesa, (Gana-pati), Isvara (Siva), Vishnu, Bhairava, and the great Durga, is one which has the enormous length of five thousand rekha-damdas, height of seven and its width eight. And the land (is) excellent and yields plentiful crops in all seasons and contains groves.
- (V.45) This land was liberally given for the gratification of gods and Brahmanas. Through the merit of this gift of land the tank was made to be an ornament (of tanks).
- (V.46) Just as the dam of a reservoir should not be injured, so likewise the dharma-dam of the ocean of kings. Therefore I, Bhaskara, repeatedly request the kings on earth to protect my charity.
- (V.50) The Officer-in-charge (adhikarin) of the tank is the clever son of the minister called Kumaragiri-natha, Devarraja by name.
- (V.52) (One) khari (of land) producing paddy and (one) khari of black-soil land, - (these) were out of regard given to him by Bhaskara, preceded by a libation.

V.S. Sukthankar, 'The Porumamilla Tank Inscription of Bhaskara Bhavadura: SAKA 1291', *Epigraphia Indica* Vol.XIV No.4 (1917-18) pp.106-109

Devaraya I brought the water of Tungabhadra from 15 miles distance to his capital. It is even now used for irrigating the fields. Krishnadevaraya also built at Nagalapur (present Hospet) a huge tank – Rayara Kere for irrigating rice fields and gardens.



During the Vijayanagara period, particularly in the semi-arid regions, many individual efforts were also undertaken by men of prominence. In return they were assured of a share in the enhanced produce. It formed part of their ‘transferable property’. Such tenures came to be known as *kattu-kodage* in Karnataka and *dasavanda* in Tamil region. In one such case builder of the tank in a temple village (*devadana*) was assured 3/10th of rice produced on land irrigated by the tank and a part share in ragi produced on the dry land. In return he was held responsible for repair and maintenance of the tank. Involvement of temples in tank building activities for irrigating fields in their own *devadana* villages was a common feature of our period in south India.



1) Stepped Tank: Vijayanagar; 2) Anegundi Anicut; 3) Anegundi Anicut; 4) Outlet from Kamalapuram Tank; and 5) Waste Weir

Source: Dominc J. Davison- Jenkins, *The Irrigation and Water Supply Systems of Vijayanagara*, New Delhi, 1997.

16.5.3 Canal

In south India rivers are largely rainfed and water level often fluctuates. On account of this canal irrigation was hardly favoured as means of irrigation. In contrast, in north India from the beginning of the 14th century our period saw the establishment of huge canal networks for irrigation purposes. Though, the beginning was done by Ghiyasuddin Tughluq (1320-25), it was Firuz (1351-86) who established a huge network of canals for irrigation purposes. To obtain continuous water supply to his newly built town of Hissar Firuz dug two canals from Yamuna – the Rajabwah and the Ulughkhani. It greatly helped in the extension of cultivation in the region. Both Barani and Afif mention that earlier only the *kharif* crop was cultivated now even the cultivation of *rabi* crop also became possible. Afif praises that it also helped in raising the ground water level in the region. Later during Akbar's reign both Rajabwah (1560) and the Ulughkhani (1570-71) were re-excavated. Shahjahan further extended the canal 30 *kuroh* (1=1.5 miles) in length and brought the water down to his newly built capital – Shahjahanabad (*Shah nahr; nahr-i faiz*). During Shahjahan's reign another important canal was excavated in the Upper Bari *Doab* region (Punjab) on river Ravi that carried the water upto Lahore.

In the Maratha territories digging up of the canals and dams were largely the responsibility of the respective villages. However, A.R. Kulkarni (1968-69) argues that the state must also be 'bearing total or partial expenditure of the construction of new dams or the repairs of old dams.' Water canalised through aqueducts was called *pals* through cooperative efforts. Kulkarni (1968, 1969) mentions an interesting *mahzar* of 1674 in which plaintiff complained against the construction of a dam on river Banganga by the *ryots* of the Mohadi village in Nasik district.

To a large extent in the northern region agriculture was rainfed. Digging up of wells was the result of individual efforts. Whatever canals were excavated in the northern region as a result of state initiatives. They could irrigate only a small area. In the Deccan and southern plains we do find creation of artificial lakes by constructing dams across the streams. However, in spite of the great concern of the state to provide irrigation facilities, approximately total irrigated land in south India constituted 3-7 per cent at the turn of the 19th century (except Tanjore where the per cent was as high as 50).

16.6 ORGANISATION OF AGRICULTURAL PRODUCTION

The Indian medieval economy was largely, 'free peasant economy.' We do not get much references to peasant opting for community cultivation instead largely peasants along with his family members carried on the production process on individual basis. In south India as well small peasant householder along with his family labour formed the basic unit of production. However, those holding larger estates (*khwud-kashta* peasants in north) had to depend on 'regular inflow of additional labour.' In the Maratha country since large number of young populace joined Shivaji's army, state was anxious to ensure whether enough man power for cultivation was available or not.

Largely in a village set up there existed three categories of land holders: higher castes (superior right holders), lower castes (*rai-yats*), and menial castes (agricultural labourers and village servants, etc.). (for details see Unit 17) Menial castes worked as agricultural labourers. Medieval north India, this way presents a contrast that on the one hand land was available in *abundance* on the other hand, there was presence

of large number of landless labourers. Stray references to forced labour are also recorded. In western Rajasthan Nais were employed as forced labourers by the Rathors while *bhumias* (synonym for *zamindar* in Rajasthan) forced Dhedhs (leather workers) to weed out grass from the fields in the Jalor region. In contrast to north one finds deficiency of labour force in south India. Alaev (Cambridge, 1982) argues that 'the deficiency of labour force was to an extent connected with the fact that an appreciable part of the population from high castes considered physical labour as degrading and some agricultural operations as forbidden and constantly sought to avoid personal participation in the production process... (and) oriented to labour saving and not to land saving.'

During our period of study we get frequent references to migration of peasants and agricultural labour from one region to another. (for details see Unit-17) When a new village was colonised or rehabilitated the leader assumed the status of a *zamindar* in the territory. In the Maratha territories he was known as *patil* who normally assumes the grant as his *watan* (hereditary revenue assignment). Peasants whom he generally brings for cultivation used to get *mirasi* rights.

The dominant agricultural castes in north India were Jats Ahirs and Rajputs who were directly involved in the cultivation. Brahmans generally used to get their land cultivated with the help of hired labour. In western Rajasthan *Kamins* (low caste people) are mentioned among the cultivators. In western Rajasthan Rajputs held superior rights in the region. They held the *zamindari (basi)* villages and not the *raiya* suggests that in the region it was a non-cultivating superior land holding caste. (Bhadani, 1999) *Patels* were another non-cultivating caste in western Rajasthan. Their concentration was in Jalor region. In contrast the Jat villages were *raiya* shows that they were the cultivating caste in the area. Paliwal appears a peasant caste in almost all the *parganas*. In the Maratha dominion generally the cultivators hailed from the Maratha class.

Besides these so called 'agricultural' castes one finds several other castes that otherwise either belonged to artisan category or else to the lower strata in the social hierarchy possessed lands and were reported as cultivators.

Alaev (Cambridge, 1982) speaks of the presence of regional division of labour in south India. Malabar specialised in the production of pepper and spices, while for rice it had to look towards Gujarat, Coromandel, and Bengal.

16.7 PASTORAL AND FOREST ECONOMIES

Pastoral Economy

Pastoralism was probably present and scattered all over and there existed intimate relationship between agriculture and pastoralism. In western Rajasthan pasturage were not only owned by the village community as common resource pool, rather a large number of pasturages were also maintained by the Rajput rulers in their *khalisa* (crown land) territories (Bhadani, 1999). Along the riverine tracts that were generally flooded and where inundation was a common feature sedantary agriculture gave way to pastoralism and nomadism. Chetan Singh's (1991) study on Punjab shows the presence of large scale pastoral communities particularly in the lower Indus plains subsisting on pastoral economy. Abul Fazl (c. 1595) and Sujana Rai Bhandari (1695) observed the prevalence of shifting cultivation in the lower Indus plains. Similarly, arid regions where scarcity of rainfall makes it difficult to cultivate the

fields presence of grassy and wild lands gave way to pastoralism. In these regions cattle herding became the chief source of subsistence. During the medieval period per head cattle population was much more than what it was in 1900. Irfan Habib points out that the presence of extensive wastes to sustain the large cattle population was the main reason for this favourable ratio. He further argues that the presence of large scale cattle population resulted in the use of bullocks and not the bullock-carts for transportation of grains in the villages. Consequently pastoral products like *ghi* was much cheaper in comparison to wheat in Mughal India. In Rajasthan *ghi*, wool and leather products were important items of export. One of the *Qanungo Bahi* of 1662 records that approximately 650 maunds of *ghi* was exported from western Rajasthan from the *khalisa* land alone. (Bhadani, 1999) Mithila region, particularly Tirhut, in Bihar was famous for its milk and curd preparations. Cattle were an essential part of the agricultural processes, both, for the purposes of cultivation and waterlifting. Interestingly religious inhibitions restricted the usage of cattle population as a source of 'food'. In Rajasthan camel breeding was an important economic activity. Camels were not just used as beasts of burden; they were also employed in agriculture. In western Rajasthan animal breeding was one of the important occupations. Animals, particularly bullocks and cows were exported from the Marwar region to the neighbouring areas. In western Rajasthan particularly Mallianians Sanchor were famous for good breed of cows. Peasants of Nagam were known for bullocks breeding. Though Mallani was also famous for horse breeding, in general horse breeding was not a very important profession instead Rajasthan was famous for sheep and goat breeding. Raibaris and Gujars were chief pastoral and nomadic communities who largely involved in animal breeding in Rajasthan. Nuniz mentions that the region around Bankapur (modern Dharwar) was rich in seed-plots and cattle breeding farms.

Forest Economy

During the medieval period the extent of forest reserves was much more than what it is today. Though agricultural products formed the mainstay of India's economy, revenue from forest products was equally important. It sustained a number of manufactures particularly related to timber, mulberry, honey, animal skins, etc. Almost ten per cent of the resource contribution was from tribal sector. Timbers from the hills were floated down the river routed to various timber marts in the plains for onward consumption. Chetan Singh has highlighted the importance of timber for boat-building along the river towns in Punjab. Wazirabad on river Chenab was known for its boat-building activities. It received the timber-logs via river Chenab from the hills. Western Ghats were known for its production of good quality teak, rated next to Malabar teak. Its production in the region provided great boost to shipbuilding industry. Shivaji's shipbuilding activities were located in Kalyan and Bhiwandi which were famous for its timber production.

Babur mentions good quality of Kabul rhubarb that was in turn coming from western Himalayas. *Majith* or madder used as dye, particularly dying the coarse woollen cloths, by the Bhotias. Gumlac, another kind of a dye, was procured from the western mountains. Musk, an animal product, was another most sought after article found in the western Himalayan region stretching from Kashmir to Assam. Ivory from elephant tusks was another product in demand among the nobility. We get numerous evidences of Mughal emperors demanding tribute (*peshkush*) in the form of forest/hill produce/rarities. Shahjahan's daughter Jahanara's letters addressed to Raja Budh Prakash of Sirmur (c. 1664-1684) shows that the Raja sent to Princess Jahanara ice, musk, pomegranates, and sal wood from Kalaghar forest.

16.8 AGRICULTURE AND THE STATE

Irfan Habib (Cambridge, 1982) basing on Barani's analysis that 'heavy taxation affected agriculture' argues that there existed a 'relationship between land revenue and agricultural production' and 'a decline in agriculture caused a corresponding fall in land revenue.' He draws a paradox that while Muhammad Tughluq's heavy taxation provoked an agrarian rebellion of great intensity in *Doab*, he was also the first Sultan to chalk out a systematic policy of improving agricultural production. He established a separate department of *amir-i kohi* headed by a *diwan*. To bring in entire *Doab* under cultivation he appointed a number of officers each holding the responsibility of bringing in 30 *kurohs* (1=2.5 km.) of land under cultivation. Barani laments that under the project 70 lakhs of *tankas* (a silver coin) were distributed but hardly 'a thousandth or hundredth part' was brought under cultivation. Whatever might have been the result of Muhammad Tughluq's efforts it nonetheless brought forth the concept of extension of cultivation by bringing in new areas under cultivation. His effort to bring in the concept of adding more high value crops by replacing the lesser value crops was equally important.

Peasants heavily depended upon state and the rich strata for conducting agricultural operations. Ordinary peasants were often short of seeds, required extra money to irrigate the land or dig a well; or else for even ploughing the fields. (for details see Unit 17)

State played pivotal role in funding the irrigation projects. Canal irrigation was almost entirely dependent on state or nobles' initiatives and fundings. Even constructing a brick-lined (*pukka*) well was beyond the means of ordinary peasant. For the first time, Muhammad Tughluq (1325-51) during *Doab* famine extensively distributed loans (*sondhar*) among the peasants for the construction of wells for irrigation purposes and to expand agriculture. Later, under the Mughals such pre-harvest loans came to be known as *taqavi*. Dilbagh Singh mentions that in eastern Rajasthan it was the state's prime concern to construct new wells and upkeep the old ones. Aurangzeb in his *farman* to Rasikdas also raises the same concerns.

Shivaji instructed his officers to advance money to the cultivators for purchasing bullocks, seeds, etc. Peasants were to pay back the balance in easy installments. Shivaji ordered in 1676 to the *subadar* of Prebhaveli *mamla* (*taluk*) to pay visit to all villages to find out the needs of the cultivators whether they were in possession of sufficient amount of seed, plough, oxen for cultivation, if need arises, to distribute advances. But state assistance was not always sufficient and many a time peasants had to bank on village *mahajans* in such cases often he had to pay double the amount. State's prime concern was to encourage peasants to bring as much land as possible under cultivation. State lured them by taxing nominal amount only.

Monopolies and State Interventions

The market forces commonly and largely determined medieval agricultural markets. However, Alauddin's market control measures was one such instance when state tried to intervene and attempted to control prices. But the venture collapsed soon after his death.

Nonetheless we frequently encounter the 'monopolising' tendencies on the part of the state. Mining all through the medieval period was state's preserve. Even use of grafting technique remained restricted for the Royal gardens. The ban

was lifted in Shahjahan's reign. The production of *chay*, a dye produced in the eastern Deccan was completely controlled by the king. There is an interesting case of indigo monopoly exercised by the Mughal ruler Shahjahan during 1633-35. Indigo was the most sought after agricultural product. The emperor's move was motivated by 'profits involved'. Shahjahan entrusted monopoly rights to Manohar Das Danda granting him the sole right of buying indigo of the empire on payment of Rs. 11 lakhs. All merchants were asked to purchase indigo from him. It fell heavily upon the peasants. Many peasants anticipating the slump destroyed their crop. They received much a lower rate for their labour. Shahjahan then tried to handle the situation by farming out the cultivation rights to Mir Jumla. But imperial monopoly could hardly last a year and the emperor was forced to withdraw. Mughal annual revenues from salt monopoly at Machhlipatnam alone constituted approximately Rs 110,000.

16.9 SUMMARY

The dominant features of medieval agriculture were favourable land man ratio, pasturage and animal population. Though land was in *abundance*, there was presence of landless labourers in large numbers; existing social structure binding them by 'custom and force'. There was large scale expansion of agriculture mainly on account of extensive forest clearances, as a result of introduction of new techniques of irrigation, particularly Persian wheel and canals. Discovery of the new route opened up new channels of contacts that brought in knowledge of new crops particularly from the New World resulting in the introduction and expansion of the variety of crops sown. Recurrent famines, however, affected agricultural operations. It not only resulted in the displacement of peasant population on account of large scale migrations but also at times influenced the production process. We have seen how after 1630 Gujarat famine peasants switched over to food crops resulting in the decline of cotton production in the region. In the entire production process states' role was very 'central'. On the one hand state extended all possible help to the peasants to combat natural calamities, on the other side, state did try to monopolise the production to a limited extent.

16.10 EXERCISES

- 1) State briefly the dominant features of Indian agriculture during the medieval period.
- 2) How did the soil conditions effect the growth pattern of agricultural operations?
- 3) How far the environment influenced the cropping pattern during the medieval period?
- 4) To what extent artificial means of irrigation stimulated the production process during the medieval period?
- 5) Analyse the techniques of production used in India during the medieval period.
- 6) What role did the state play in the growth of agriculture during the medieval period.
- 7) Discuss the importance of pastoral and forest products in medieval economy.

UNIT 17 AGRARIAN STRUCTURE: RELATIONS

Structure

- 17.1 Introduction
- 17.2 Agrarian Class Structure: The *Zamindars*
- 17.3 Peasant Stratification
- 17.4 The Notion of Power
 - 17.4.1 Sources of Power within the Peasant World
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- 17.5 Categories of Peasants
 - 17.5.1 *Khwud-kashta*
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 - 17.5.6 The *Kamins*
- 17.6 Credit Relationships and the Money Lenders
- 17.7 The Village and the Village Community
- 17.8 Forms of Peasant Resistance
- 17.9 Agrarian Structure: Deccan
- 17.10 Agrarian Structure: South India
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17.1 INTRODUCTION

Rural society was a conglomeration of those who have been generally termed the 'dominant sections' and the vast majority who tilled the land and sweated it out. We can begin our discussion by probing into the position of the superiors and the nature of power that they enjoyed. According to Irfan Habib the highly centralized Mughal state extracted a large proportion of peasants surplus produce through an elaborate system of revenue taxation. The bulk of the revenue resources were distributed among the nobles or *mansabdar* through transferable *jagirs*. The purpose was to secure the military might of the empire and the loyalty of its political agents. A subordinate share of the surplus produce went to the *zamindars* whose participation in the system was essential to facilitate the process of revenue collection from the peasants. However, the *Zamindars* possessed permanent superior rights over the produce of land while *jagirdars* enjoyed no such permanent rights.

17.2 AGRARIAN CLASS STRUCTURE: THE ZAMINDARS

We can begin with a brief discussion of the institutional means of access to rural resources through the system of rights to surplus produce. The image of the Mughal empire portrayed by Irfan Habib is that of a highly centralized state that extracted a large proportion of the peasant's surplus through an elaborate system of revenue taxation. The redistribution of these resources came to be the principal mode of securing the military might of the empire and the loyalty of its political agents. The bulk of the resources of the empire were distributed among the nobles or *mansabdars* through transferable *jagirs*. A subordinate share of the revenue accrued to the hereditary holders of superior rights in land, collectively termed the *zamindars*, whose participation in the system was essential not only on political consideration but also to facilitate the process of revenue collection from the peasantry.

Zamindars in Mughal India were socially a heterogeneous group. Their position, rights as well as obligations varied a great deal. For purpose of analysis Nurul Hasan has classified the *zamindars* into three categories – autonomous chieftains, intermediaries and primary *zamindars*. According to Professor Hasan these categories are hierarchical but not mutually exclusive. Also there was a latent struggle for land, power and authority among them. Thus attempt of bigger Rajas to bring intermediary *zamindars* under their control was a continuous feature. The *zamindars* as a class were also divided on caste/clan/tribe lines. The Mughals tried to utilize conflicts between various sections of the *zamindars* for their own purpose both in terms of hierarchy and caste composition. The heterogeneity of the *zamindar* class needs to be emphasized in order to understand their multiform behaviour.

Despite this inherent weakness the *zamindars* as a class constituted a formidable element in medieval Indian society and polity. They were in control of tremendous territorial and revenue resources. According to *Babar Nama* 1/6th of the revenue of Hindustan came from the territory of the *zamindars*. From the point of view of military resources they were a power to be reckoned with. The total military strength of the *zamindars* according to Abul Fazl (c. 1595) stood at 4.4 millions. Moreover the *zamindars* were strongly entrenched into the rural society and dominated it by virtue of caste links and customary ties. They were the most important link to gain access to local resources. The Mughals were faced with the problem as to how to curb the power and authority of the *zamindars* in the interest of a centralised state, and how to draw them into the task of administration for the sake of stability. The working of the Mughal revenue system depended upon the ability of the Mughal govt. to overawe the *zamindars* with their superior military might. At the same time the Mughals tried to resolve the basic contradiction between the two which centered around the question of distribution and redistribution of revenue resources. The *zamindars* were integrated into the Mughal administrative apparatus to the extent that they had become partners, albeit unequal partners of the Mughal ruling class in its exploitation of the peasantry. The Mughals endeavoured to convince the *zamindars* that it was more profitable for them to look for the support of the state rather than defying its authority. A small portion of the *mansab* holders such as the Rajput, Baluch and Ghakkar chiefs belonged to the *zamindar* class. They were granted *jagirs*. The Mughals integrated the *zamindars* with the land revenue administration for realizing land revenue from the peasants. At the local level Mughal state also remained largely dependent on the *zamindars* for the implementation of its agrarian policy particularly the expansion and improvement of cultivation. A share in the *jama* or revenue was also allowed to them as compensation for services rendered to the state.

However, the major source of conflict between the *zamindars* and the Mughal state was the size of the former's share in the surplus produce. Irfan Habib has pointed out that the zamindar's share was restricted not only by imperial rules and regulations, customary practices, but really much more by the fact that the high pitch of revenue demand left little with the peasants to be taken by anyone else. Hence clash of interest between the two.

The Mughal policy towards the *zamindars* was contradictory. Abul Fazl (c. 1595) and Mughal chronicles of the 17th century used the word *zamindarana* in the sense of opportunism or disloyalty. From the official point of view the *zamindars* were regarded as main danger to law and order and reluctant to pay land revenue. That the Mughals were not able to overawe the *zamindars* is completely obvious from their categorization of the *zamindars* into *zortalab* and *raiyati*. *Nor did the Mughals succeed in isolating the zamindars from the peasants.* The *zamindars* never gave up the ambition of enlarging their rights. Yet the Mughals depended heavily on the *zamindars* and they themselves strengthened their position in the rural society.

We can infer from the evidence of the Mughal period that the struggle between the imperial administration and the *zamindars*, breaking out frequently into armed conflict, was an important feature of the political situation of the time. Manucci wrote around 1700 that Mughal governors are in a constant state of quarrel with the *zamindars* and that usually there is some rebellion of *zamindars* going on in the Mughal kingdom. It is evident that the Mughals could not finally resolve the basic contradiction that revolved around the appropriation of surplus.

The possession of *zamindari* right not only implied dominant position and higher social status in the rural society but also conferred certain economic advantage which made the *zamindari* right highly valuable. His principal fiscal right was to demand *malikana* from the *raiyat*. In addition the *zamindar* also claimed many customary perquisites on many occasions in rural social i.e. cess at the time of marriage, birth, festival, etc. He had also the right to demand *begar* on the basis of customary practices from peasants, artisans and menials. *The zamindar* was also entitled to pay land revenue at concessional rates on their personal holdings. In *pargana* Merta the *zamindars* possessed nine per cent of the total cultivated land and paid only Rs. 19 as land tax whereas the normal tax burden amounted to Rs. 200. *Zamindars'* land holding was also exempted from the payment of common village expenses and many other taxes. A substantial part of his holding was devoted to the cultivation of cash crops as he was in a position to provide necessary inputs. There is also evidence indicating that a part of his liquid capital was invested in usury. That the *zamindari* right was considered worth possessing is evident from the point that there was an evergrowing tendency on the part of several members of dominant castes to create new *zamindari* rights in *raiyati* villages. There are also instances of establishment of *zamindari* rights through forced sale.

The higher social status of the *zamindar* was manifested in the variety of customary rituals he performed in the social life of the village community. It was his customary privilege to beat the drum at the time of arrival and departure of a marriage procession in the village. The bridegroom was required to call upon the *zamindar* and offer him presents. It was obligatory on part of the *raiyat* to extend invitation to the *zamindar* for a feast at the time of marriage.

Between the *zamindar* and a section among the *raiyat* there existed a relationship of mutual dependence. The economic aspect of this relationship was of primary importance. The *zamindar* who possessed substantial holding was dependent on the peasants for its cultivation.

According to Irfan Habib the unequal conflict with the mighty imperial power compelled the *zamindars* to adopt a conciliatory attitude towards their peasants who would have become their allies. It is quite likely that the peasants and the *zamindars* could have clash of interest over the part of the surplus that latter claimed. It is, however, remarkable that this contradiction did not fully develop in the Mughal empire. On the contrary the official view as reflected in Alamgirnama was that the *zamindars* generally managed to keep the peasants conciliated. Caste and traditional ties were perhaps factors in preserving and strengthening bonds between the two. The role of caste is obvious in the case of the Jats and the Maratha rebellions. One, however, cannot visualize a uniform pattern of relationship. The relationship between the two depended on various factors such as caste composition, customary practices, state of economy, strength of the peasant community and the nature of administrative control.

The question arises that what were the processes whereby the *zamindars* and the peasant came together? The growing pressure of revenue demand not only fanned peasant resistance but also compelled large number of *zamindars* to turn to rebellion since they were not only the collecting authority but also had permanent interest in land which coincided with those of the peasantry. Secondly, the *zamindars* also commanded a traditional loyalty from some of their peasants. Many of the armed retainers of the *zamindars* were peasants. They served the *zamindars* either because of caste affiliations and in return for economic considerations. These peasants could be drawn into adventures that *zamindars* might undertake in pursuit of his own feuds or ambitions. According to Irfan Habib the *zamindars* and the peasants joined each other in rebellion in two situations. Distress owing to growing pressure of land revenue which affected both the peasants and *zamindars* and in the second the struggle was essentially that of *zamindars* in which the peasants were primarily involved owing to customary allegiance. The Jat and Maratha *zamindars* had a definite social base among peasants of their castes. The widespread disturbances in at least two regions – Agra-Eastern Rajasthan and Mughal Deccan were set in the background of a resurgence of *zamindari* power on the one hand and increasing tendency to exploit the peasant on the other.

J.F. Richards has questioned Irfan Habib's formulation that the *zamindar* rose in rebellion as a result of the growing pressure of revenue demand on the rural society. His counter argument is that rising production and monetisation placed the *zamindars* in more advantageous position. The local *zamindars* had slowly gained a military advantage vis-a-vis imperial army. The Mughals did not have the will and resources to disarm aggressive *zamindars*. Instead the long term effect of Mughal agrarian system on the rural society increased the confidence and resources of the *zamindars* which encouraged them to enter into conflict with the other prominent groups.

However, what is indisputable is the fact that the Mughals could not maintain the social balance which was the basis of the so called 'Mughal stability'. The clash of interest between the *zamindars* and the state and between different sections of the *zamindars* could not be resolved. These conflicts according to Nural Hasan led to frequent clashes, disturbed law and order and seriously weakened the administrative and military power of the state. After the death of Aurangzeb in 1707 the Mughal administration became too weak to maintain the social equilibrium. The Mughal empire was waning and it was the *zamindars* who were exerting themselves.

17.3 PEASANT STRATIFICATION

The village population comprised different sections and categories of people, each with different functions and status. The superior section of the village society was

composed of *zamindars*, *muqaddams*, *chaudhari*, *qanungo* (rural aristocracy). They owed their status partly to hereditary superior right in land and partly to their position in the apparatus of revenue administration. The *jagirdari* system did not alter the structure of rural society.

From the economic standpoint, however, the most important section of the village population comprised the cultivators who are collectively referred to as *raiyat*. The terms *raiyat* and *asami* are often used in general sense to denote peasants. Other terms such as *khwud-kasht*, *pahi*, *muzara*, *hali* were specific to different sections within the peasantry and hence not interchangeable. They were differentiated from the *kamins* (artisans and menials) and other occupational classes who could also engage in cultivation. Both numerically and because of their role in the village economy and society the agriculturists dominated the village.

Table 1
Distribution of Artisan and Menial population in Eastern Rajasthan

Village	Agriculturists	Artisans, menials
Badahera	93	33
Rangpura	56	9
Aranya	32	12
Chadelpur	55	7
Vorkhedi	20	6

The peasant population in many villages was overwhelmingly of the same caste, often of the same lineage group. Even in the 18th century a village could easily be identified as a Jat, Ahir, Gujar, Meena or Rajput village. Other villages had a fair mixture of peasant castes, although one or the other caste was still in a dominating position which is evident from the following Table pertaining to eastern Rajasthan:

Table 2

Village Caste Households	No. of Peasant Households	Dominant Caste	No. of Other
Chandelpur	45	Jat	33
Aranya	32	Meena	26
Rangpura	56	Jat	51
Kuthi	51	Meena	25
Mojpur	17	Jat	11
			Ahir 6

The peasant proprietors were termed *khwud-kashta* and those cultivators who did not have lands of their own were known as *muzarian*. The *khwud-kashta* formed majority among the peasants. Less numerous than the *khwud-kashta* were *pahis* who were essentially migratory cultivators. They could be either residents of neighbouring villages or those who had deserted their original villages.

Apart from the *khwud-kashta*, *pahi* and *muzarian*, a section of the peasants comprised share croppers and *halis* or *majure* who had overlapping positions and fluctuating rights. The dividing line between the *muzarian* and *halis* was the possession of ploughs and oxen. There are references to peasants who sank to the status of *mujur* or *hali* due to the loss of agricultural assets. The categorization of the rural population was thus based on 1) Caste and occupation, 2) residential

status, and 3) the nature of rights in land. The position of each resident in the social hierarchy of village was mainly determined by these factors. The possibility of transformation from one rank to another within the rural society, must also be taken note of. *Khwud-kashta* could sink to the position of tenant or *pahi*. *Pahi* could rise up the hierarchy and become peasant proprietor. Agricultural labourers improved their position by acquiring ploughs and bullocks.

There was a vast difference in the resource position of individual peasants. This is indicated by references to peasants who cultivated large holdings by hiring in full time agricultural labourers. They also possessed a number of surplus ploughs and bullocks which they rented out to the needy peasants. As for the small peasants, though they might be the owners of their holdings, quite often did not have enough resources and looked to the richer section for the supply of agricultural as well as consumption loans.

In order to illustrate large intra group stratification and disparities in the distribution of land and agricultural implements we may refer to some documents from eastern Rajasthan.

Table 3
Pattern of Distribution of Size of Holding in Eastern Rajasthan

Village Saluno		
Total no. of cultivators	No. of cultivators	Size of holdings
20	2	8 <i>bighas</i>
(8 cultivators grew only <i>kharif</i> 12 obtained two harvests)	6	20 to 30 <i>bighas</i>
14 cultivated cash crops	8	50 to 80 <i>bighas</i>
6 only food crops)	4	100 to 200 <i>bighas</i>
Village Sagod		
Total no. of cultivators	No. of cultivators	Size of holdings
19	3	less than 10 <i>bighas</i>
	4	10 to 20 <i>bighas</i>
	13	50 to 80 <i>bighas</i>
	14	100 <i>bighas</i>
Village Board		
Total no. of cultivators	No. of cultivators	Size of holdings
22	7	less than 10 <i>bighas</i>
	11	20 to 50 <i>bighas</i>
	6	more than 100 <i>bighas</i>
Village Khairabad		
Total no. of cultivators	No. of cultivators	Size of holdings
33	14	less than 10 <i>bighas</i>
	15	30 to 80 <i>bighas</i>
	5	more than 100 <i>bighas</i>
Village Vaqod		
Total no. of cultivators	No. of cultivators	Size of holdings
42	29 landowners	13 landless

Pattern of Distribution of Ploughs

In village Jholpa, in eastern Rajasthan 244 ploughs distributed over 83 cultivators average 3 per cultivator. However, the picture undergoes a change if we consider individual cases:

13	less than 1 plough	5	more than 5 ploughs
14	1 to 2 ploughs	2	33 ploughs each
50	3 to 5 ploughs		

Concentration of numerous ploughs in the hands of a few members of the village community is also testified to by a document pertaining to village Dhulia, in eastern Rajasthan. Out of 203 ploughs 102 were owned by 2 Rajput cultivators.

In village Pasrao, in eastern Rajasthan there were 74 ploughs out of which 18 were held by the village headman, 25 by a Rajput and 9 by a Mahajan. Similarly in village Ratwara out of 39 ploughs available 19 were possessed by two Rajputs.

The question arises as to what extent the caste status corresponded to the economic status of cultivators. One criterion to determine the nature of economic differentiation is the possession of ploughs and bullocks. The significance of this exercise lies in the attempt to assess whether the concession granted to the upper castes was reflected systematically in the differential ownership of key productive resources. Disparity in the ownership of these assets in terms of caste is apparent but it is not acute. We may say that caste status cannot be seen as an automatic proxy for economic status but the majority of the prosperous peasants belonged to the upper castes.

17.4 THE NOTION OF POWER

We can look into the factors which created within the peasantry socio-economic disparity and situations of power for some and powerlessness for others.

17.4.1 Sources of Power Within the Peasant World

The connection between caste and power is slightly complicated. The complication arises because one has to consider both ritual ranking as well as the power that accrued to them or was appropriated by them in the economic and political sense because of their favourable position in that hierarchy. There was the division of peasants into the categories of *khwud kasht*, *muzarian*, *pahi*, *hali* and menials. The question is whether or not the caste composition of each of these categories broadly corresponded to their status. Caste was also the basis of the divisions of agrarian class 'into caste peasantry on the one hand and the menials (agricultural labourers) on the other. However, the situations cannot be understood merely in terms of the powerful high caste vs. the powerless low caste notion. Without undermining the inequalities created by the caste system, we may argue that caste did not create conditions of complete and total power for some and utter powerlessness for others.

Caste was an entitlement to material well being as there was considerable difference in the economic positions of various castes. Upper castes were also assessed at concessional rates. Caste ties prompted peasants to collective action.

17.4.2 Land and Resources

From the unequal access to land and resources arose several imbalances and dependencies in rural society. The possession of resources needed to cultivate land

was an important source of power. It instantly increased the possessors reckoning in rural society as well as in the eyes of the state. Our documents, whenever they list the *asamis* of particular village or those who migrated from elsewhere to bring land under cultivation, mention the numbers of plough and oxen held by them. We know of poor peasants who depended on those who possessed surplus implements. Possession of resources was so valued that it also became an entitlement to more favourable treatment in the allocation of land and higher status.

Lack of resources resulted in various forms of agrarian dependence. Agricultural labourers represented the most extreme form of agrarian dependence. Widespread indebtedness also reduced the autonomy of the peasants in cropping decisions. Indirect interventions in the labour process of the peasant proprietor or *khwud kasht* could have been exercised through the manipulation of the terms of debt repayment. In one instance we find the money lender demanding repayment of grain loan in the form of raw cotton after the harvest.

17.4.3 Money

Those who possessed money wielded considerable power. It is best evident from the position and status of money lenders in rural society. It was a power that arose out of the strength of their purse. Almost all sections of the rural society depended on money lender in one way or the other. It was on the strength of their money that the money lenders acquired land, hereditary offices and tracts in *ijara*. Infact they were emerging as strong competitors to traditional leadership of the village. Poorer section of the village society was critically dependent on credit offered by money lenders. Indebtedness intensified exploitation even then we come across instances of peasants siding with moneylenders against *zamindars*, etc. It was in the large scale purchase of offices that the importance of money in power play is best exemplified. Money became an alternative source of gaining access to agrarian resources.

17.5 CATEGORIES OF PEASANTS

Within the village peasants themselves were stratified into number of categories on the basis of the nature of holdings.

17.5.1 *Khwud-Kashta*

The term *khwud-kashta* implied hereditary ownership of land and the right to sell or mortgage it. The essential feature of this tenure was the possession and use of personal ploughs for tilling the land holding owned by the family. *khwud-kashta* had the right to get back his holding even after the lapse of 10-15 years provided he cleared revenue dues. The upper caste and richer *khwud-kashta* relied on full or part time labour for cultivating their holdings as their women did not work in the fields and the Brahmans and Rajputs did not plough land themselves. In their case the use of hired labour irrespective of the size of land holding was indispensable. The number of ploughs owned by a *khwud-kashta* was a measure of his status. A section of the *raiyat* who did not own ploughs had to lean heavily on those *khwud-kashta* who possessed surplus ploughs.

The richer section of the *khwud-kashta* and superior caste peasants enjoyed tax concessions and leading positions in the rural society. The *khwud-kashta* status also incorporated complete or partial exemption from payment of common village expenses. In short, the *khwud-kasht* were relatively well off peasants, owners of the best land,

possessors of numerous ploughs and bullocks and in addition enjoying a favourable tax rating. It was also noted by the Mughal administration that the richer section of the *khwud-kashta* at times manipulated to shift their burden on to the common peasants. They also tried to repress the small peasantry by converting the raiyati holding into their *khwud-kashta*. Officially, the conversion of raiyat kashta land into *khwud-kashta* was prohibited. Despite official restriction this trend asserted itself gradually. The richer section who had resources at their disposal, were involved in the purchase and mortgage of land holding belonging to the resources of the poor peasants which led to the development of share cropping and tenant farming.

The *khwud-kashta* were expected to implement the agrarian policy of the state because of their ability to invest capital need for expansion and improvement of agriculture. It was noted by the administration that a section of the *khwud-kashta* could maintain cultivation even in lean years while majority of the small peasants would give up cultivation. It was an awareness of this situation that enabled the well off *khwud-kashta* to consolidate their position vis-a-vis the state and weaker section of the village community.

17.5.2 The *Pai Kasht*

The *pai* or the *pahis* were those who came from villages other than the village where they resided. The position and the nature of their land rights varied depending on their caste, duration of stay, their agricultural capital, availability of land and the customary practices of the area. They were mostly inferiors in caste and status. Occassionally, those from the upper castes also became *pahis*. Though by and large poor no summary conclusions about their economic conditions are possible. Those with ploughs and bullocks were better off and they were more likely to be singled out by the state for concessions. Through the offer of payment of land revenue at concessional rate, by extending help in the construction of hutment, through preferential treatment in the allotment of cultivable waste, the *pahi*'s resources and labour potentials were put to use in the interest of the state.

There were two categories of the *pahis* the first may be termed non-resident cultivators. They usually came from neighbouring villages and cultivated land without becoming the resident of the village, tilled the land as tenants and had no right to sell or mortgage it. The *pahis* were induced to develop newly colonized and depopulated villages and they were charged land revenue at a concessional rate. This sometimes made the *pahis* even better off than the resident cultivators, but being outsider, they did not have social status.

The second category of the *pahis* was essentially migratory cultivators who came from far off villages and *parganas*. The extent of the mobility of such peasants is evident from the fact that they came from far off regions. In 1665 four hundred *pahis* migrated from the Deccan and settled down in 36 villages of *pargana* Malrana in Rajasthan. The *pahis* brought 416 ploughs along with them. The migrant *pahis* were offered attractive terms on two consideration: 1) they had to leave their ancestral villages, and 2) because of their agricultural capital. They were permitted to construct their hutment in the village by undergoing the custom of *chhaparbandi* and acquire the resident status. In due course of time they could transform themselves into *Khwud-kashta*.

The reasons for the migration of the *pahis* are sometimes mentioned in the document. Famines, wars, oppression, by local authorities, excessive taxation, demand for revenue arrears, indebtedness, non availability of credit, search for better terms and

conditions are all cited as reasons for migration. According to a late 17th century document from eastern Rajasthan *patels* and raiyats of tappa Phagi migrated to Aurangabad due to famine. According to the census of 78 villages of *pargana* Malarna about 10% were migrants, 7% from the neighbouring *parganas* and 3% arrived from Deccan and Malwa. About 4% of the cultivators had also emigrated from the *pargana*. The recognition by the state of the ability of the peasants to migrate in search of better conditions and thereby affect the states' revenue constituted a vital element of the state agrarian policy. There was a section among the peasants prepared to migrate if better terms were available elsewhere.

It is also evident from our documents that the *pahis* were less numerous than the *khwud kashta*. According to a *yaddashti* document pertaining to *pargana* Pinayan the total number of cultivators in 20 villages was 391, of which only 76 were *pahis*. There were no *pahis* in 5 villages and in the remaining 15 their number varied from 1 to 22. They formed 19% of the total number of cultivators in that *pargana*.

17.5.3 The Muzarians

The *muzarian* were, as a category of cultivators less privileged than the *khwud kashta* and were occasionally dependent on the village money lender, *zamindar* and headman for bullocks, ploughs and seeds, etc. The *muzarian* belonged to two distinct categories, namely state tenants and tenants of superior section.

State tenants were those who cultivated surplus land and land abandoned by some *khwud kashta* in the village under specific terms and conditions mentioned in the patta issued by the state revenue officials. There used to be competition to attract tenants on the part of the state officials, *madad-i maash*, and *inam* holders.

The position, rights and economic conditions of the state tenants rested on such concrete conditions as the availability of cultivable waste and the nature of implements owned. Tenants who had implements of their own were preferred by the state. They could bargain with the officials for securing pattas on favourable terms. The terms of tenancy varied. Some of them worked as short term contractors, cultivating a particular land holding for a single harvest or for a period of one year, but the contract was renewable. According to some documents land revenue demand on the state tenants was 40% of the produce on the cultivation of *banjar* and 50% where the land cultivated was *polaj*. In course of time a section of state tenants, originally assigned to cultivable waste, became settled and acquired hereditary occupancy rights over land.

The second category of the tenants tilled the personal lands of the superior sections (*zamindars*, *muqaddams*, holders of *inam*, *madad-i maash* grants) and other prosperous peasants who depended upon tenant cultivators partly owing to the social factor and partly due to the pattern of land holding. A large proportion of land was held by the dominant and richer section which was partly let out to the tenants. Whereas the state tenants paid only land revenue to the state these tenants had to pay in addition rent or *malikana* to the owner which came to about 15% of the produce. If we add it to the 40 to 50% taken away as state revenue, the share demanded from the tenants can be computed to 55 to 65% of the produce. The proportion could go even higher if the tenant did not have required agricultural inputs and borrowed them from the owner. Many of these tenants were in debt to the owner. The existence of such tenants in spite of the great *abundance* of cultivable land can be explained in terms of their inability to invest in their holdings.

17.5.4 Share Croppers

Share cropping is also a form of dependence. It cannot be equated either with untouchability or landlessness. It arose out of poor peasants inability to get enough from his own holding or his poor resource position. *Sanjha* entailed a specific production relationship between investment and labour and between investment and redistribution. Under this arrangement one group provided necessary investment or productive resources and labour power was provided by another group. Under the *sanjha* tenure the resource poor peasants cultivated land conjointly with the *zamindars* and other prosperous cultivators who resorted to this arrangement because of their substantial land holdings for which they could not provide required labour and personal supervision. Small peasants supplemented their income by working on *sanjha* holding. In some cases, the land was owned by the *zamindar* but inputs or cost of production was shared by the *sanjhadars*. But mostly, it was the proprietor who bare the cost of production. A special feature of the *sanjha* was the differential revenue assessment for the two parties of *sanjha*: the *zamindars* were assessed at concessional rates and the peasants were required to pay normal rates. Moreover, the *sajha* holding was not liable to exemption from *malba dues*.

17.5.5 Agricultural Labourers

The caste factor necessitated a certain supply of hired labour. A large reserve for such labour was supplied by the menial castes. Apart from the landless menials a section of the small peasants was also available to render part time agricultural labour. There are numerous references to full time and part time agricultural labourers (*halis, majure*) who were employed by different sections of the rural society. The *halis* are categorized as *Brahman ka hali, Rajput ka hali, zamindar ka hali* and *gaon ka hali* signifying agricultural labourers under the employment of the upper caste cultivators, superior sections such as the *zaminder*, village headman and those who rendered labour within the frame work of the village community. Thus in one village in eastern Rajasthan out of 28 *halis* ten were hired by the richer section and the rest served the village community. Some of the *halis* belonged to the agriculturist castes. Thus in a village of *pargana* Barsana out of 40 *halis* 5 belonged to the middle caste and the rest were artisans and menials who included Khati, Lohar, Nai, Kumhar, Teli, Mahar (water carrier) and Balahi (tanner). Female *halis* were also employed. Thus in a village of *pargana* Barod out of 8 *halis* 5 were male and 3 were female *halis* who belonged to Jat and Ahir castes. In the majority of cases, full time *halis* were employed for a period of 3 to 4 months and received monthly wage. Thus in village Umaheri out of 5 *halis* 4 were paid monthly wages at the rate of Rs.2 and the 5th designated as Chamar received Rs.1.50 per month. Female *halis* were paid lower wages as compared to their male counterparts. In village Bhawro two elderly Ahir female *halis* were paid 1.25 per month and one young Jat female *hali* was paid Rs.2 per month. The *halis* were also given a small fraction of food crop produce. *Gaon ka hali* or those employed by the village community rendered agricultural labour at certain periods of peak agricultural activities such as sowing, harvesting, weeding, etc. They were paid through a share of the produce. Their share in the produce varied from 0.50 to 1% of the gross produce. They were also allotted small plots of land in lieu of services rendered to the community.

17.5.6 The Kamins

The *kamins* formed the lowest rung in the social hierarchy of the village. They are also referred to as paoni and *begaria*. They served to cater to the village community

requirements for agricultural implements as well as labour. The low castes such as Chamar, Balahi, Thori, etc. worked as the village menials and also supplied agricultural labour to the village community especially in the busy season.

It is not entirely clear as to what was the status of cultivators belonging to the professional and service castes i.e. *kamins*. Irfan Habib is of the opinion that the hereditary division of labour imposed by the caste system prohibited the low castes from acquiring the status of peasants thereby creating a 'fixed reserved labour force for agricultural production.' But there is ample evidence to show that *kamins* could become full time agriculturists. We can divide the *kamins* into two categories 1) who performed services to the village community and also rendered begar to the superior sections on customarily fixed share of the grain heap before the payment of revenue. Second category of the *kamins* were agriculturist, paying land revenue to the state. They were exempted from begar and payment of taxes on their caste related professions. Khati, Teli, Kumhar, Kalal and service castes such as Chamar, Balahi and Nai are referred to as *asami* land or tax payers. In some villages they constituted 10 to 17% of the recorded *asamis*. Our evidence indicates that the number of cultivating *kamins* was significant and widespread.

Despite official restrictions on the expansion of khud kasht holding at the cost of *raiyyat* land, this trend asserted itself gradually. The resource rich *khwud kashta* were involved in the mortgage of lands of the *raiyyat* on a large scale. The best agricultural land thus tended to pass into the hands of this moneyed class. This caused acute tension between the privileged and under privileged categories of cultivators in their joint petitions the unprivileged demanded that these be limited to their actual land holdings and should not be extended to land acquired from the unprivileged i.e. exemption from *malba*.

This brought about a new relationship into the village society, namely between the richer and poorer section of the peasants who were reduced to the status of tenants and dependent peasants. The extension of the *khwud kashta* holdings had several implications for the function of the village community. The well to do *khwud kashta* who were able to consolidate large holdings, with consequent demand for increased labour supply, used their status and capital to keep the *raiyyat* poor and dependent. When a small peasant in adverse circumstances had to barrow money or grain for subsistence, the rich *khwud kashta* lent money on the mortgage of land. In one instance they mortgaged 175 fields out of 350 belonging to the *raiyyat* at the time of famine and scarcity. Often the richer *khwud kashta* let out the agricultural land they had acquired to the erstwhile peasant proprietor on condition of paying rent. Many *khwud kashta* thus transformed themselves almost completely into rentiers.

The richer section could maintain cultivation even in lean years while majority of small peasants were hard pressed to cultivate even small holdings. It was an awareness of their situation that enabled the privileged and richer section to consolidate their position in the village community vis-a-vis the state. The administration could not have been wholly insensitive to these realities. In order to protect the interest of the ruling class the state authority maintained social and economic disparity one reinforcing the other.

The state had to maintain the richer groups within rural society as some kind of insurance for continuing cultivation in lean years. The state also realized that it was the rich groups which could expand cultivation and engage in cultivation of superior crops.

The net result was growing inequality resulting in turn to the concentration of land at the higher end and increase in the number of dependent peasants on the other. This fact is vividly brought into focus by the petition filed by the *raiyat* of village Phagi. They complained that earlier they owned 700 ploughs and now they own just 28 ploughs. Many documents testify to the deteriorating condition of the *raiyati*. In village Pahari the number of ploughs belonging to the *raiyat* fell from 300 to 50. Their growing pauperization was accompanied by an ever increasing burden of debts which ultimately deprived many peasants of their fields and wells. The economic disparity in the village community grew and the accumulation of capital enabled the richer section to exploit the poor strata of the peasantry more intensively. The kind of equilibrium and the relationship of interdependence created by land *abundance* situation collapsed due to the working of economic forces. The result was that the number of tenants and dependent peasants increased without any corresponding increase in pressure on land and the power of the richer section grew further. With the pauperization of a large section of the peasantry and concentration of wealth in a small section, the rural society in the 18th century thus became more unequal and segmented than before.

In view of the various forms of dependence and interdependence that existed in the rural society it would be conceptually more accurate to view the individual cultivating family unit as part of a complex production system. This was particularly so because of the fact that control over local capital was restricted into the hands of rural elites and moneylenders.

17.6 CREDIT RELATIONSHIPS AND THE MONEY LENDERS

Peasants' needs and demand for loan can be attributed to their 1) revenue obligations 2) subsistence and seed loans 3) to build up agricultural assets and 4) to meet social obligations. Irfan Habib on the basis of the 18th century evidence from Bengal states that the peasant took loan mostly to pay land revenue. In Rajasthan loans were obtained to buy seeds, to dig wells, and for personal consumption, etc. There is a clear indication of the important role of credit in agricultural production.

The main sources of credit during the medieval period were *bohras*, *mahajans*, *sahukars* and the State. These were not two competing alternatives but complimentary to each other. Loans to the individual were largely provided by the *bohras* and the loans on large scale were generally collectively made to the *raiyat* by the state. The loans were given for the development and agrarian restoration, colonization, etc. and when *bohra* was not available or he was reluctant to offer money on credit to the needy peasants.

Irfan Habib believes that the growth of money lending was almost an inevitable accompaniment of demand for land revenue in cash. It did not really generate any agricultural capital, but merely marked a parasitical growth on agriculture. However, our evidence from Rajasthani documents indicates that credit from private money lender was intrinsic to the system of agricultural production and the money lender provided useful service to the peasant community, enabling them to maintain cultivation 20 cultivators and survive in lean years during the *rabi* harvest, to dig up wells with the help of money lender. The state too recognized the important role that they played in the rural economy in the context of the dominance of 'subsistence sector' and in areas where production was uncertain due to geographical factors.

Money lending in the rural areas was not restricted to the Bania caste, Brahmans *Sanyasis*, *chaudhuri qanungo*, *zamindars* and rich cultivators also worked as money lenders. Some *mahajans* combined it with trade and agriculture. Rural magnates who combined these activities and in some cases also held administrative office existed in the 17th-18th centuries. In conflicts regarding mortgage of land it was this category of rural magnets that were involved. In addition to lending money rural rich also hired out wells and other assets. Money lending was widespread in the rural society, as instances of raiyat of *parganas* in eastern Rajasthan falling under debt are numerous. In Rajasthan *tagai (taqavi)* was not interest free. Nine per cent interest was charged on loans both in cash and kind.

The rate of interest in eastern Rajasthan ranged from 9 to 25%; in Marwar region it was 10 to 36%, while in Maharashtra it ranged from 37.5 to 60%. The rate of interest was higher on unsecured loans and lower rate was charged where security was offered. State helped in securing repayment of loans provided it were not more than 10 years old. No help was extended where the state realized that recovery would adversely affect peasant production.

State also imposed restriction on the operations of the *bohras*. These were aimed at restricting the degree of exploitation as well as to ensure uninterrupted cultivation. Peasant's response to excessive demand of the *bohras* generally resulted in the desertion of the village. In order to prevent desertion of villages that the state issued instructions to that local official that 1) *bohra* should not harass the *raiyyat* for the payment of old loans; and 2) repayment should be made in accordance with the harvest output. General principal in regard to all loans was 1) repayment of fresh loans soon after the harvest 2) recovery of old loans if current harvest was extremely good; and 3) installments should be fixed according to the paying capacity. The state also fixed restrictions to the maximum limit for compound interest. The total debt should not exceed twice the principal amount. In situation of acute distress of the *raiyyat* a moratorium on all repayments of loans was imposed for the time being.

These restrictions, however, must not be taken to imply an antagonistic relationship between the state and the *bohra*. The *bohra* served a large number of small borrowers and the state fully realized the important role played by them in the rural production system and marketing thereby ensuring the flow of revenue to the state. The rationale for restriction lies in the objective of the state to subordinate the claims of the *bohra* to its own revenue demand. An integral part of the policy to regulate and limit *bohra* exaction was the provision to extent state *taqavi* when the *bohra* refused to offer loan. *Bohras* were also encouraged to offer loans supported by official assurances for recovery. These assurances were crucial in allaying the private *bohra*'s fear of default in condition of uncertain production or desertion by the peasantry.

17.7 THE VILLAGE AND THE VILLAGE COMMUNITY

The village was both a primary territorial locus and a revenue unit. The village was viewed as a discrete entity not only in terms of its physical space but also in the sense of a social collective represented by the village community with the *muqaddam* as its chief spokesman. This is most clearly brought out in representations made to the higher authorities by the *muqaddam* pleading on behalf of the entire village on a variety of issues common to the whole cultivating community.

In the official writings of the early British administrators on the Indian rural society the village communities are identified on the social foundation of the peasant economy in India. The village community is characterised as a closed corporate foundation depending on small scale production to meet its own requirements. According to the British official writings India was a land of little village republics and the people of India lined under this simple form of municipal government or small republics.

Sir Charls Matcalfe describes the character of the village community as little republics almost independent of any foreign relations and unchanging in character. He also believed in the interdependent community character of the various classes of inhabitants living in the village. James Mill confirmed his belief in the village community as a corporation. Sir Henery Maine found the Indian Communities as an organized self acting group of families exercising a common proprietorship over a definite tract of land. According to him there were two types of village communities 1) in which the village authority was lodged with the village *panchayat* and 2) in which the authority was in the hands of village headman. Elphinstone also believed in the concept of Village community as being a form of municipal institution with some local jurisdiction. He also asserted that 1) The village community was not a universal phenomena in India. 2) we also maintained that 2) not all the classes of functionaries (artisans, etc.) lived in every village and that 3) within the village the waste land was owned by the state rather than the Village community. Baden Powell assumed that the concept of Village community was associated with the land revenue system and that the Village community was not invariably the simple survival of a primitive age. He did not agree that the Indian Village was inherently democratic or republican in its constitution. He viewed the village essentially as a community of separate cultivating land holders and other village functionaries organized as a small monarchy or oligarchy. He identified two types of villages raiyati or non-*zamindari* and *zamindari* village.

All these formulations need critical examination in the context of the complexity of the structure and functioning of the village community during the pre-colonial period.

The view of the village community as democratic or primitively democratic institutions seems questionable. In all populist accounts of the village community the starting point is to postulate the village community on a more or less universal basis of social organisation with specific features such as political autonomy, economic anarchy, social homogeneity and the unchanging character of this closed collectivity.

The village was viewed as a territorial concept as well as a fiscal unit. It was also viewed in the sense of a social collective represented by the headman. He made representation to the higher authorities on behalf of the entire village on a variety of issues common to the whole cultivating community.

To start with the village never was an isolated self regulating unit. The question is how such a concept could be reconciled with the obligation to pay land revenue to the state by and large in cash. The assumption that the village headman acted as the representative of the collective interest and that he was subject to the control of the peasant community is equally dubious. He was also as much under the control of the imperial administration.

The assumption that the peasant economy had a communal and autarchic foundation is also open to strong criticism. The pattern of land ownership, and distribution of agricultural assets among individual cultivators reveal a considerable degree of

economic differentiation. It is also unacceptable that the peasant community was homogeneous or undifferentiated. A fair degree of economic differentiation had taken place due to unequal distribution of power, and other resources. Landlessness and agrarian dependence were visible in the rural society. Production decisions were taken by individual peasant family rather than collectively and obligation to pay tax was that of individual cultivator. In the revenue records arrears of revenue are shown against individual defaulters rather than the village community as a whole.

Another feature of the Mughal agrarian system was the diversification of the economy in the countryside. It was not that the village was producing only for the community or what the village needed through an integration of agriculture and domestic crafts. The rural economy on the other hand was marked by highly specialized commodity production, agriculture or otherwise and there was a considerable penetration of money economy into the countryside. The village economy was becoming more and more market oriented. The growth of commodity production led to the growing interaction between town and countryside between agriculture and handicraft activities. *Qasbas* are the indicators of the growth of rural markets. The village population was not so large as to accommodate all classes of artisans and other functionaries.

Thus the village community was not a closed stationary and strongly collectivist social foundation. The British writings neglected crucial aspects like differentiation and domination within the rural society and its dependence on wider economic and political institutions. These writings also failed to accommodate conflict and change. B.R. Grover argues that the concept of village community, as held by the British administrators in the 19th century, was based on their confusing the 19th century joint family *zamindari* estates known as *pattidari* and *bhaichara* land tenures with the communal ownership of land as such.

17.8 FORMS OF PEASANT RESISTANCE

At the crux of the agrarian system of Mughal India is the notion of a reckless exploited peasantry thrown into either flight or rebellion. Refusal to pay land revenue is seen by Irfan Habib as the classic act of defiance by peasants. Though complaints by peasants are mentioned, the focus is on flight, which according to Habib was the peasants' first answer both to famine as well as oppression. He treats armed resistance as the embodiment of peasant anger and desperation. In 'Peasant in Indian History' Habib details the excessive exploitation, which the medieval peasantry was subjected to and proceeds to analyse peasant revolts. Habib cites evidence of peasants uprooting crops and trying to delay or refuse payment of tax. Habib writes of the range of resistance, right from passive to armed resistance, the other variables in this context are not given due attention. The peasantry is shown as having few options to choose from. The basic premise is that peasants finally take to armed resistance when unable to cope with ever increasing oppression.

Harbans Mukhia has tried to explore the notion of resistance as being both silent and overt forms. He has suggested that peasant resistance could assume various forms depending on the production system. Lethargy, carelessness, haggling over payments, concealments, petitioning, threats to give up cultivation, violent upheavals have all been conceded as possibilities. He has argued that the peasants accept only a part of the ruling class ideology; he has visualized the peasantry as possessing a certain amount of power to resist and a considerable degree of dynamism, notwithstanding the fact of their exploitation.

Two positions are visible; first we have studies which focus on revolts. In the second category we have comments from historians conceding to the possibility of the passive, everyday form of resistance. Apart from these two positions on the forms of resistance two images of the peasantry also emerge. On the one hand, we have the picture of an utterly oppressed, absolutely hopeless and helpless peasantry not knowing what to do and how to survive in the face of over increasing exploitation, its only weapon being the ultimate one of rebellion. On the other hand we have a picture which cautions against placing them forever at the receiving end of exploitation, questions the wisdom of treating peasants as an utterly passive and powerless lot, argues that peasants resist the exercise of power in myriad ways and contest spaces in more ways than we usually think of.

Petitioning was one of the several methods of protest when peasants petitioned, they either pleaded for relief/concessions or reported exploitation and urged the state to take remedial actions. These were in the nature of complaint or protest. Implied in the petition is also a veiled threat of counter action if demands are not met. Petitions presuppose the petitioner's faith in the willingness as well as ability of the state to fulfill requests and redress grievances.

Most petitions were attempts to bring injustice to the notice of the state. Peasants petitioned against a variety of injustices. Most frequent were complaints about excessive demand of taxes. Attempt to force upon peasants taxes which were not customary were met with resistance. Regardless of the content of the petitions the seriousness of the issue and the desperation of the petitioner reported. The tone of petitions was never very loud, the posture never aggressive. The petitioners did not question the legitimacy of the structure of domination and subordination. What was opposed was the transgression of established practices. By petitioning peasants played up to the rhetoric of the traditional obligation of rulers to be fair and just.

A very interesting fact about petitions is that after the complaint had been made, petitioners invariably state that in the face of the reported transgression we cannot survive, cannot stay in the village, and the village cannot be populated. By stressing that they could not to survive or continue or prosper peasants let it be known to the state the urgency of remedial steps. They also caution the state of the consequences of the ruination of the petitioners.

Petitioning seems to have been a popular method of protest. It was probably also the first initial reaction to exploitation and the first line of defense. It entailed no risks. It was almost a sure way to get one's voice heard. The sheer number of petitions, the range of their contents the sections of rural society who petitioned prove that it was a popular and effective method of protest.

Non-payment or refusal to pay revenue by peasants was considered to be an outright defiance. Peasants who dared to refuse payments were called *zortalab/badamal*. However, non payment need not always assume the form of open confrontations. It varied from outright refusal to what seems like a policy on the part of peasants to delay, evade, underlay and not yield willingly. A variety of term appears in the Rajasthani documents for this kind of peasant's behaviour – *ujar* (to avoid and make excuses); *kotai* (falling short); *dheel* (delay); *sokhi* (throwing temper); *sukhan* (reluctance); *hujati* (argument); *seenajori* (defiance); *kahavati* (altercation); and *haramjadagi* (chicanery). These terms suggest that non payment assumed various forms from open refusal to pay up.

Migration and Threat of Abandonment

Peasants deserted their villages when they were unable to cope with excessive exploitation. It is also significant that peasants sometimes threatened to migrate in response to exploitation. Late 17th and 18th century documents from eastern Rajasthan throw light on how peasants used the threat to migrate to their advantage. This evidence also indicates that in some cases migration or threat to migrate was an act of defence rather than a measure of desperation. There is ample evidence to show that desertion of villages in response to excessive demand was not infrequent and whenever peasants actually migrated, they were consoled, called back and pacified. Considering the land man ratio and the state's interest in uninterrupted cultivation desertion or threat to desertion invoked favourable response from the state. The peasants were pacified with assurances as well as concrete concessions to get them back.

Subtle Resistance

From the analysis of documents from eastern Rajasthan it appears that the peasants including the richer section maneuvered, evaded, cheated and connived in an effort to retain for themselves as large a share of produce as possible. Thereby raising the question of relationship between what the state had demanded from them and actual payment in practice. There is a wide range of activities aimed at evading payment of land revenue in full such as removal of standing crops from the field, concealment of land and crop at the time of measurement, not disclosing area under cash crops and irrigated lands, not revealing the exact number of taxpayers, declaring superior crops as inferior crops, false declaration regarding the rate of tax applicable, tampering with measured area figures and getting holdings liable to be assessed at normal rates assessed at concessional rates. What is more striking is the fact that all sections of the village community, village headman and privileged category of cultivators, were involved in cases of cheating the state. The reported cases pertaining to these acts provide invaluable sight in the nature of collusions, collaborations and connivances within the peasant world which cut across differentiation and stratification. All sections of the rural society seem to be involved in the common objective to escape assessment to get away with lesser payment. Involvement of the richer section of the cultivators in the cheating of state indicates that the primary objective was not the securing of a bare subsistence level in order to meet the needs of survival but clearly an attempt to increase personal income at the cost of state. This day-to-day passive form of resistance best suited to the peasantry – a class scattered across the countryside lacking formal organisation and stratified both socially and economically.

17.9 AGRARIAN STRUCTURE: DECCAN

Village in the Deccan was divided into habitational (*pandhari*) and cultivated area (*kali*). The habitational areas/houses left over by families for some reasons were known as *gatkul gharthana/gatkul vada*. The cultivated area was divided into number of *thals* (land). *Thals* in turn were further divided into *shet* or *set* (*kshetra* i.e. fields). The pasture land of the village (used in common) was known as *lokacha kuran/gayeran* while the pasture belonging to the state was called *sarkarcha kuran*. Villagers had to perform *begar* for cutting the fodder from the state's pastures. The cultivated land on the basis of the nature of the tenure/holdings was further subdivided into *four* major categories as we have seen in north India as well - *miras* or *thalkari* (peasant holdings), *inam*, *sarkari sheri* or *khalisa jamin* (crown land), *gatkul jamin* and *pad jamin* (waste lands).

Village headman (*muqaddam*) was the most powerful of the lot. Village community comprised of hereditary officials (*watandar*, *patel*, *kulkarni*, *muqaddam*) peasant proprietors (*miras*) and village servants (*baluedars*). There also lived 'outsiders/strangers'/*upari* (tenants-at-will). Usually their position was subordinate to *mirasdars*. But they could assume a status of a *mirasdar* by paying a fee (*nazar*).

Village headmen enjoyed right over the *gatkul jamin* and the waste lands. He could dispose that of. Village as a group (i.e. the village assembly) possessed right to sell waste lands as *inam*.

Mirasdars were the hereditary peasant proprietors. They were the original settlers of the village. They never loses their right over land unless they sold or gifted the land. Even those who deserted the village continued to possess their right over land. They are mentioned in the records as *gat-kuli*. They played active role in the village assembly and *gotsabha*. Their symbol 'plough' had to be affixed on all decisions (*mahajars*). In certain cases only the concerned *balutedar* was invited to attend the *gotsabha*.

Balutedars

Village servants called *balutedars*. Traditionally they numbered twelve and designated as *barabalutas*. However, initially, the number appears to be only *five* and were called *panchkaruk* (potter, blacksmith carpenter, barber and washerman). The number of *balute* varied as per the size and need of the village.

Traditionally *balutedars* are grouped on the basis of their income as well as the services they provided to the village. On the basis of their income (*kaas*) they were grouped into three categories (rows). 1) *Thorali Kaas* (major row) consisted of *sutar* (carpenter) *lohar* (blacksmith), *mahar* (village watchman and performed other menial work), and *mang* (leather rope maker). 2) *Madhali Kaas* (middle row) included *kumbhar* (potter), *chambhar* (cobble), *Parit* (washerman) and *nhavi* (barber;). 3) *Dhakti Kaas* had *Bhat* (bard), *Mulana* (servant of the mosque and of the Muslim community of the village), *gurav* (temple priest), and *koli* (water carrier), *sonar/potdar* (goldsmith), *joshi* (the village astrologer), and *Ramoshi* (village guard).

On the basis of services they broadly consisted of a) village artisans and professionals, b) general servants of the village, and c) religious servants. They received lieu of their services specified quantities of grain (*baluta*) at harvest time, while some (*mahar*, etc.) also received *inam* land. Among the *balutedars mahar* community was quite large. The elected head of the community was known as *mehtar mahar* who looked after the community's welfare. In lieu of his services he was entitled to 1/9th of the entire *mahar watan* including grain, perquisites and donations. There existed clear distinction between the *watandar balutas* (hereditary) and *upari* (stranger) *balutas*. These *upari balutedars* were generally 'migratory' servants ready to fill up the gap where the need be. While making the payment (cash or kind) for their services no distinction was made between a *watan* or *upari balutedar*.

A.S. Altekar has emphasised since they were fulfilling the needs of the community, their 'maintenance was guaranteed'. But they did not possess freedom to migrate in search of better livelihood. Thus he negates their mobility aspect altogether and presented village community as 'self-contained' and 'self-sufficient.' Sociologists and anthropologists (Max Weber, W.H. Wisner, Karl Marx Baden Powell) have explained this relationship in terms of '*jajman*' and '*jajmani-haqq*' and their services

are termed as '*demiurgic* (village serfs; not paid for their services) mode of payment'. R.S. Sharma also argues that with the decline of urban centres artisans in large numbers migrated to the rural areas that resulted in the emergence of *jajmani* relations. However, both Fukazawa and A.R. Kulkarni rejects the presence of *jajmani* system. They argue that a) these *balutedars* (barring priest) were not employed by specific families instead they served the needs of the entire village; b) They received their remuneration as *haqq* (right), *lavajima* (perquisites) or *manpan* (privilege); and c) These *baluta watans* were not only hereditary but also transferable and saleable. A.R. Kulkarni has preferred to use the terms *gramsevak/grambhrutak* for them as is traditionally used in literature to address them.

Besides these *balutedars* we also hear twelve *alutas*. Grant Duff mentions the alutedars as naru and balutedars as karu. Fukazawa and Kulkarni maintains, however, since we do not come across the word *alutas* in the Marathi documents prior to the British period 'the term *aluta* was formed *alliteratively* with *baluta* in extension of the application of that word.' It will, however, be interesting to find that traditionally they were addressed as *panchkaruk* and this binary division is equally reported during the early medieval period. (for details see Section 12.6)

17.10 AGRARIAN STRUCTURE: SOUTH INDIA

In South India village was divided into number of residential wards probably on the basis caste/occupation. We do hear of *paraichheri* (for the Paraiyas) *kammanachcheri* (for kammalas), *kudiyirukkai* (for *kudi*) *vannarachheri* (for washermen), etc.

In South India at village level there existed *sabha/sabhai* and *ur*. *Sabha* was generally associated with *brahmadeya* villages and *ur* were present in non-*brahmadeya* villages or at least in these villages that were not exclusively controlled by the brahmans. If the donee of a *brahmadeya* village is one single individual it were known as *ekabhoga* (i.e. land enjoyed by a single individual); and if there were many donees in a *brahmadeya* village it was known as *ganabhoga* (i.e. the land enjoyed by a *gana*/group. Since the *ganabhoga* villages had to be governed/shared collectively their assembly came to be known as *sabha* and its share holders as *vidwan-mahajanas* or *mahajanas*. *Caturvedimangalam* (*brahmadeya*) village generally had a 'central' village associated with it were many small villages and each village was divided into small wards.

Sabhas possessed right to acquire or dispose of village lands. They appeared to have functioned in *ganabhogam* or *samudayam* villages (where property right was held in common) and worked on behalf of the village community. Parudari connected with temple administration perhaps also worked under the control Village *sabhas* and *uravars* also performed the function of revenue collection to be deposited to the imperial treasury. Thus they also worked as agents of the state revenue for collection. In case of failure of depositing the land tax in time the assembly had the right to deprive the landholders/cultivations from lands. They also possessed the right to impose or remit some local cesses that the assembly had the right to extract. It could not impose and remit any tax pertaining to or associated with imperial exchequer without the permission of the state. However, these local bodies possessed great influence and state could not remit or impose any tax without their consent. At times *uruvars* also acted as lease holders of the state land.

These assemblies also dispense the justice and punish the offenders. At times they could even confiscate the lands of the guilty/convict. Even it possessed the right to confirm temple lands and at times it shared lands in common with temples like tanks, etc. They also served as guardian of public lands, endowments and charities. During Bukka II's reign Rasappa, son of a merchant, Cinnappa granted a piece of dry land to God Kalledeva, the *mahajanas* were made incharge of the holding. *Sabha* continued to function during the Vijayanagara period and enjoyed as vigorous powers as it were under the cholas.

Another semi-autonomous assembly of importance was *nadu*. Though it enjoyed almost similar powers its jurisdiction was comparatively much larger than *sabha* and *ur*. Its members were known as *nattavar/nattar* and *periyannattar*, *tandirinais* (Telgu region) and *okkuh* in Karnataka. Tamil inscriptions mentions *nattu-viniyogam*, *nattu-kanikkai* and *nattayam* extracted by the *nattavars*. Though *nattavars* of the Chola period were largely Vellala land-holders during the Vijayanagar period we find it included members of various communities including merchants, artisans etc. K.V. Subrahmanya, Venkata Ramanayya T.V. Mahalingam and Noboru Karashima argue that these bodies (both *ur* and *nadus* gradually lost their vitality during the Vijayanagara period itself. A Krishnaswamy, however, maintains that 'They did not actually destroy the *Sabha*, the *Ur* and the *Nadu*... But they did not actually revive these ancient institutions when they ceased to function...' He attributes the chief reason behind this trend was - 'feudal' and military organisation, the hostility of the Vijayanagara 'warriors', the 'highly centralised 'feudalism,' and the growth of substitute local institution 'the *nayankara* and *ayagar* systems. However, Saletore feels strongly that these assemblies continued till late. Mahalingam also attributes the chief factors behind this declining trend to "partly on feudal and partly on military basis'. Though, he agrees that there was no deliberate attempt on the part of Vijayanagara rulers to discontinue them. He further deliberates that "the evolution of the *ayagar* system and the direct appointment of officers responsible to the government from the administration of the local areas must have sapped the very foundations of local initiative and autonomy and stifled the free life of the village republics." Noboru Karashima (2001) while agreeing with Mahalingam emphasises the changing trend to the consolidation of *nayaka* rule in the regions that "the *nayakas* started to administer their territories employing their own agents by the beginning of the 16th century." There is no reference to exaction of cesses like *nattu-viniyogam*, *nattu-kanikkai*, and *nattayam* in Tamilnadu in the 16th century. Further, Noboru Karashima deliberates that the decline of *nadus* as territorial units could largely be as a result of establishment of *pettai* (new trade centre) and *nayakkattanams* (territories bestowed by the Vijayanagara rulers to the *nayaks* to govern themselves directly). Though, the usage of *nattavars* continued but *parru* became the effective administrative unit. We get frequent references to 18 *parru*, 17 *parru* in the 16th century. During the 15th century tussle between *nayaks* and *nattavars* became frequent; the latter representing the interests of the peasants to reduce the tax burden.

During the 13-14th centuries in South India a new class of non-Brahmana landlords emerged who got their land cultivated by *adimai* (slaves) and *kudi* (tenants). We do not know what kind of services provided by *adimai* or *adiyar*; probably Paraiyas and Pulias employed as agricultural labourers; while Vellalas worked as domestic servants. We do get references of *kudiyameru* (colonising land with the help of cultivators). Kudigals cultivated temple lands under the direction of the temple organisation as tenant. On the eve of peasant revolt in early 15th century most of the land held by landholders (Kaniyalar) who inturn rented it to the tenants (*kudi/kudigal*).

Thus peasants cultivated their own lands also get it cultivated with the help of slave labour (*admai* or else rented out to the tenants (*kudi/kudigal*). Towards the closing years of Vijayanagara period we find nayaks also emerging as lease holders of the temple lands. Our period also saw emergence of another class as lease holders – merchants –the chettis. Their emergence as lease holders appears to be as a result of growing trade and commerce during our period. Karashima argues that this trend deeply altered the agrarian relations. It led to the decline and sale of Brahmana lands (*brahmadeyas*) during the 13-14th centuries. Though the immediate reason was heavy taxation imposed by the Vijayanagara rulers. According to Karashima it should also “be viewed in the context of agrarian change, particularly differentiation in agrarian society. These lands...were mostly bought by non-brahmanas who became the local magnates of the lower Kavery valley and other regions towards the end of Chola rule. Nayaks’ effort to control production in their territories, employing their own agents, must have affected nattavar’s position as well.

Bunton Stein argues that like the change in the Tamil century in the Karnataka region as well local institutions were ‘altered’. Bunton Stein emphasises that suffix *Rattavade* (seven and one half lakh country), *Gangavadi* (96,000 country) “represent units of ethnically defined territoriality under local chiefs.” In contrast *ayagar* system of Karnataka became widespread – throughout the macro-region (Tamil country).

Ayagars

Like village servants of the north and *bara balutas* of the Deccan and Maharashtra in South India the village organisation during the medieval period emerged was known as *ayagar* system putting the *ur Chola* into the background. It was a body of 12 functionaries (like *balutas*) N. Venkata Ramanayya includes in the list of *ayagars* - *karnam/senabova*, *gauda/Reddi*, *talari*, *washerman*, shoemaker, barber, carpenter, goldsmith measured grain during harvest, *purohit* decided auspicious dates for ploughing and harvesting preceded over all the village ceremonies, waterman regulated water supply to the fields, potter and blacksmith. They were the village servants. Except the *karnam* (maintained accounts), *Gauda* and *Talari* (village watchman) no one else was associated with state functioning. *Karnam* used to assist in revenue collection in association with the Reddi. They collected the *jodi* from the ryots and deposited to the state treasury.

They were assigned plots of the village lands and enjoyed hereditary rights over it known as *mirasi* and paid *jodi*. Besides at the time of the harvest as was the case in Maharashtra they were paid by ryots fixed quantities of grains/produce as per the custom of the village. It was known as *mera*. Their position was hereditary and permanent. In situation of disputes over their rights state machinery used to intervene. They could sell or mortgage their rights. They also used to receive revenue free grants (*manyams*) that were granted to them in perpetuity in lieu of their services. Mahalingam asserts that “no transfer of property could be effected or grant made without the knowledge of these village functionaries.. Sales of land had to be made only with the knowledge of these officers...” A. Krishnaswamy argues that the system was completely new to the Tamil country. However, Bunton Stein maintains that we do get references to village headman, artisans, etc. in the Tamil country. According to him, ‘what was new in Tamil country, was perhaps not elsewhere, was the support of these persons and functions by special village tenures... Yet the *ayagar* system, long prevalent in Karnataka where land was generally less valuable, was introduced into Tamil country during the fifteenth and sixteenth centuries suggesting a shift in the

relative power of the dominant landed people and those who performed village services.' ...This new basis of locality leadership altered earlier patron-client relations in a decisive way; it also led to significant changes in the land system of the time.'

However, Noboru Karashima raised his doubts over Burton Stein's statement that it was introduced in the Tamil region in the 15-16th centuries. He is doubtful his doubts whether it was ever introduced 'during and after' the Vijaynagar rule in the Tamil region. He argues that he does not find in any inscription reference to *ayagar*. The date, he says, used by Mahalingam, too, is from Kannada inscriptions and not Tamil.

17.11 SUMMARY

Village continued to remain the basic unit for administrative and revenue purposes. The notion that the medieval villages represented 'undifferentiated' and 'unstratified' mass hardly holds ground. Village community was highly stratified on the basis of caste, class and professions. Though state's concern was to ensure cultivation our records are full with instances of peasants' migrations and threats to migrations. *Zamindars* served as major link between the peasant and the state. They played a dual role of an exploiter, on the one hand, at times joined hands with peasants against the exploitation of the revenue officials/*jagirdars*. In the Deccan and south India village servants (*balutedars/ayagars*) formed an important part of the village community. However, their relationship vis-a-vis village can not be equated with *jajmani* rights. During our period in south India drastic changes appears to have occurred in the agrarian relations. The growing prosperity of the region and large scale migration of Telegu warriors (poligars, *nayaks*) resulted in the decline in the *brahmadeya* lands, largely losing to the non-brahman cultivators.

17.12 EXERCISES

- 1) State various views pertaining to the village community during the medieval period.
- 2) Explain the notion of power in the context of village community in the medieval period.
- 3) 'The medieval village community represented undifferentiated, unstratified mass.' Comment.
- 4) Discuss the condition of peasants during the medieval period.
- 5) Critically analyse the presence of different categories of cultivators in the medieval period.
- 6) State the importance and the impact of 'credit' in the rural society during the medieval period.
- 7) Discuss the rights and perquisites of the zamindars and the bhomias.
- 8) Compare the agrarian structure of north India with that of the Deccan and south India.
- 9) State the salient features of the village community of the Deccan during the medieval period.
- 10) Critically examine the changing pattern of the village community of medieval south India.

UNIT 18 NON-AGRICULTURAL PRODUCTION

Structure

- 18.1 Introduction
- 18.2 Agro-Industries
 - 18.2.1 Textiles
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 - 18.2.3 Indigo
 - 18.2.4 Sugarcane
 - 18.2.5 Oil Production
- 18.3 Metals
 - 18.3.1 Gold and Silver
 - 18.3.2 Diamond and Precious Stones
 - 18.3.3 Copper
 - 18.3.4 Iron
- 18.4 Minerals
 - 18.4.1 Salt
 - 18.4.2 Saltpetre
- 18.5 Building Construction
- 18.6 Other crafts
- 18.7 Organisation of Craft Production
 - 18.7.1 Artisanal Production
 - 18.7.2 *Dadani*
 - 18.7.3 *Karkhanas*
 - 18.7.4 Wages
 - 18.7.5 Specialisation of Crafts
 - 18.7.6 Technology and Tools
 - 18.7.7 Craft Mobility
 - 18.7.8 Medieval Women and Craft Production
- 18.8 Monopolies
- 18.9 Debates
- 18.10 Summary
- 18.11 Exercises

18.1 INTRODUCTION

Commenting on the state of medieval crafts Francois Bernier (1656-68) mentions that ‘This is not owing to any inability in the people to cultivate the arts, for there are ingenious men in every part of the Indies. Numerous are the instances of handsome pieces of workmanship made by persons destitute of tools, and who can scarcely be said to have received instruction from a master. Sometimes they imitate so perfectly articles of European manufacture that the difference between the original and copy can hardly be discerned...’

‘Want of genius, therefore, is not the reason why works of superior art are not exhibited in the capital. If the artists and manufacturers were encouraged, the useful and fine arts would flourish; but these unhappy men are contemned, treated with harshness, and inadequately remunerated for their labour. The rich will have every article at a cheap rate.’

Bernier’s statement points out two basic contrasts: a) There was no dearth of craftsmen and their craftsmanship could be equally matched with their counterparts in Europe; and b) the tools possessed were very simple; they were ‘remunerated inadequately, and lived miserably’. In the course of our discussion we will attempt to return to these issues off and on. Another issue, perhaps the most problematic of all, is the nature and pattern of non-agricultural production – Whether it was static or dynamic; whether it could lead to capitalistic or semi-capitalistic form of production? Answers are probably not so easy to find in certain terms particularly in the light that the data available to us to explore these issues is negligible and indirect. It will also be interesting to find where we can place medieval artisan – *urban, rural, or rural-urban*. You will find that the vast battery of artisans involved in the production process may not necessarily be residing at the urban centres only. As for technology pertaining to the concerned crafts, we are going to discuss it in detail in Unit 23 of the present Course. Here our emphasis is more on the finished goods/crafts; its production process; persons involved and how the production was organised. However, we have avoided discussion on the social status of craftsmen for all these details you will find in our Course MHI-06. Further, we have included those products that are not related to agriculture as well as products for which raw material may be derived from agriculture, but they were treated before finally sold off in the market. The Unit not only focusses on the products but also on its creators – the artisans.

18.2 AGRO-INDUSTRIES

Let us begin our discussion on those crafts that depended for its raw material on agricultural products.

18.2.1 Textiles

Textiles could be said to have been the 'heavy industry' of the pre-industrial age around the world. Textiles occupies foremost place among India’s crafts since time immemorial. Textile production was widespread throughout India. Pelsaert says that from Chabaspur (Shahbazpur) and Sonargaon (east Bengal) to Jagannath (Puri) all lived by weaving industry. Almost every town was filled with weavers. In 1620s at Masulipatanam alone 7000 weavers are recorded. Similar numbers were mentioned to be present at Benaras in 1640s. Proximity to raw material and proper transport facilities were prime considerations for developing a textile centre in the medieval period. However, certain weaving villages also emerged on account of greater demand, particularly by Companies for a specific variety of cloth. During our period of study in south India you will find a shift in the settlement pattern of the weavers. Earlier their large concentration was in the temple premises. During the seventeenth century, barring a few votive records of Kaikkolla weavers that we find in the temple complex, donative inscriptions of the weaving community during this phase are more frequent at secular places than in the temple complex. Gujarat, Bengal, Indus plains, and Coromandel were the chief centres of production. Gujarat, after 1630s famine lost its importance and place to Bengal. Her further decline in the 18th century was caused on account of loss of Persian Gulf market owing to disturbed political conditions. Maratha disturbances during the 18th century also played a negative role and contributed to its decline. In Bengal, however, it is interesting to note that cotton that was an important crop grown during the medieval

period almost disappeared later in the 19th century in the region. Ibn Battuta (d. 1377) records that the finest cotton cloth was sold in Bengal at extremely cheap prices of 30 cubit for 2 *dinars*. North Coromandel region (north of Pulicut) produced white Guinea cloth that had great demand in the Red Sea and the Levant. Similarly, south Coromandel was known for its blue, red, and striped cloth. Aurangabad and Burhanpur were famous centres of white cloth production. Chaul was famous for linens and Cambay for its quilts. So famous was the town of Masulipatanam as it was known as city of dyers and weavers. Pondicherry emerged as one of the important centre for bleaching. Painted cloth was also exported from Pondicherry.

English factory records mention more than 150 varieties of cotton textiles. Muslin was largely produced in Bengal and Dacca. *Qaimkhani* was a fine variety of muslin chiefly purchased by the Mughals and the elites. Delhi, Agra and Patna were famous for its chintz, Negapatnam for calico and chintz. Machhiwara (*suba* Delhi) was famous for *bafta* (high quality calico). Many centres were so acclaimed that the variety of cloth named after the centre – *Dariyabadi* (Dariyabad, Bulandshahr district, Uttar Pradesh), *Khairabadi* (Khairabad, Sitapur district, Uttar Pradesh), *Semianoes* from Samana, *salahati* (from Sylhet), Devgiri (from Deogir), *kanchivani* from Kanchipuram, *tanchera* from Tanjavur, etc. Certain varieties came to be known after the weaving community e.g. *Jedara* silk after *Jedara* community. Tents were in great demand among the royalty and the elites during campaigns. Abul Fazl mentions ten such varieties. The cheapest one fetched the price of 10,000. Long cloth was largely produced at northern Coromandel and north India.

In medieval Karnataka Maggadavaru, Neygeyavaru, Salesasirvaru, Devanga and Jedaru continued to enjoy prominence among the weaving communities. However, Kaikkolars replaced the old Saliyas of Tamil Nadu. Weavers even made grants to the temples to enhance their status in the social hierarchy.

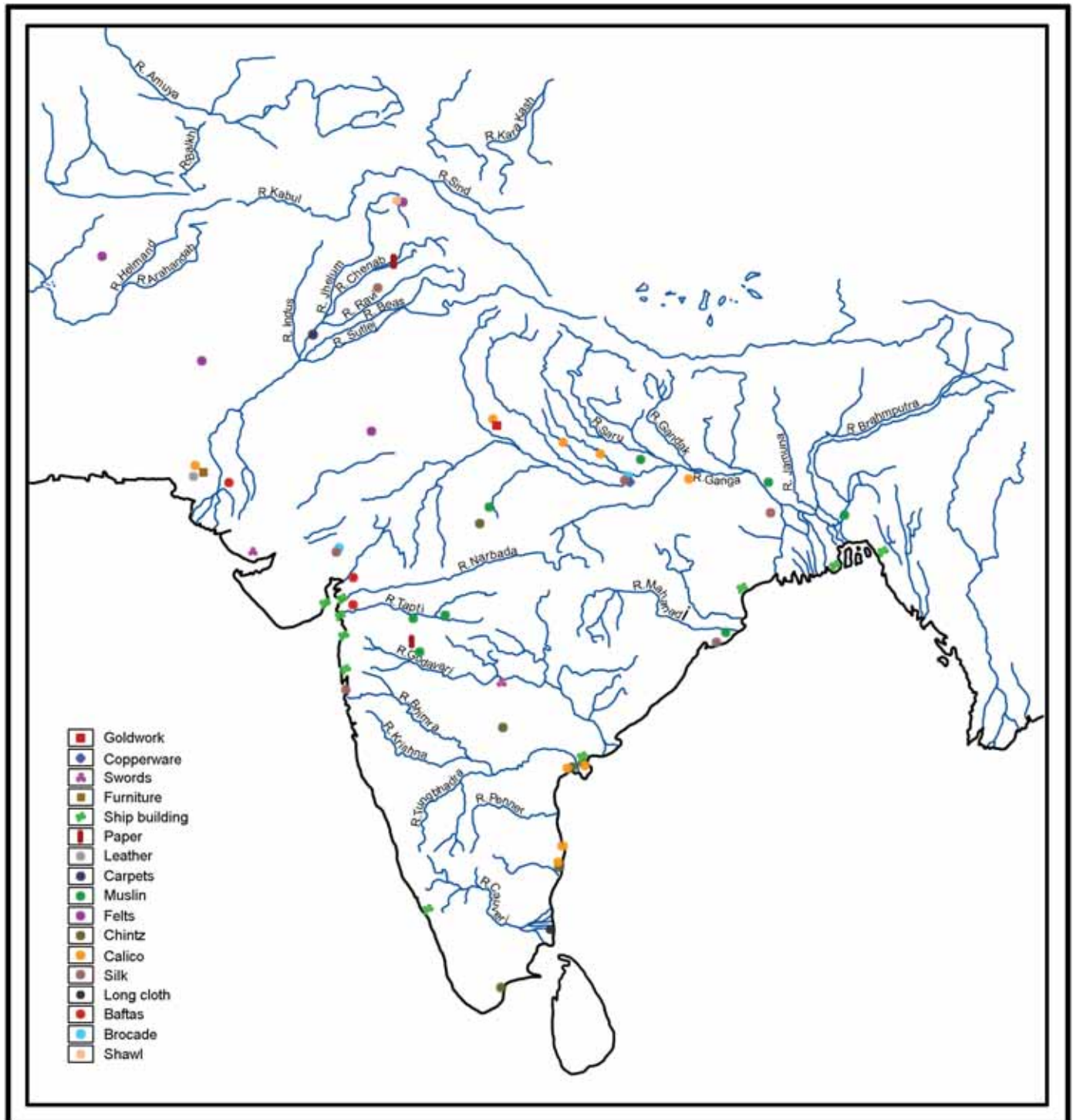
Under Turkish and European influence pattern of using motifs also undergone certain changes. The traditional motifs in south India were based on the themes of epic *Mahabharata* and *Ramayana*. Kalamkari was the finest example of this.

Broadly the 'poor' could afford a coarser variety (*kamin*) while finer variety (*mahin*) was the 'exclusive' preserve of the elites. Introduction of *charkha* (spinning wheel) and *pinjana* (cotton carder's bow) during the Sultanate period led to sharp increase in cotton textile production during the medieval period. (for technology see Unit 23) Irfan Habib has assessed that spinning wheel enlarged the efficiency six-fold. In general, one finds that overall consumption as well as production of textiles appears to have increased during our period of study. In the south as well technological changes occurred under Muslim contacts. Besides the earlier patterned loom draw loom also became common. But its usage seems to have largely confined in South India among the Muslim community. The Tirumalai-Tirupati Devasthanam inscription speaks in great detail the looms used by the contemporary wearers:

while we are assembling here... in the course of weaving by handlooms, one-third of the *Sadisarakkudam* or *achchukkattu* should be drawn lengthwise and two-third of the cotton yarn should be used in cross-wise weaving. This mode of weaving *should be done only by the Muslims* (and not by the Hindus). As a reward for their services (in this style of weaving) they are authorized to collect the income from the gifted lands for their weaving.

Tirumalai-Tirupati Devasthanam Inscriptions, ed. S. Subramanya Sastry and V.V. Viraraghavacharya, Madras, 1931-38, Vol. IV, No. 112. Vijaya Ramaswamy, *Textiles and Weavers in Medieval South India*, OUP, 1985, p. 126.

Vijaya Ramaswamy (1985:66,126-127) on the basis of above inscription counters Irfan Habib's argument that *kar-chob* i.e. square wooden frame came to be used in India during the seventeenth century. She claims that *Sadisarakkudam* referred to in the Tirupati record is 'very similar to *kar-chob*' literally means 'a four cornered frame.' She has further expressed her reservation over the usage of draw loom in India that Irfan Habib accepts it a seventeenth century incorporation (see Unit 23). He links the innovation to vertical loom. However, Vijaya Ramaswamy argues that 'the vertical loom seems to have been the most primitive type in existence in India.' She cites the 1184 AD inscription of Vira Ballaladeva's reign in Jambur village (Shimoga district) that refers to 'looms which are tied to the roof with a rope.'



Craft Products of the Mughal Empire

Source: Irfan Habib, *An Atlas of the Mughal Empire: Political and Economic Maps*, OUP, Delhi, 1982.

18.2.2 Silk

In India silk was produced both by the mulberry-feeding (domesticated) and non mulberry-feeding (wild) worms. The major silk producing regions in India were Gujarat, Bengal and Kashmir. Chaul was famous for silk weavers. (for details see Block 5, Unit 23.2) Sericulture was also practised in Medieval Orissa.

Peasants used to cut the old mulberry trees into small pieces and tilled them after ploughing in October. In a few days time the shoots come out and they were plucked daily to feed the worms.

Indians used the same reeling techniques for all variety of silks. They were not aware of the Chinese method of reeling. Reeling starts just before the moth was about to break the cocoon. The cocoons were first put in hot water and then in fresh water before reeling. The thread was just softened during the process of reeling. This way Indian system was considered better than Chinese and Persian methods. Wheel reeling in India began with the introduction of spinning wheel in India in the 14th century. The filaments from better quality cocoons were *pattani* and lower grade cocoons were known as *potti* or *poot*.

Alauddin Khalji sent *abrad-i kambayati* (stripped silk cloth of Cambay) to Il Khanid minister Rashiduddin as present. Initially Gujarat was heavily importing raw material from China. But by 17th century Bengal emerged as one of the chief producers of silk and ousted China. Tavernier mentions that Qasimbazar alone exported 2.4 million lb. At Rajmahal in Shah Shuja's garden a fine variety of mulberry *Tut* was produced. *Juz*, *koila*, and *mashru* (mixture of cotton and silk) were produced at Delhi. *Patola* was the most sought after variety of silk produced in Gujarat. Bhagalpur (in Bihar) was known for *tasar* production. However, its production declined sharply in the 19th century. Tavernier also mentions the production of Assam *muga* silk.

Besides cotton textiles and silk, carpet weaving was also widespread. Warangal and Masulipatanam were famous centres of its production largely producing for exports.

18.2.3 Indigo

Indigo was one of the most important cash crops during the medieval period. It is surprising that Thakkara Pheru (c. 1290) does not refer to indigo among his long list of crops mentioned. It was a dye largely cultivated in Alwar (Mewat), Bayana (near Agra), Sehwan (Sind), Telangana and Sarkhej (Gujarat) regions, though coarser variety was produced all over India. On the Coromandel coast Naglewanch produced good quality indigo. However, indigo produced at south Coromandel was of inferior quality. Indigo was also produced at Dabhol and Wengurla in Bijapur. Nainsi and Peter Mundy (1630-34) mention that indigo was also grown in Merta region in Rajasthan. Similarly, Chetan Singh argues that the expression 'Lahore indigo' does not mean the indigo brought from outside and simply marketed here. He says that Lahore indigo was qualitatively different from Sarkhej or Bayana or that of Thatta. It was actually produced by peasants from locally raised crop in the region. In 1614 Masulipatanam indigo cost 12 pence a pound; Surat indigo 13½ pence; while Sarkhej indigo ranged between 15 and 20 rupees per maund. Pelsaert (c. 1626), writing a little later, mentions the price of Mewat indigo at Rs. 20 per maund when the Bayana indigo was selling at Rs.30 a maund.

Generally indigo was marketed only after being processed. But we do get the reference from Gujarat where peasants sold raw leaves. The crop was sown by the end of June. It provided three cuttings. The first one, *nauti*, was reddish in colour; the second, *jerry*, which was ready by August was actually the best and possessed perfect violet colour and was most in demand. The third cutting, *katel*, was brackish and was not of good quality at all. Production of indigo required special processing to be sold in the market. To process it a set of brick lined rectangular and circular vats (in some case two) were used. Inside walls were plastered with lime. Introduction of fine cementing material, lime mortar, during the 13th century made indigo extraction easier by making the walls of the vats waterproof. The rectangular vat was filled with indigo leaves and alkaline water (for best results) for steeping for 16-17 hours. During this period indigo colour of the leaves dissolves into the water. After steeping the material is transferred to a circular vat for beating/churning. At Bayana two vats were used for the processing but at Sarkhej and Mewat both the processing was done in one vat itself. At the churning stage the waste was removed. Pelsaert attributes to better quality of Bayana indigo to its use of alkaline water. K. K. Trivedi (1998) adds that the use of two vats separately for steeping and churning also produced better results. Besides, use of dry leaves in place of green at Sarkhej also affected the quality substantially. Trivedi has calculated that approximately 502 metric tons of indigo was produced during a season at Bayana.

Pelsaert's Account

The true Bayana indigo, which is made near that town, does not amount to more than about 300 bales, but it is much superior to the produce of other neighbouring villages. This superiority is due to the brackish water in the wells near the town, for the use of sweet water makes the indigo hard and coarse...brackish water will give indigo worth at least one rupee per maund more than plant cut from the same field, and worked with the sweet water.

Other places also yield large quantities of indigo, such as Koil (modern Aligarh) or Gorsa (modern Khurja ?), which lies 30 kos from Agra on the other side of the river. Most of its produce is brought up by Armenian, Lahore, and Kabuli merchants; is good indigo, but has not such a reputation as that of Bayana...

Mewat is a tract 30 kos from Agra...Indigo is made in many of the villages of this tract, and the annual yield is 1000 bales or more, but it is inferior and of low quality, and usually sandy. The method of manufacture is that of Sarkhej rather than Bayana; the steeping of the plant, and the working back and forward to extract the dye from the leaves, are done in a single *put*, whereas in Bayana or Gorsa two are used...The price is consequently much lower, 20 rupees for a maund in Mewat when Bayana is selling for 30 rupees...

W. H. Moreland and P. Geyl, *Jahangir's India, The Remonstrantie of Francisco Pelsaert*, Delhi, pp. 13-15.

Indigo was so prized a crop during the medieval period that Shahjahan aspired to monopolise it. Yaqub Beg, the governor of Broach forced English Company to buy indigo from him despite their objections. Its production declined particularly towards the close of the 17th century largely on account of unequal competition the peasants had to face from the West Indies market. Further, political instability in the regions, particularly in the areas around Agra and Delhi on account of Jat (1670-80s) and Satnami (1672) uprisings, also contributed to its gradual disappearance. Gujarat famine of 1630-32 also took the toll of indigo production in the region. It declined since then in the region. Tapan Raychaudhuri (Cambridge, 1982) highlights citing the case of decline of indigo in Gujarat the importance of 'price responsive character of India's agro-manufactures.' 'The peasants' choice to cultivate particular crops

depended on the 'price it fetched.' After Gujarat famine prices of food grain crops increased greatly resulting in peasants' opting to cultivate food grain crops in preference to cash crops. It is interesting that in the production of indigo, particularly at Sarkhej merchant capital was also invested.

There was another dye *al* (a red dye) that was produced largely in lower *Doab*, Bundelkhand and Malwa regions but comparatively at lesser scale. With the introduction of manufactured dyes its production almost ended.

18.2.4 Sugarcane

Sugarcane production was widespread throughout north India and listed among all the *dastur* circles in the *Ain*. However, one finds sugarcane practically absent from the medieval list of crops produced in western Rajasthan, though the crop is listed in eastern Rajasthan. Steel and Crowther observed that, 'all the country betwixt Agra and Lahore yields great store of powdered sugar.' Maham in *sarkar* Hissar Firuza, *suba* Delhi was noted for high quality sugar. The best and the cheapest sugar was produced in Bengal. Dutch's annual export of Bengal sugar to Persia alone in 1640s constituted around 400,000-450,000 lb. However, sugarcane production in Bengal shows signs of decline during the 19th century though it still remained an important crop of the region. For making sugar and *gur*, 'The juice was obtained from the cane by the use of worm-gear wooden rollers worked by oxen in the southern regions, and by the stone-mortar-pestle mill, also turned by oxen, in the Gangetic zone. These mills were replaced by iron-rollers only by the close of the nineteenth century. The juice used to be put in iron cauldrons serving as boilers; and *gur* and various varieties of sugar were produced by different degrees of refining.' (Habib, 1963)

18.2.5 Oil Production

Telis (oil pressers) occupied an important place in both the rural and the urban settings. Oil being the essential commodity made the presence of the community in almost every big village. Apart from the extraction of edible oils certain centres were known for its odoriferous oils – Midnapore for oils from flowers; Gwalior produced *chambeli*; and Orissa *gingelly*; while Rander and Navsari (Gujarat) were famous for aromatic oils and scents.

In Karnataka the community involved in the profession was known as *telligaranakhara*, *telligara kottali*, *telligaseni*, *telligaraivottokkalu* and *ganigarokkalu*. By 13-14th centuries oil pressers in Karnataka also involved in oil trade due to increase in production. The use of the titles like *gavunda* and *setti* for them in Karnataka is quite interesting and suggests increase in their status.

In Maharashtra oil pressures belonged to the category of *alutedar* (village artisans whose services were not regularly required by the village). *Litacharita*, a Marathi biographical work of the 13th century mentions oil shops in the *hat* (local weekly market). The oil pressures are mentioned busy extracting the oil from the *ghana* and their wives busy selling the oil sitting in front part of their houses. This shows that the *telis* used to work on their own mill using their muscle power to extract the oil. Though we do hear references to *bail ghana*, i.e. the use of the bull power for extracting the oil. Oil was extracted both in the oil-press (*ghani*) and oil mill (*jawaz-i kolhu*).

Its use for lighting the lamp made it an item for endowment. We do get frequent references to *madad-i maash* grants under the Mughals for lighting lamps in the

temples as well as mosques. Inscriptions from Maharashtra also mention that one *do* (wooden ladle) and one jar of oil to the temple priest from each *ghana* was required to be given for endowment. Inscription from Patan records that *telikars* had to supply oil to the *maths* regularly. It is probably that the state instead of taking tax from the *telikars* in cash was taking and diverting it in the form of endowments to educational and religious institutions. In Maharashtra they appear to be earning good profits to emerge as money lenders operating at small levels in the rural settings.

Alauddin appointed Sirajuddin as superintendent (*shahna*) to control the fraudulent practices of the oil merchants of Delhi and neighbouring areas. The oilmen had their own guilds like organisations in the region of Bihar.

Fishing was another important profession. Mogar and Mukkuvan fisherman of Malabar made good fortunes out of their profession.

18.3 METALS

India was rich in mineral deposits. Among the metals mined diamond occupied the foremost place. India was also known for its iron and steel. However, she had to largely depend for her gold and silver on imports.

18.3.1 Gold and Silver

Gold was not produced in India on a considerable scale. Gold mines of Karnataka exhausted long back. But what we hear from our period is the extraction of gold from river sands. Ralph Fitch (1583-91) mentions that people find gold by digging sand deposits at Patna. Gold was extracted from the sands of river Ganga and its tributaries. But the extraction process was very expensive and the margin of profit was almost negligible.

As for silver mines, references to its extraction are very meagre. Though Abul Fazl mentions the presence of silver mines in Kumaun hills and there were some traces of silver mines in Sirmur hills, largely gold and silver were pumped to India through favourable balance of trade.

Nonetheless, craft of jewellery making was a flourishing one. Bernier (1656-68) remarks, 'it may be doubted if the exquisite workmanship of those articles can be exceeded by any European goldsmith.' In Karnataka they were called *akkasaliga*. They are mentioned in the inscriptions as taxpayers, receiver of grants and even as donors. They even constructed temples.

18.3.2 Diamond and Precious Stones

Chhotanagpur plateau (Gondwana region) in central India was known for its diamond that tempted Jahangir to send two expeditions in 1612 and 1615. Huge booty of diamonds was collected from Durjan Sal. Tavernier (1640-67) also records diamond mining at Soumelpour in Lohardaga district of Chhotanagpur. In Bihar, Kokradesh was famous for diamond mines. Ibrahim Fath Jang, governor of Bihar sent the emperor nine diamonds. But after 1612, all traces of it are lost.

Golconda was known for its famous diamond mines of Raolconda and Kulur. Diamond mining was a state monopoly and were leased out by the kings to merchants.

In Kulur mine alone the workers employed during the seventeenth century were approximately 30-60,000. The expected revenues from the diamond mines of Golconda in 1680 was one crore and twenty lakhs of rupees.

Jacques de Courte's account of the Diamond Mines of Golconda c. 1592-1622

... The kind of soil in which diamonds are found are part rocky and part soft which breaks under a little pressure, and are of the same colour as mengui with white and black shades. The natives, fifty thousand in all, are very poor, having little to eat, particularly those in the mines...Being too poor to fend for themselves, they band together into groups and offer themselves to merchants who pay them their food, provided they hand over the diamonds they find that month to them. The merchants buy them very cheap after discounting the expenses borne in their regard. The workers continue in debts for months, since the diamonds they find are too few to cover their expenses.

... They pay Gopal Raya, nephew of the emperor and the master of the mines, half a pagoda per person per month to work there. Diamonds above seven carats belong to the master and those below to the finder. The workers are always watched for any big diamond.

Before they begin to dig any part in the mine, they prepare a ground enclosed by a ditch half a foot deep. Near it they erect a pagoda...After this, they begin to dig with iron implements and the earth is placed in a sieve made of cane and lined with hide, which they place on the pavement, till it becomes a heap the size of a man to be spread around for washing. In order to hasten this process they move the earth with their feet the way a farmer does in a field. After this seven to eight men sit on the pavement and beat the heap into powder with square granite stones a span long.

When they reach the edge of the pavement, the mud is carried away by the wind and the stones are left behind. Thus the earlier heap of a man's height is now half a yard in height and consists of little stones. The seven then begin to look out for diamonds, big and small, but usually find the latter according to the luck of each. They do not speak when sorting and at times work two or three months without any success. They watch each other while they sort, lest one or the other steals the bigger diamonds. There are the guards and merchants at the edge of the pavement besides. Yet they manage to steal and sell it to foreigners for less than half its value. Violations are punished with loss of life and property, which applies likewise to those who buy. The miners are not allowed to sell to the foreigners, but only to the merchants who provide for them. This prevents evasion of duties due to the master which are 2 % from the buyer and 2 % from the seller too. There are many tax farmers and guards, and the foreigners can buy only from the merchants.

Work in the mines is very hazardous. While there, I once saw a mine give way and trap fifty persons in it...

...My trips from Bijapur to the mines were at least nine in all, over a year and a half. I spent some time in each of them. Each mine had its own master, and I covered eight of them, namely, the mines of Langapur, Ramanakota, Poli, Dwanikuthi, Marmur, Gotoal, Kotakonda and a new one in the territory of Qutb Shah, all yielding diamonds. Another mine in Qutb Shah's domain is known as Kodapoli, and yields soft stones like garnets, sapphires, amethyst, marine water, hyacinth and others of different colours.

Teotonio R. de Souza, 'A New Account of the Diamond Mines of the Deccan', in A.R. Kulkarni, et. al. (ed.), *Mediaeval Deccan History*, Bombay, 1996, pp. 127-128, 130.

After the occupation of Golconda by the Mughals (1687) diamond production in the Golconda region could only be started in 1692 almost after a gap of five years. Mines were placed under the direct supervision of a *faujdar*. The arrangement was not very different from what was prevailing earlier. It was given to private contractors who with the help of hired labour mined specified plots of land for diamonds. Diamonds over the weight of a gold *hun* (3/8th of an ounce) belonged to the Emperor as was the case earlier. The only change that had occurred was earlier Hyderabad was the hub of activities for diamond trade now the centre shifted to emperor's Camp. Another important aspect was on account of political instability of the region mining areas were now walled and garrisoned.

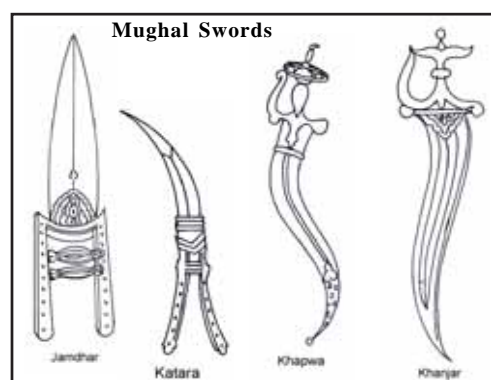
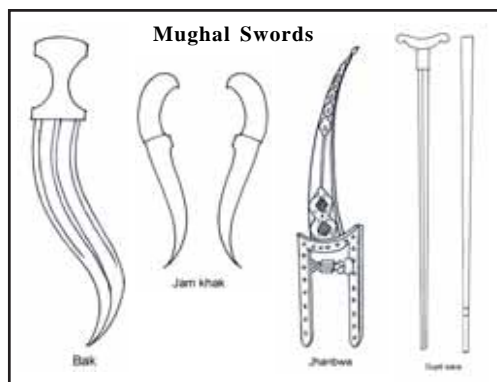
Marco Polo (1298) speaks high of the pearl fishery of Tuticorin in south India. Kazor in *pargana* Mahakanta (in Gujarat) was also famous for pearl fishing. At Limdora near Cambay carnelian was mined from a hill. Cambay exported beads to different places. Here artisans prepared articles from stone and pearls with such fineness that Barbosa (*c.* 1518) remarks that it is difficult to distinguish from the real ones. It was also famous for ivory bracelets. Lantegree was famous for coral polishing.

18.3.3 Copper

Copper was extensively used for coinage as well as it was important for production of arms. In the north copper mines were located amidst the spurs of Aravallis. Rajasthan was known for its copper mines. The copper mine tracts in Rajasthan were Sojat, Toda Bhim, Bairat, Singhana, Udaipur, Kotputli, and Narnaul. South-east Bihar was also rich in copper ores. Raja Bahroz of Kharagpur (1631-76) exploited the rich mineral deposits to his advantage. We also hear the presence of copper and iron mines in Suket-Mandi.

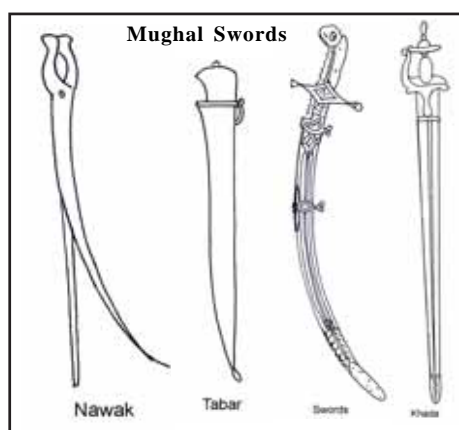
18.3.4 Iron

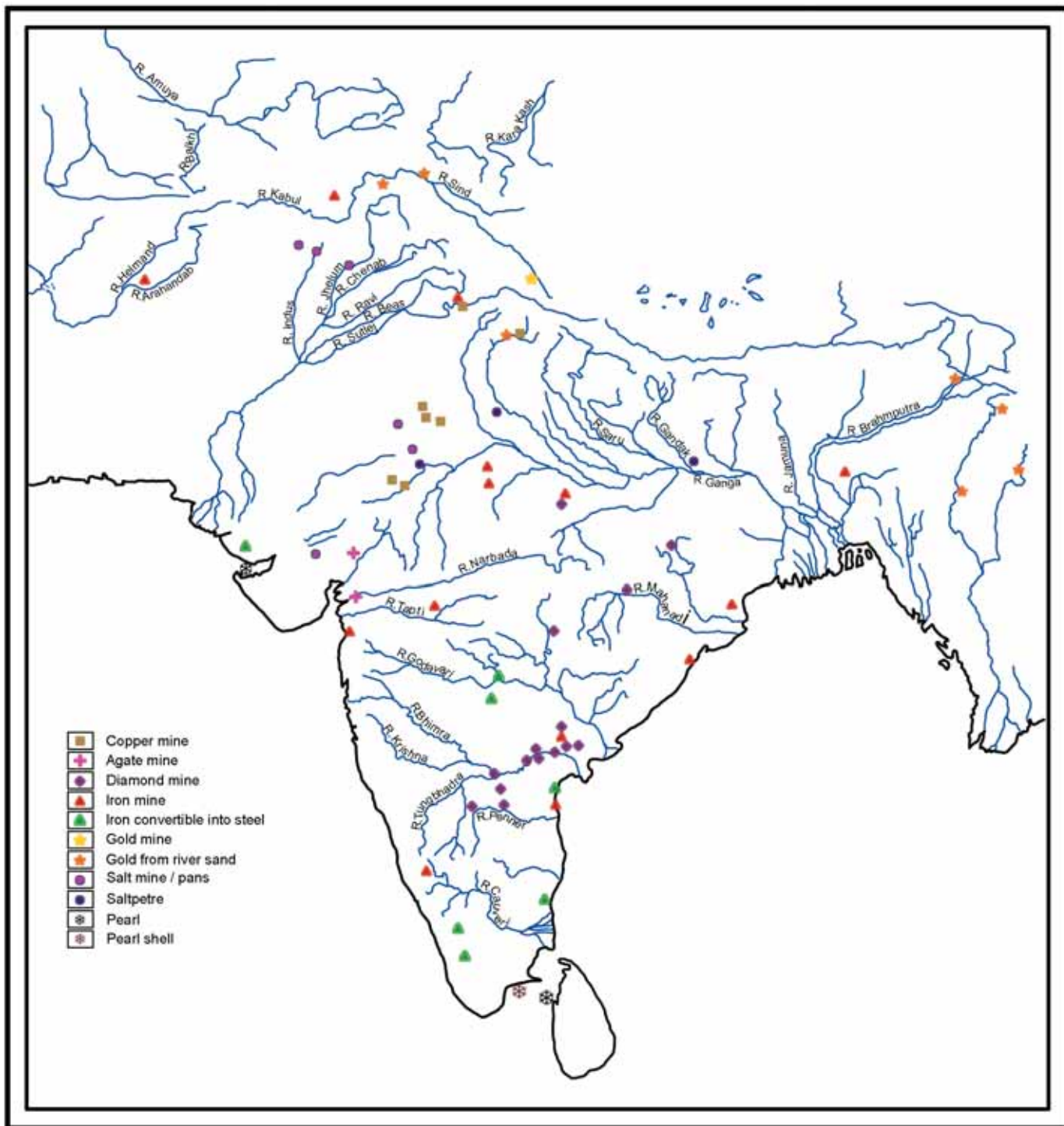
Shihabuddin-al Umari (d. 1348) is full of praise for Indian iron and steel. (see Unit 23 for details) Iron ores were largely located in the hilly tracts extending from Gwalior to down south. The neighbouring spurs of Himalaya (Kumaun and Siwalik hills) also possessed iron mines. Deccan was exporting iron to the Middle East. Masulipatanam, Petapoli (modern Negapatnam), Pulicat, etc. were major centres of iron export. Sea coast town of Chikhli in *sarkar* Surat also possessed iron mines.



The smelting process was highly labour intensive, using rudimentary furnaces and implements. (see Unit 23) No underground mining was practiced; instead deposits were tapped near the surface level. Usually when one bed was exhausted another shallow mine was dug elsewhere. Around Bangalore sand mixed with iron deposits was collected during the rainy season. Later the sand was washed to remove the earth. Then it was smelted.

Among the iron products, India enjoyed great reputation for its finest varieties of swords. Kumaun was known for its swords and daggers. The famous *korij* swords were made of Kutch iron. Indalwai (near Nizamabad) was an important centre for production of swords, daggers and lances. It largely used the raw material from Kalaghat hills. Ahmedabad was famous for its production of arms. Patan was known for its swords for water from a particular well provided good temper to steel.





Mines and Minerals of the Mughal Empire

Source: Irfan Habib, *An Atlas of the Mughal Empire: Political and Economic Maps*, OUP, Delhi, 1982.

18.4 MINERALS

During the medieval period the chief mineral products mined were – salt, saltpetre, sal ammoniac, sulphur, and borax. Borax was procured from the hills of north Bihar. Thanesar was known for its production of sal ammoniac; while sulphur springs were scattered all over.

18.4.1 Salt

The salt production in famous salt-ranges probably continued uninterrupted from Huan Chwang's (629-645) time. Commenting on the distribution pattern of the share of the produce from the mines Abul fazl mentions that out of the excavated salt $\frac{3}{4}$ th belonged to the worker; while $\frac{1}{4}$ th remained with the carrier. The owner's charge was 10 dams

(40 *dams* = 1 Rupee) per carrier. In Rajasthan Didwana, Sambhar, Pachpadra upto the Rann of Kutch was one of the biggest salt producing tract. Nainsi reports in Pachpada region alone 300-325 salt pits. In the Marwar region the Kharwal community involved in the manufacture of salt. In western Rajasthan two methods were employed to extract salt 'either by digging pits (*agar*) or obtaining it by spreading water over a patch of land (*partal*).' (Bhadani 1999) Salt was transported by the *banjaras* from Marwar to different regions of Rajasthan and Punjab by the local Banias. Railways, however, put a big blow to the industry in the region. Bhadani calculates that in 1660s salt workers involved in the region were approximately 2922-2965 as against 828 in 1891. Salt was traded in huge quantities (as much as 10,000 tons annually) from Agra to Bengal. On Gujarat coast Makbulabad, *sarkar* Broach, was the centre of salt production.

Konkan region was also known for its salt production. Pen, Panvel, Nagothane, Revdanda and Thana (all in modern Thana and Kolaba) were famous centres of salt production. Here largely peasants/cultivators were the salt makers. Thus it worked as subsidiary to agriculture. During Shivaji's reign salt manufacturers had to face stiff competition from the Portuguese of Goa. In Karnataka salt manufacturers were known as *uppaligas* and *upilakara* and their organisation was called *besavokkalu*. In Karnataka like other professions it was common among salt manufacturers also to join the state service as warriors/soldiers.

18.4.2 Saltpetre

In medieval period saltpetre was used for gunpowder and refrigeration. On account of its high cost it seems highly unlikely that its use for refrigeration was available for the commoner. Saltpetre from Bihar was considered to be the best for gun powder. Patna and Saran in Bihar were famous for its production. Ahmedabad and Agra were other important centres of its production. Chala-Babra and Malpur, *sarkar* Ahmedabad were important centres of production of saltpetre. In western Rajasthan it was an item of state expenditure. It was extracted from Jalor. Pelsaert (c. 1626) provides a detail description of the processing of saltpetre:

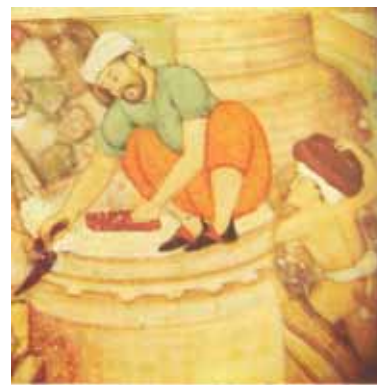
It is prepared from three kinds of earth, black, yellow, and white, but the black earth gives the best quality, being free from salt or brackishness. The method of manufacture is as follows. Two shallow reservoirs like salt-pans are made on the ground, one much larger than the other. The larger is filled with the salt earth and flooded with water from a channel in the ground; the earth is thoroughly trodden out by numbers of labourers till it is pulverised and forms a thin paste; then it is allowed to stand for two days, so that the water may absorb all the substance. The water is then run off by a large outlet into the other reservoir, where a deposit settles, which is crude saltpetre. This is evaporated in iron pans once or twice, according to the degree of whiteness and purity desired, being skimmed continually until scarcely any impurities rise. It is then placed in large earthen jars, holding 25 to 30 lb.; a crust forms in the dew during the night, and if any impurities are still left, they sink to the bottom; the pots are then broken and the saltpetre dried in the sun.

18.5 BUILDING CONSTRUCTION

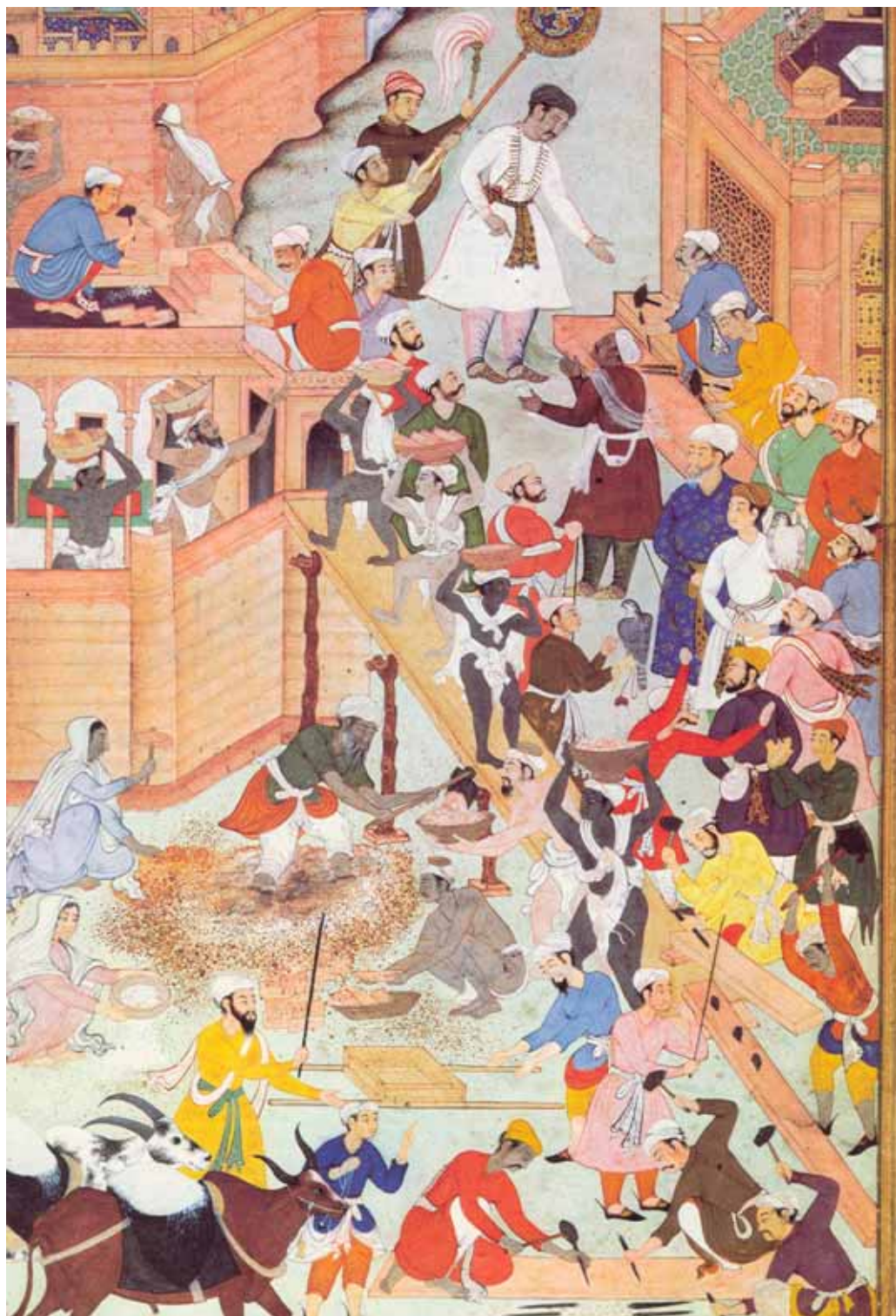
With the introduction of fine cementing material (lime mortar) and new techniques (arch and dome) one finds fast growth of brick houses in the cities. Alauddin Khalji employed 70,000 craftsmen for his buildings. The number of stone-cutters alone employed by Babur for his buildings were 1491.

In building construction role of engineers (*muhandis*) and architects (*me'mar*) and builders (*banna*) was most important. At first *tarah* (*naqsha*, plan) of a building used to

be chalked out on a sheet of paper and building was constructed as per the tarah. The master architect was known as *Ustad*. *Ustad Ahmad* and *Ustad Hamid* were the chief architects appointed for the construction of Shahjahanabad fort. A painting from Baburnama shows Babur inspecting the graph-sheet (*naqsha*) of a layout of a garden. 'Gardens' formed an integral part of Mughal building constructions. In Karnataka architects and builders were known as *ruvaris*, and *rupakaras*, *silpi*, *achari*, and *acharya*. They were involved in tank and temple constructions.



Mughal mason at work;
Akbarnama



Akbar inspecting construction of Fatehpur Sikri, A folio from *Akbarnama*.

Stone and bricks, both baked and dried, constituted prime building material. Next in importance was the lime/ lime mortar. Red sandstone was quarried from Fatehpur Sikri and Rupbas. Bihar was known for cutting and polishing of stone. Phalodi in Rajasthan had two stone quarries. Abul Fazl (c. 1595) records presence of two marble quarries at Rajgir and Gaya in Bihar used for making ornaments. Marble was quarried from Marwar. For Taj Mahal marble was brought from Udaipur region. The stones were transported on cart-loads. Lime was quarried from Broach and Patiali (near Aligarh). Limestones were used for white washing. Gujarat's *sang mahtabi* (a variety of lime) was known for its softness and whiteness. Lime from sea-shell was prepared in the region of Bengal. For making lime mortar *surkhi* (pounded bricks) was used.

Beldar specialised in laying out the foundation; *sangtarash* were the stonecutters. However, there were separate embossers (tracers, *naqqash*), inlayers (*parachinkar*), and for polishing the stone. Bricklayers (*raj*) constituted separate category. Ironsmiths though played active role in the building activities, as is evident from Mughal paintings, interestingly he is found missing in Abul fazl's list of building workers.

Carpenters (*najjar*) and sawyers (*arra kash*) were important part of building construction. In Karnataka, known as *badagi* and *varadhaki*, they enjoyed the status equal to *rathakara*. During the 14th century, in Irinjalakuta temple, Kerala we hear about the *Taccuta Kammal* (artisan priest, a carpenter), incharge of the construction activities in the temple. They were equally vital in both the rural and urban economy. They were essentially required for making agricultural tools and bullock carts in the village society.

18.6 OTHER CRAFTS

The list of sundry crafts during the medieval period is exhaustive. We do hear manufacturers of bamboo articles (*komti* in Maharashtra), image sellers (*but farosh*), bangle dealers, (*kasar* in Maharashtra). Cambay was known for its production of wooden furniture, perfumes, etc. Furniture manufactured at Baroda was exported as far as to Basra. Ahmedabad (Gujarat) and Sambhal (Uttar Pradesh) were important centres of paper manufacturing. At Sialkot and Sirhind several varieties of paper was manufactured (for techniques see Unit 23). Van Twist (c. 1638) mentions that Ahmedabad depended for the raw material for paper production on Malabar coast. At Ahmedabad vermilion was produced from mercury. Surat was another important centre of its production.

Potters formed one of the essential component of a village life. Potters of Patna were famous for their earthen ware. Their ware was so fine that it was not thicker than paper. It used to be sent as 'rarity' all over. They used to receive land grants or fixed proportion of crop in lieu of their services. They also served as warriors in south India.

Tanning was the craft that was solely the profession pursued by the Chamar caste. Saddles, water buckets, leather pots, shoes and similar other articles were manufactured out of leather. Sirhind was noted for quivers, greaves, shoes and sandals. Excellent shields were made at Sambhal out of the skin of rhinoceros. While at Cambay shields were made out of tortoise shells.

18.7 ORGANISATION OF CRAFT PRODUCTION

One finds fairly uniform pattern in the whole subcontinent as far as certain broad features pertaining to organisation of non-agricultural production is concerned. Largely the crafts possessed 'rurban' character. 'Caste' played an important role in the production process. Further, there were certain artisans attached to the village community while others were

independent producers. We can categorise the organisation of non-agricultural production broadly into four ways: a) Village artisans; b) Independent artisans producing with their own tool and capital; c) *Dadani* or putting-out-system, where artisans were supplied with money or raw material, and d) *Karkhanas*.

Village was the basic unit of production. Each medieval village had artisans attached to the village community (called *balutedars* in Maharashtra and *ayagars* in south India). They were the service providers to the entire village and largely production was not meant for sale in the market. However, skilled artisans did sell their goods in the *qasba* market – shoes, blankets, cloth, wooden articles, etc. We have already discussed in detail their role and functions as part of the village community in the previous Unit. Here we will discuss in detail how the production was organised under other three categories.

18.7.1 Artisanal Production

No organised labour force probably existed in medieval times. Individual artisans used to produce with the help of his own or family labour, and with his own capital at their respective homes. Though implements used by them were crude, they achieved high degree of efficiency. Marx has called it ‘asiatic’ and ‘petty’ mode of production; while Moreland calls it artisanal system of production. However, Irfan Habib characterises it as ‘medieval Indian production’.

In north India, particularly during the Mughal period, the state was the largest producer and best master craftsmen worked in their *karkhanas*. Still a large number of artisans were producing independently and enjoyed freedom of production for the local consumption as well as their goods were also in demand in distant markets. Lahore was famous for carpet production. Manucci (1656-1712) records 20 varieties of Lahore woollen goods were on sale in Agra market.

Non-agricultural production was deeply rooted in the agrarian setting. Commenting on Mughal period Tapan Raychaudhury (Cambridge, 1982) states that, ‘Manufacturing in Mughal India was predominantly a rural activity though most urban centres also had their artisan industries specially production of certain luxury and semi-luxury goods.’ Weavers and dyers did not constitute part of the village servants. But they did possess rural base. Spinning was almost exclusively done by women on payment. Weavers used to buy the yarn from the ‘independent’ spinners. The main centres of yarn production were Balasore, Qasimbazar and Broach. Cotton carders (*naddaf*) hire out their services as to this date in the villages and to some extent at the urban centres by reaching door-to-door. Artisans, particularly, weavers and oil-pressers used to market their products in the nearby markets. Fukazawa (1982), however, finds that in Deccan weavers and dyers were more urban than rural. In south also they formed very much part of temple-towns. K.N Chaudhuri referring to 17th century textile production in India finds that in north it was more town centric while in the south and Bengal the production ‘scattered throughout the country’.

In south India craftsmen of different professions and castes more commonly possessed ‘collective identity’ – *Panchala* (Karnataka), *Panchanamuvuru* (Andhra Pradesh), and *Kammalar* (Tamil Nadu). Craftsmen were at the centre of the growth and emergence of temple towns in south India. Craftsmen not only played an important role in the construction activities but also formed part of the temple complex in south India. Their settlements in the temple complex were known as *tirumadailagam*. It is interesting to note that the position of craftsmen involved with temple construction was much different to their counterparts working in the villages as simple blacksmith, etc. There existed huge socio-economic gap between the two. (Vijaya Ramaswamy, 2003) Interestingly, in south India though we do not find *karkhana* type of organisation, we do hear craftsmen

attached to the temple. Thus enjoyed patronage of the temple and right to participate in the temple management. They used to perform the services to the temple. Portrait sculptors derived their patronage almost exclusively from the royalty. (Vijaya Ramaswamy, 2003) However, in contrast to artisans working in the *karkhanas* they not only cater to their patrons but also to the market.

European factors used to operate through middlemen (brokers/*dallals*). They worked as facilitators in procuring goods from hinterlands. Money advances were made to the weavers, calico printers. Though initially it helped the weavers, in the long run gradually it led to merchant interference in the production process. To ensure the supply European Companies gradually encouraged weavers to settle down near the factories. This gave rise to increase in weavers' settlements around European factories resulting in the emergence of new set of settlements and new equations. French advanced around 30,000 *pagodas* to get the weavers settled in the nearby villages around Pondicherry. Interestingly, the indigenous soldiers employed by Francois Martin were used by him in times of peace for weaving.

We are not sure to what extent the guilds survived or whether there existed any formal organisation of guilds. However, men of the same profession lived in the same quarter/s of the town/village. In Maharashtra basic occupational organisation was caste. We do get references of *mehtare* (chief) in the Decaan. Burton Stein argues that powerful merchant guilds of the Chola period declined during the Vijayanagara period in the wake of the establishment of centralised bureaucracy. However, Vijaya Ramaswamy (1985:82) counters that 'in the sixteenth century textile trade continued to be in the hands of Ayyavole guild and its connection with the textile industry continued till the late seventeenth century.' We continue to get references to Ayiravar Nagarattar and Choolias in the seventeenth century. Nonetheless there appears to be a definite decline in the power and prosperity that they enjoyed during the earlier centuries. The declining powers of the guilds led merchants to associate themselves to a group of landholders who emerged as powerful private landowners and were organised as *chitrameli-periyanaadu*.

In south India our period also saw emergence of weaver-merchant or master weaver employing artisans under him. It had an added advantage that it not only ensured involvement of the artisan but also of the entire household. Dutch had the largest dealings of this sort. Such contracts were signed by English East India Company with the chief weavers of Salawar and Janrawar weaving community. The master weaver in this case thus represented the interests of the weavers as well as the Company.

Our period is marked by the growing power of *kaikkolas* (weavers) of Valudilampattu region, particularly in the lower valley of Pennai and Gadilam and those of the *kanmala* (the smiths). Their association with local administration and temple management is suggestive of their growing power. During the 16th century records kanamalas are mentioned to have been exempted from *kanikkai*, *pavadai*, *parivattam*, and *mugantudai*.

Artisans were neither economically well off nor well treated. Pelsaert (c. 1626) lamented the condition of the artisans: 'For the workmen there are two scourges, the first of which is low wages...The second [scourge] is [the oppression of] the Governor, the nobles, the Diwan, the Kotwal, the Bakhshi, and other royal officers. If any of these wants a workman, the man is not asked if he is willing to come, but is seized in the house or in the street, well beaten if he should dare to raise any objection, and in the evening paid half his wages, or nothing at all.' Bernier (1656-68) has also made similar remarks over the prevailing condition of the artisans in Mughal India. The rich will have every article at cheap rate. 'When an Omrah or mansabdar requires the services of an artisan, he sends to the bazar for him, employing force, if necessary, to make the poor man work, and after the task is

finished, the unfeeling lord pays, not according to the value of the labour, but agreeably to his own standard of fair remuneration, the artisan having reason to congratulate himself if the korrah has not been given in part payment.'

In north India caste organisations did sometimes protest against exploitation. We do hear voices of protests on the part of artisans. In 1630 at Baroda weavers declined to supply *bafta* to the English unless they stopped buying the yarn from the market for it hiked the prices of yarn. Similarly, English factor (1634-36) mentions a case of Baroda where weavers resisted selling the cloths to the *faujdar* on prices dictated by him and threatened to leave the town. The large scale participation of artisans in the popular movements particularly the Satnami uprising, shows signs of artisans' resistance against exploitation.

South Indian crafts organisations did play active role in 'collective bargaining' and protested against 'enhanced taxation.' Increase in loom tax by Krishnadeva Raya in 1513 resulted in an en masse desertion of weavers. Abbe Carre (1672-74) mentions that, 'there was a firmly established custom (among the *kammalar* artisans) that if one of them is offended or wronged, all others shut their shops and abandon their work.'

The other side of the story is instances of cheating on the part of the artisans are also recorded, though such cases are a few only. English factors complained at times dyers supplying half-dyed clothes. After Gujarat famine when indigo production dropped sharply indigo manufacturers started mixing sand, oil, etc. with indigo.

18.7.2 *Dadani*

Dadan, a Persian language term, means to give. Generally the advances were made by the merchants to the weavers. The capital invested by the merchant, however, could be in the form of cash or raw material. Here artisan was producing not with his capital though still producing with the help of his tools and family labour. *Verlagg* in south India was similar to the *dadni* ('putting-out-system') where merchants used to provide raw material to the weaver as advance. In south India it started under the influence of the European trading companies who required the specific variety of cloth. The quantity and quality required, however, was determined and dictated by the investor. Thus, while still controlling the tools and labour the artisans' choice in terms of choosing raw material and the final product got restricted; their originality and creativity was lost under the dictates of merchants/companies to provide specific design and style of cloth. European factors instructed that 'those which you shall send we desire may be with more white ground and the flowers and branch to be in the middle of the quilt...whereas now most part of your quilts come with sad red grounds which are not so well accepted here.' (Vijaya Ramaswamy, 1985) The investor could be merchant or a broker. There was tendency on the part of these merchants to monopolise the areas of their investments through their agents and at times tried to impress upon price curves. Pelsaert (c. 1626) states that, 'The practice of giving advances to indigo producers proved very profitable since at that time the market price of a maund of indigo was Rs. 35-36 while by paying in advance they got it for Rs. 24-25.' Thus merchants became indirect organisers of production. In the seventeenth century we hear more of independent merchants than merchant organisations. The famous names were Mir Jumla, Virji Vohra, Chinanna, Kasi Viranna, Seshadri, Varadappa. They wielded lot of political power. Chinanna, when turned hostile against the Dutch besieged, though unsuccessfully, Fort St. Geldria. These merchants exploited the artisans to their fullest possible capacity. Somaji Chitta of Surat charged interests on the money be advanced to them. Instead of charging 1 per cent commission he charged them 12 per cent. In fact weavers lost their freedom in choosing the quality, fixing the quantum of production, and above all in determining the prices of the finished goods. It practically reduced them to the level of hired labourers and only

'thin line separated them'. But at times they save them from official oppression. These merchant-brokers served as link between the Company and the artisans. It also reduced the level of risk for the Company; even at times they made advances to the Company.

18.7.3 *Karkhanas*

These *karkhanas* were not necessarily production centres. Some were, however, the real factories where manufacturing was done (*Qur Khana* – arms and armoury); while others served as royal stores (*filkhana* – elephant stable), *abdarkhana* (maintained water supply of the palace, etc.). Shams Siraj Afif (c. 1400) calls the first type *ghair ratibi* and the later types *ratibi*. The later one received fixed royal grants. In the present Section we will be focussing on the first type of *karkhanas* where actual production was done. In these *karkhanas* not only the things of daily use but also artillery and amunitions were produced.

The institution of *karkhanas* appears to be a Persian importation. *Karkhanas* known as *buyutat* (lit. house) were more in the form of royal workshops producing or storing items of value/needs required by the royal household. Persians exploited large numbers of war captives for the production purposes.

We hardly get much information on *karkhanas* prior to Tughluq period. Muhammad Tughluq had employed 400 silk weavers in his royal *karkhana*. However, Firuz's reign saw the unprecedented growth of the institution of *karkhanas*. He maintained as much as 36 *karkhanas*. Afif provides a graphic description of the working of the *karkhanas* under Firuz.

The royal establishments (*kar-khana*) of Firoz Shah

Sultan Firoz had thirty-six royal establishments, for which enormous supplies of articles were collected, *** and the annual outlay on which was very large. Some of them were in receipt of a regular payment (rayati); others had no fixed income (ghair-rayati). Thus among the rayati establishments there were the elephant, horse, and camel stables, the kitchen, the butlery, the candle department, the dog-kennels, the water-cooling department and other similar establishments. These received a regular monthly allowance of one lac and sixty thousand tankas for their expenses, in addition to which there was the cost of their furniture, and the monthly salaries of the accountants and other officers, which also amounted to one lac and sixty thousand silver tankas. In the establishments which received no regular allowance, such as the wardrobe, the *alam-khana* or insignia, the carpet stores, and the like, new goods were procured every year according to orders given. In the winter season six lacs of tankas were expended on the wardrobe, besides the outlay for the spring and summer. 80,000 tankas were expended on the *alam-khana* in the purchase of articles, besides the salaries of the accountants and the wages of the work-people. About two lacs of tankas were expended in the carpet department. Each of these establishments was under the charge of a khan or malik of high rank; thus the wardrobe was under the superintendence of Malik' Ali and Malik Ismail.***

Khwaja Abu-l Hasan Khan was charged with the general superintendence of all the *kar-khanas*, and through him all orders were issued to the respective establishments. There was a separate financial department (*diwan khana*) for the *kar-khanas*, in which the general accounts were kept, but the accounts were rendered to and recorded in the exchequer (*diwan-i wizarat*). So that the exchequer not only kept an account of the land revenues (*ikta*), but also of the expenditure of the *kar-khanas*. There were many accountants in the various *kar-khanas* who received monthly pay.**

Shams Siraj Afif, *Tarikh-i Firuz Shahi*, trs. Elliot, H.M., and John Dowson, *The History of India as told by Its Own Historians: The Muhammadan Period*, Allahabad, Vol. III, pp. 103-106.

Under the Mughals the institution expanded further. Akbar took special interest in its expansion. Jadunath *Sarkar* has counted as much as 70 types of *karkhanas* working under the Mughals. Speaking strongly for the institution Bernier (1656-68) comments that, 'The arts in the Indies would have long ago lost their beauty and delicacy if the monarchs and principal omrahs did not keep in their pay a number of artists who work in their houses, teach the children, and are stimulated to exertion by the hope of reward and fear of the *korrah*.'

These royal *karkhanas* were not only established at Delhi and other capital cities instead they had huge establishments at provinces as well. Shawl industry was largely concentrated in Kashmir. Akbar is credited with popularising the shawl industry of Kashmir to other parts of India, particularly Lahore. During Akbar's period they operated at such a vast expanse that Abul Fazl has equated them with a city. Akbar tried to develop shawl and carpet workshops at Patna, Agra, Delhi and Lahore. Abul Fazl mentions the existence of more than 1000 *karkhanas* of shawls alone in Lahore.

Ain 32 : On Shawls, Stuffs, etc.

His Majesty improved this department in four ways. The improvement is visible, first, in the *Tus* shawls, which are made of the wool of an animal of that name; its natural colours are black, white, and red, but chiefly black. Sometimes the colour is a pure white. This kind of shawl is unrivalled for its lightness, warmth, and softness. People generally wear it without altering its natural colour his Majesty has had it dyed. It is curious that it will not take a red dye. Secondly, in the *Safid Alchas*, also called *Tarhddars*, in their natural colours. The wool is either white or black. These stuffs may be had in three colours, white, black, or mixed. The first or white kind, was formerly dyed in three ways his Majesty has given the order to dye it in various ways. Thirdly, in stuffs as *Zardozi*, *Kalabatun*, *Kashida*, *Qalgha*, *Bandhnun*, *Chhint*, *Alcha*, *Purzdar*, to which his Majesty pays much attention. Fourthly, an improvement was made in the width of all stuffs; his Majesty has the pieces made large enough to yield the making of a full dress.

In former times shawls were often brought from Kashmir. People folded them up in four folds, and wore them for a very long time. Nowadays they are generally worn without folds, and merely thrown over the shoulder. His Majesty has commenced to wear them double, which looks very well.

His Majesty encourages, in every possible way, the manufacture of shawls in Kashmir. In Lahore also there are more than a thousand workshops. A kind of shawl, called *mayan*, is chiefly woven there; it consists of silk and wool mixed. Both are used for *chiras*, *noital*, *fotas* (lion bands), etc. (pp. 97-98)

Abul Fazl Allami, *The Ain-i Akbari*, trs. H. Blochmann, Vol. I, New Delhi, *Ain* 87, pp. 97-98.

Aurangzeb's noble Bakhtawar Khan had wide network of *karkhanas* in Delhi, Agra, Lahore, and Burhanpur. Peter Mundy when visited Patna in 1632 found weavers employed by the governor Abdullah Khan in making fine linen for his harem. Ali Mardan Khan sent to Shahjahan woollen carpets and shawls produced in his *karkhana*. We also hear *karkhanas* maintained by Shahjahan's daughter, Princess Jahan Ara Begum. Raja of Kharagpur Bahroz (1631-76) was running his own workshops in which Kols, Neyas and Asuras used to smelt iron-ores and prepare lime for the Raja. In his workshops silver work was also done.

However, Aurangzeb did not extend such liberal patronage and number of *karkhanas* declined during his reign. But the tradition of maintaining *karkhanas* did survive in the regions (Jaipur, Bengal, etc.) during the 18th century.

They largely catered to royal demands, either for royal consumption or for gift purposes. Generally, luxury items and expensive materials were produced in

the *karkhanas*. However, later, for sure, production in the royal *karkhanas* was not only meant for the personal consumption of the royalty and the nobility rather it was also done for the market. Afif (c. 1400) mentions under Firuz the turnover of *jamadarkhana* in winter alone was 60,000; while that of *farrashkhana* (carpet weaving) 200,000 *tankas* (silver coin) per year and that of the *karkhana* of mines equalled the revenues of the city of Multan. G.S.L. Devra (1987) has calculated the profit of the Bikaner rulers from different *karkhanas* during 1694-1699 at Rs. 33,881. He concludes that it was fashionable among the aristocracy to use 'branded' products of the *karkhanas*. The articles produced in these royal *karkhanas* were supplied to various departments on market rates. This way they were huge revenues generators.

But these *karkhanas* could never develop into commercial establishments for their existence depended largely upon the state patronage or the patronage provided by the nobility. As soon such patronage was withdrawn they also declined.

In the kingdoms of Maratha and Golconda *karkhanas* also developed on Mughal lines. Shivaji is credited with establishing *karkhanas* in his dominion. Sabhasad records 18 *karkhanas* of Shivaji. The production was done largely for the royalty and not for commodity production and they worked as mere state departments. Interestingly, *karkhanas* in the Deccan under the Marathas also employed forced labour (*vethbegar*). (Fukazawa, 1982) The period of forced labour ranged from eight days to two months in a year depending on the nature of work. At times they were paid a small amount in cash or kind.

Organisation of *Karkhanas*

Under the Delhi Sultans each *karkhana* was placed under the charge of a distinguished noble who was in turn assisted by *mutasarrifs* (superintendents). These *karkhanas* were well equipped and efficiently organised. Abul Hasan was the chief *mutasarrif* of all the royal *karkhanas* during Firuz Shah's reign. Initially under Akbar *karkhanas* were placed under the over all charge of *diwan-i buyutat* and later *mir-i saman* looked after the office. During Aurangzeb's reign, the charge shifted to *khan-i saman*. However, *diwan-i buyutat* continued to look after the financial matters independent of *mir-i saman*. Each *karkhana* had a *darogha* (superintendent), *tahvildar* (cashier and store keeper) and a *mushrif* (accountant). *Darogha-i kacheri* was incharge of the general supervision of the office. It was *darogha* and *tahvildar* who were in direct touch with the artisans supervised and distribute the daily work and material among the artisans. *Mustaufi* was the auditor who was to verify and audit the accounts before sending it to the office of the *diwan*.

Manufactories

The first venture in this direction was undertaken by the English East India Company at Patna under Hughes and Parker in 1620-21. Approximately 100 artisans were employed in the *karkhana* for the production of silk. In 1646 the English constructed the dyeing house for them at Ahmedabad where they not only hired the artisans but tools also belonged to the master. In 1652, at Palakollu on Coromandel coast Dutch built 300 jars for the purpose of dyeing blue cloth. Similar dyeing workshops were built by English at Surat, Tegnapatnam, Fort St. David, Pulicat, and Fort Geldria. However, they largely operated through merchant-brokers.

Karkhanas and the Artisans

It will be interesting to find out the recruitment pattern of the artisans in these royal *karkhanas*. Whether they were employed on individual basis? Were they simply wage earners? What was their socio-economic background? Or what was their status in the society?

Our information on these aspects is sketchy. We know for sure that in the royal *karkhanas* not only the master craftsmen from India but also from Turkey, Persia, China and even from European countries were employed. Thus the *karkhanas* no doubt enjoyed the services of the best artisans. However, it is difficult to say once the artisan got enrolled into these *karkhanas* to what extent he was free to produce the product of his choice – whether in terms of design or shape or colour. Production was dictated as per imperial choice/wishes. Craftsmen had to work under *mutasarrif*. In return for his services he was paid wages. He had no say in the choice of raw material. It was supplied to him by the state. State provided raw material, tools, and space to work. Artisan was simple wage earner, produced as per the taste of royalty. Jahangir in his *Memoirs* mentions that, ‘I ordered the Ustads Puran and Kalyan, who had no rivals in the art of engraving to make dagger hilts of a shape that was approved at this time and has become known as the Jahangiri fashion. At the same time the blade and the sheath and fastenings were given to skilful men, each of whom was unique in his age in his art. Truly, it was well carried out according to my wish.’

Though it is difficult to analyse whether there existed hierarchy among the artisans, it seems that there did exist some sort of gradation among the artisans on the basis of their skills. Abul Fazl mentions a huge chain of artisans employed in building construction from stone cutter, plasterer, carpenter, sawyer, lattice maker, brick layer, glass cutter, etc.

In these *karkhanas* the artisans not only lost their freedom as producer they even received much below their ability. Pelsaert (c. 1626) has commented on the pathetic condition of artisans in these *karkhanas*, ‘artisans had to work from dawn to dusk only to get 5 or 6 tachas (dams) in the evening. He was enrolled by force. In case of resistance the reward was good beating and half the wages.’ Another major blow was once they got employed in the *karkhanas* much of their family labour used to go waste. On account of their poverty they were hardly in a position to bargain. It was not easy for them to take their goods to distant market in hope of high prices. Generally they sold their goods in the local market at low prices.

The chief transformation between artisanal and *karkhana* manufactory production was that the craftsmen who were owners, master, producer (worker) and seller started disintegrating and lost their freedom in the process.

18.7.4 Wages

We have very little information on this. The only information of substance is provided in the *Ain* by Abul Fazl. But that too represents prices prevailed at the capital city/royal camp.

Ain 87 on the Wages of Labourers in the Building Establishment

Gilkars (workers in lime): first class workmen, 7 d.; second class, 6d.; third class, 5d.

Sang-tarash (stone-masons): The tracer gets 6e. for each *gaz*; one who does plain work, 5d. A labourer employed in quarries gets for every man he breaks, 22j.

Carpenters, first class, 7d.; second class, 6d., third class, 4d.; fourth class, 3d.; fifth class., 2d. For plain job-work, a first class carpenter gets 1d. 17j. for one *gaz*; second class carpenter gets, 1d. 6j.; third class do., 21j.

Pinjara-saz (lattice worker and wicker worker): First, when the pieces are joined (fastened with strings), and the interstices be dodecagonal, 24 d. for every square *gaz*; when the interstices form twelve circles, 22 d.; when hexagonal, 18 d.; when *ja fari* (for rhombus-like, one diagonal being vertical, the other horizontal), 16 d.; when *shatranji* (or square fields, as on a chess board.), 12 d. for every square *gaz*.

Secondly, when the work is *ghayr-wasli* (the sticks not being fastened with strings, but skilfully and tightly interwoven), for first class work, 48 d. per square *gaz*; for second class 48 d., per square *gaz* 40d.

Arra-kash (one who saws beams): For job-work, per square *gaz* 2½ d., If *sisau* wood; if *nazhu* wood, 2 d. A labourer employed for the day, 2d. There are three men for every saw, on above, two below.

Bildars (bricklayers): 2 2 first class, daily 3½ d.; second class daily., 3d. If employed by the job, for building fortress walls with battlements, 4d. per *gaz*; for laying foundations, 2½ d. ; for all other walls, 2d. per *gaz*; For digging ditches ½ d. per *gaz*

Chah-kan or well-diggers : first class workmen, 2d. per *gaz*; second class 2 d, per *gaz*, 1½ d., third class, 1½ d.

Ghota-khur, or divers : They clean wells. In the cold season, 4d. per diem; in the hot season, 3d. By the job, 2R. for cleaning a depth of 1 *gaz*.

Khisht-tarash, or tile makers : for 100 moulds, smoothed, 8d.

Surkhi-job (pounders of old bricks) : 1½ d. for a heap of 8 mans.

Glass-cutters : 100 d. per *gaz*.

Bamboo-cutters : 2d. per diem.

Chapper-band, or thatchers : 3d. per diem; if done by the job, 24d. for 100 *gaz*.

Patal-bank : 1d/ 4 *gaz*.

Lakhra : They varnish reeds, etc., with lac. Wages, 2d. per diem.

Abkash, or water – carriers : First class, 3d. per diem; second class 3d. per diem., 2d. Such water-carriers as are used for furnishing house- builders with water for mortar and quicklime, get 2d. per diem.

Abul Fazl Allami, *The Ain-i Akbari*, trs. H. Blochmann, Vol. I, New Delhi, 1977, *Ain* 87, pp.235-36.

d = *dam* (40 *dam* = 1 silver ruppee); j = *jital*; R = *Rupee*

The artisans in the *karkhanas* were paid either monthly or on daily basis. In the eastern Deccan in 1620 blacksmiths, goldsmiths, etc. were paid 8.4-9.6 pice a day and their helpers approximately 2.8 to 3.2 a day. Similarly, wages of the workers in the Kulur diamond mines were 2 pice a day.

We do hear of protests against the low wages. In 1660 it was reported to Aurangzeb that the *karkhana* workers refused to accept the wages in devalued new coin; accordingly their wages were raised from 1 to 1.5 *tanka* (Mughal copper coin = 2 *dams*). In a similar incident Ali Muhammad Khan records a complaint of construction

workers of Ahmedabad in 1671-72 over the low wages. Aurangzeb instructed *diwan* of the *suba* to look into the matter and asked that they may be paid as per the established norm. While lamenting over the poor pay of the craftsmen Pelsaert (c. 1626) even attributes it as the main reason behind the lack of incentives for the craftsmen to produce quality products or increase productivity. However, in spite of low wages Moreland (writing in 1920s) analyses that the workers employed in Mughal *karkhanas* were 'better off than many labourers of the present time.' Shireen Moosvi's analysis (1987) also suggests that 'purchasing power of wages in terms of cereals was significantly higher in 1595 than in the latter half of the 19th century... [and] a distinct fall in the real wages of skilled artisan too.'

18.7.5 Specialisation of Crafts

During the medieval period though craftsman with his family labour produced wonders there did exist division of labour. We get definite evidence that specialist craftsmen were employed to perform specific activities in the royal *karkhanas*. Moreover, such specialisations can also be seen in artisanal production. Take the case of textiles, the 17th century painting given in Block 5 Unit 23 on page 45 clearly points towards various craftsmen performing specific roles in the weaving process. Weaver, the master craftsman sitting in the middle involved working with his loom while you can also see a separate winder rewinding the yarn, and also cotton carders and dyers busy doing their work. The cotton and cotton yarn were freely available in the Gujarat markets. Village Sobay near Gujarat was exclusively 'weavers and spinners' village. Broach emerged as a prominent centre for high quality bleaching on account of availability of good quality water and the presence of skilled artisans. From Ahmedabad, Baroda and Agra textiles were coming for bleaching to Broach. So famous were the Gujarati bleachers that their presence is recorded in Java in 1642. Even English factors requested to send some bleachers to Bombay. Weaving and printing were two separate operations. Similar was the case with yarn production. With great increase in demand there emerged special class of labourers who were involved in production of yarn only. Broach also emerged as famous centre for the production of yarn. Their production appears to be market oriented. When Gujarat famine affected the yarn production scarcity of yarn in the market led to fluctuations in the prices of cloth and affected other operations of textile production.

Indigo was another manufacture where such division of labour existed. The process required a group of persons and could not be performed alone. It could be hired labourers or family members. In Gujarat use of hired labour in the process can definitely be discerned for here producer of the crop and the manufacturer of the product were at times different. Those buying indigo leaves and manufacturing it definitely must be employing hired labourers. We do get evidence of Europeans buying leaves and getting the dye manufactured by employing hired labourers. Saltpetre production was also no exception. It required, as we have seen, efforts of groups of workers to process the production from mining to finished product. Duarte Barbosa (c. 1518) informs us that 13 persons were engaged in performing the operations from mining of carnelian rock to its final processing. In diamond mining use of hired labour was a common feature. John Fryer (1672-81) mentions coral being wrought at the house of a 'Hindu' and 'Moorman' cut all sorts of stones clearly indicates the existence of specialisation and division of labour.

There existed a thin line between the artisans and soldiers. In fact during the medieval ages when sword was the prime determinant in south India particularly we find people of all professions and different traits joining the profession.

18.7.6 Technology and Tools

Babur in his *Memoirs* praised India for its ‘unnumbered and endless workmen of every kind’ of craftsmen. Artisans developed occupational specialisation and technical mastery by learning the same profession from generations. The point is well illustrated by Bernier (1656-68): ‘The embroiderer brings up his son as an embroiderer, the son of a goldsmith becomes goldsmith...No one marries but in his own trade or profession, and this custom is observed almost as rigidly by the Mahometans as by the gentiles, to whom it is expressly enjoined by their law.’ Pelsaert (c. 1626) also echoes the same voice: ‘workmen’s children can follow no occupation other than that of their father.’ Though medieval artisan enjoyed high reputation but his tools were very primitive and simple as compared to Europe and China (for details see Block 5, Unit 23). Though spinning wheel brought wonders as for production of yarn is concerned but the yarn produced was coarse and for quality production artisans had to bank on traditional tools. The famous muslin of Dacca was not spun on spinning wheel instead a bamboo spindle was used. The implements used by them were crude, but they achieved high degree of efficiency and skill pursuing the same profession from generations. We do get some faint references pertaining to attention paid for the improvement of tools of the artisans in the *karkhanas*. With a wish to produce better textiles than Ahmedabad, Raja Jai Singh of Amber ordered that for the *karkhana* of Jai Nagar tools be made of special kind of wood. (The details on technology and techniques used in metallurgy are discussed in Unit 23 of Block 5)

18.7.7 Craft Mobility

During the seventeenth century European travellers were astonished seeing the mobility of weavers on Coromandel coast. The prime reason behind the mass migration was either instable political conditions or protest against enhanced taxation or natural calamity.

But sometimes such mobility was also restricted by the state. In 1622-23 governor of Broach denied permission to five carpenters shipbuilders to migrate to Surat. Similarly, famine condition also forced weavers to migrate. Gujarat famine was so severe that textile workers migrated in great numbers from the region. English attempt to promote Surat resulted in local Parsi cultivators opting for weaving as one of their profession. Soon they emerged out to be one of the finest weavers in Gujarat. Ovington (1689) mentions them as the main weavers of silken fabric. Alexander Hamilton records (1692) the presence of a tailor from Surat at Achin under whom ten workers were working. There are also references to the presence of Gujarati bleachers as far as Bantan (Indonesia).

Max Weber argues that in India caste system prevented inter craft mobility. Rejecting Weber’s argument Irfan Habib has emphasised that the vast battery of skilled/unskilled workers/artisans formed a sort of ‘reserve’ out of which on the one hand new classes of professions created; contrary to it under pressing circumstances they also withdrew to their original status being absorbed into the old village settings. At times more than one caste followed the same profession. Further, as Irfan Habib puts it they were never ‘eternally fixed in their attachment to single profession or skills.’ We do get references to craftsmen shifting to another profession under ‘economic compulsions’ Thus as rightly put by Irfan Habib that ‘caste did not represent an insurmountable obstacle to the mobility of craft labour.’

In the Deccan as well caste basis of organisation of production does not appear to be very rigid. Fukazawa (1982) mentions that during the early 18th century a section of tailoring caste joined the profession of dyeing. During 17th century on account of increasing demands for textiles there occurred large scale migration of weavers from Sindh to Gujarat. In Gujarat printers formed separate caste known as Bhadar. Similarly, dyers constituted a separate caste in Gujarat. Initially Bohras of Gujarat were involved in production as well as sale of saltpetre. Later *Banjaras* also began the operation. However, they had to leave the profession on account of excessive state interference.

In south India as well medieval period saw proliferation of weaving castes – Pattunulkarar (specialist in tie and dye), Mooree, or Caingaloon, etc. and there does not appear to be immobility of craft professions. (Vijaya Ramaswamy, 2003). In the Pudukottai region some of the former military groups *kaikkolar* and *niyayattars* became weavers by the late 13th century. However, Alaev (1982), commenting on situations in south India, maintains that, 'Technological improvements were to a great extent checked by caste rules'. Nonetheless caste support 'served as a safeguard to their right.' He argues that these caste ties were more 'cohesive' in the towns strengthened by 'territorial' boundaries.

It is interesting to note that craftsmen (goldsmiths, weavers and oil pressers, braziers, carpenters, blacksmiths, etc.) in medieval south India find wielding swords and joining the state service as warriors/soldiers and their involvement in cattle raids. Mugabala (in Karnataka) inscription of AD 1337 refers to goldsmith Maroja's son Varadan died in a cattle raid.

18.7.8 Medieval Women and Craft Production

During the medieval period largely women's role in the entire production process was that of a 'subordinate' partner and were 'marginalised' in the whole processes.

Textile was the one craft where women's participation appears to be the maximum. Women largely involved in separating the cotton fibre from the seed. Though *dhunias* were largely men, scutching with hand-beating was done by women. Spinning was the area where women were in sole command. In bleaching, dyeing and printing probably both participated together. We do get separate word for male (*chhipa*) and female (*chhimpaka*) printers. At Cambay Duarte Barbosa (c. 1518) mentions the presence of Muslim washer-women.



Mughal Painting

A folio from *Akbarnama*; women at work

Besides textiles, women work hand in hand with menfolk in the construction activities. In the Mughal paintings women are shown involved in breaking stones, preparing lime-mortar, carrying it in pans. However, there is no evidence of women laying bricks or doing plastering, etc.

In south India women were allowed to use bellows but 'not permitted to forge the iron.' Women were also not allowed to assume the prime role of a designer while they were involved in the process of polishing, cutting, etc. in jewellery making. In one of the reference from Maharashtra, man is mentioned operating the oil mill, while woman was engaged in its selle.



Woman sieving the lime;
Akbarnama

18.8 MONOPOLIES

Monopoly had adverse impact on the artisans. It not only affected their freedom of work, state being the sole purchaser of the commodity, artisans used to get much below the prevailing market price. Manufacturing in the *karkhanas* was a state monopoly. English factors record that tapestry (a variety of textiles) at Lahore was the monopoly of the Mughal emperors. Skein silk was state monopoly and to purchase it one had to take the permission of the local *kotwal*. It was normally priced at 25-37 per cent higher than the actual price. The factor of the first commercial mission at Patna (1620-21) tried an unsuccessful experiment in winding skin from cocoons in a *karkhana* with 30 silk winders. Aurangzeb monopolised Bee-wax and salt in Chittagong, Dacca and Hugly. Mines and minerals had always been the state monopoly. Saltpetre was another industry where official interference was the utmost. In 1647 Mughal emperor reserved the right to employ saltpetre refiners in the imperial establishment and no where else. It affected English factory's fortunes greatly for they were doing the refining work themselves at Surat. As an important ingredient for gunpowder it was a sought after and prized product. In 1630 Shahjahan banned its export from Gujarat. John Albert de Mandelso (1638-39) records that foreigners were not allowed to export saltpetre, lead and gun powder without the permission of the governors. Tavernier (1640-67) refers to an interesting way of monopolising lime by the state, 'All the waggons which came to Surat from Agra and Jahanabad, are compelled to carry lime which comes from Broach, and which, as soon as it is used, becomes as hard as marble. It is a great source of profit to the emperor who sends it where be pleasure.'

Diamond mining was the monopoly of the rulers. Even stones of more than 10 (in some cases seven) carats were the property of the king.

Shivaji earned great profits out of his salt monopoly. Shivaji arbitrarily fixed the prices of salt at a higher level in the region of Prabhavati-Kalyana-Bhivandi (Ratnagiri and Thana districts). Fixation of higher prices on the part of Shivaji immediately turned the flow of trade in favour of Bardesh (Portuguese Goa). To combat that Shivaji imposed higher transit duties so that in the final analysis salt at Sangameshwar apparently appeared cheaper to the merchants than that of Bardesh. It appears that attempt was made purely to enhance the finance of the state but the local consumers within his own state must have severely been affected by the rise in salt price. But, since all routes to Goa (to buy the cheap product) passed through Shivaji's dominion

merchants could not avoid high transit duty resulting in balancing the lower prices of Portuguese Goa. Shivaji ensured protection for his own merchants from ruin.

Similarly, Governor of Baroda (1634-36) forced weavers to supply the cloth at prices fixed by him. In 1647 local governor at Ahmedabad forced indigo producers to pay Rs.250 to permit them to sell their commodities in the market. Above all when he procured indigo leaves in excess in 1656 he forced the producers to buy from him only at exorbitant prices or else not produce indigo at all. In 1620s Broach Governor made it mandatory to sell all narrow and broad *baftas* to him only.

18.9 DEBATES

Let us ascertain the growth potential of medieval Indian economy – whether it was static or dynamic and whether it possessed potential for capitalist production. If so then why could it not take off? We have already seen as far as agricultural production is concerned medieval economy was in no way stagnant and laggard. As for non-agricultural production, foreign travellers, particularly Bernier is all praise for enormous size of craft production. However, W. H. Moreland argues that such production was actually confined to big towns and certain specific centres of production. Otherwise, in general craft production was not to such an extensive scale as described by foreign travellers, particularly considering the ‘poor’ purchasing power of the common masses. However, Tapan Raychaudhuri (Cambridge, 1982) argues conclusively that, ‘the weight of the evidence is overwhelmingly against the view that the industrial map of Mughal India was marked by a few oasis of manufacturing centres hugging the trunk routes amidst an economic desert of subsistence agriculture.’ Another reason why the production could not assume capitalist manufacture, Aliev attributes it to the advent of Europeans.

The English attempts to procure saltpetre from Malpur (near Ahmedabad) and get it refined at Surat at their own establishment do suggest some element of capitalist form of production but on account of certain ‘extra’ factors (particularly political interference due to its importance for gun powder) the experiment was short-lived. Similarly, involvement of European capital in the manufacturing of indigo production does indicate some penetration of foreign capital in the indigenous manufacturing process. However, its effect were probably not as alarming as in the 18th-19th centuries but the process of colonization of Gujarat economy began.

Aliev agrees that in south India the ‘trade-artisan relationship contained some capitalistic features (particularly weavers ‘received not earnings but wages’) nonetheless the ‘relationship were interwoven with pre-capitalist ones, i.e. the caste solidarity.’ (Cambridge, 1982) He concludes that ‘all these forms remained within the limits of the traditional system which was not disrupted either by the activity of native capital or by the penetration of the foreign merchant capital.’

There is no doubt that during the medieval period free labour was available to sell his labour in the market, a pre-requisite to capitalist form of production. But to what extent the practice was widespread to assume a “capitalist form of production.” To analyse the issue in this context role of middlemen/brokers assumes great importance. Since the production was organised to a large extent on individual basis it were the middlemen worked as link to finally transport the goods to the consumer. Their role particularly became ‘pivotal’ with the increasing involvement of the Company trade. During this period merchant capital also dominated the production (*dadni*). Though merchant capital was visible in all crafts, it brought nothing but misery to the craftsmen.

(Gopal, 1975). We do find in certain branches of production some involvement of capitalistic features of production in certain regions, but it could not take off. Pavlov attributes it to 'deep roots of the feudal society'. Max Weber attributes caste system as detrimental to economic development/growth in India during the medieval period.

We would like to close the discussion on this issue with Irfan Habib's remarks that, 'In so far as capital, confined practically to the sphere of commerce, had failed to develop any independent basis for itself, its fortunes would lie with the Mughal ruling class, and, after its collapse, with such other classes as imitated or inherited the methods and institutions of that class. Denied, during the eighteenth century, the large market it had been provided with by the Mughal empire, merchant capital had no choice but to atrophy. With this also receded into the background those prominent economic landmarks, which on the better days of the Mughal empire might have been mistaken for capitalistic features.'

18.10 SUMMARY

We began our discussion questioning whether Indian economy was static or dynamic in the concluding remark let us highlight that the Medieval economy reached its pinnacle of glory during the closing years of our period. Indian artisan, with his master skills, caught the eye of European travellers. India achieved high state of monetisation, commodity production, there was presence of huge labour market with elasticity to be mobile. Merchant capital played active role in the production process. But in spite of the presence of such vibrant economy it failed to take off.

18.11 EXERCISES

- 1) Critically analyse the growth of textile production during the medieval period.
- 2) Discuss the potentialities of capitalistic development during the medieval period.
- 3) Compare the artisanal production with other forms of productions during the medieval period.
- 4) How was the artisanal production organised during the medieval period?
- 5) To what extent *karkhanas* can be equated with manufactories? In what ways were they different?
- 6) 'There existed no 'intercraft' mobility during the medieval period.' Comment.
- 7) What was *dadni*? How was the production organised under *dadni* system?
- 8) Critically examine the condition of medieval artisanal class.
- 9) How was the craft production organised during the medieval period?
- 10) Write short notes on the following:
 - a. Techniques of indigo-production
 - b. Techniques of saltpetre production
- 11) Analyse dominant features of medieval Indian textile production.
- 12) What role did the state play in the growth of non-agricultural production during the medieval period?

UNIT 19 TAXATION

Structure

- 19.1 Introduction
- 19.2 Islamic Theory of Taxation
- 19.3 Land Tax
 - 19.3.1 North India
 - 19.3.2 Deccan
 - 19.3.3 Malik Ambar's Settlement and the Maratha Land Tax
 - 19.3.4 South India
 - 19.3.5 Relief Measures
 - 19.3.6 Revenue Collection and the State Machinery
- 19.4 *Abwab* / Cesses
- 19.5 Taxes Other than Land Tax: *Sair Jihat*
- 19.6 Custom and Market Dues
- 19.7 Taxes on Professions and Manufacturers
- 19.8 Revenue Assignments
- 19.9 State and Taxation
- 19.10 Summary
- 19.11 Exercises

19.1 INTRODUCTION

The most crucial issue related to land tax during the medieval period concerns 'ownership'. Who possessed the ownership rights – the state (emperor) or the *ryot* (peasants)? The question is 'central' to explain whether land revenue was a tax on land or on a crop or a rent?

The problem pertaining to the issue begins from European travellers' accounts particularly Francois Bernier (1656-68) followed by British official writings who argued that in India ownership rested with the 'crown'. The problem largely arose on account of 'utter' misunderstanding of the working of the *jagir* system. Bernier equated Mughal *jagirdars* with lords of the western Europe. Since the *jagirdars* were frequently transferred at the will of the emperor for them it was the 'king' and not the *jagirdar* held the right of ownership. Aurangzeb's *farman* to Muhammad Hashim clearly addresses peasants as *maliks*. Abul Fazl in his *Ain-i Akbari* distinctly brings out 'land revenue as tax on the property of the peasants.' It was a 'remuneration' in lieu of providing 'protection and justice' to his subjects. (Irfan Habib, 1963). Even on the waste lands reclaimed by peasants their ownership right was recognised. B.R. Grover in his well researched article on, 'Nature of Land Rights in Mughal India' convincingly argued that during the medieval period ownership right vested with *riaya* (peasants). They possessed the right to transfer, sale or mortgage their lands. Irfan Habib (1999) in his *Agrarian System of Mughal India* while recognising peasants' ownership rights brought out the peculiarity of medieval situations that, "In so far as the peasant recognized the *zamindar*'s right of choice in giving land to him to till he was not, in such lands at least, the proprietor. In these and other (*raiyyati*) areas, his right of occupancy was counterbalanced by the

constraints legally set on his mobility. To that degree, he was a semi-serf, not a free agent. And his right, such as it was, was seldom saleable. It is, therefore, not possible to discern the emergence of any substantive peasant property in Mughal India. Rather one could say that there was no exclusive right of property vesting in anyone; instead the system contained a network of transferable rights and obligations, with different claimants (the king or his assignee; the *zamindar*; and finally, the peasant) to differently defined shares in the produce from the same land.'

Similar conditions prevailed in the Deccan as well. *Mirasdars*' hereditary rights on land were recognised. Peasants could sell or mortgage their land. Even at times the king is mentioned purchasing land of the *riaya*. However, customary laws put lot of restriction on buying and sale of *watan* land. Peasants could not sell their lands without the consent of the villagers.

Nuniz referring to south India mentions that "all the land belongs to the king...and they (peasants) had no land of their own for the kingdom belongs entirely to the king.' N. Venkata Ramanayya also agrees that in the Vijayanagar period king was the owner of land with the exception of Kanarese country where he accepts the presence of 'individual ownership of land' as an 'exception.' But Noboru Karashima and Y. Subbrayalu emphasise the presence of individual ownership in *brahmadeya* villages by members of the *sabha*. They are mentioned in the inscriptions possessing *kani* rights (hereditary right of possession). However, they accepted that members of *ur* (i.e. in non-*brahmadeya* villages) held land in common. Karashima points out emergence of individual ownership in the lower Kaveri valley even in the non-*brahmadeya* villages towards the end of the Chola period. This he attributes to increasing wealth as a result of territorial expansion and rise in agricultural production with the introduction of new irrigation techniques (tanks, dams, etc.). In this area during our period kshatriyas (*irasukulavar*) acquired *kani* rights. The process got accelerated during the late Chola period on account of disturbed political conditions. It must have disturbed the local balance resulting in old (local) *kani* holders abandoning cultivation that led to state interventions to preserve their traditional rights. However, Burton Stein rejects the presence of such individual ownership. He argues that, 'Local politics and property relations were founded on corporate control either of communal holders of specific privileges, usually Brahmans and temples, or of corporate landed lineages. Private landed proprietorship did not exist in its modern meaning...' In such cases of communal ownership largely the land was held in common by the community – Brahmans, Tamil Vellalars, Kannadiga, Vokkaligar, and Telegu Reddis. Outsiders were not allowed to purchase the village land, though the community members could sell their part within the village. Such lands could also not be given as grant or even in dowry (*stridhana*) to an outsider. Burton Stein maintains that the, 'communal property and privilege was defended partly by the fighting capabilities of martial peasantries.'

19.2 ISLAMIC THEORY OF TAXATION

Our period in north India largely coincides with the establishment of Turkish monarchy in India. The new ruling class coming from different environment was culturally very much different from their predecessors. They had their own system and set of rules of governance. Therefore it would be pertinent to discuss in brief the legacy of the Turkish monarchy. It will be of some interest to know that to what extent they implemented the laws of their land. However, here we are concerned with the theoretical position – the rules that were professed by the Muslim jurists. What they did actually implement will form part of the subsequent Sections.

The process of the formation of Islamic principles of taxation began as early as Caliph Omar's time (d. 644) and continued upto Abbasid period (AD 750-1258). Predominant schools of Islamic thought are Hanafites (founder Abu Hanifa c. 699-767) and Shafites (al-Shafi was the founder; AD 767-820). In India Muslim monarchies largely followed Hanafite school of thought.

Muhammad bin al-Hasan al-Tusi (d.1097) mentions four different types of lands on the basis of nature of possession : a) Those who had willingly accepted Islam were to pay *ushr* and possessed full ownership rights. b) Land of the Muslim community occupied by use of force. This was *kharaj* land. The cultivator was to pay $\frac{1}{2}$ or $\frac{1}{3}$ as rent and he also had to pay *ushr*. Irrespective of the fact whether someone had taken part in occupying the land, the land belonged to the entire Muslim community and its proceeds were accordingly be divided among all. c) *Sulh* land: Where *imam* had entered into an alliance. The land was to be retained by the owners on payment of half, a third or a quarter of the produce. This category of land belonged to non-muslims (*dhimmis*), and d) *Anfal* lands abandoned without fighting, dead lands, lands on mountain tops, plantations and the lands of previous kings. Important point to note here is that Muslim jurists recognised 'ownership' rights.

Broadly the sources of revenue were divided into *fay* and *zakat*. *Fay* lands were those 'acquired by unconditional surrender. The Shafites maintain that it was *ghanima* (booty) and should be divided among all combatants; while Hanafites argue that it could be divided among the combatants or else *imam* may permit its inhabitants the ownership rights an payment of *kharaj*. According to Hanafites the revenues of the *fay* lands should be spent for the welfare of the Muslim community such as stipends of soldiers, *ulama* and other officials, for the maintenance and protection of cities and highways, building dams and dikes. However, Shafites argue that $\frac{1}{5}$ th of it should be set apart.

Fay could broadly be divided into *khums*, *jiziya* and *kharaj*. *Khums* means one fifth. State was entitled to one fifth of the war booty. *Jiziya* was levied on non-Muslims (*dhimmis*) in lieu of protection and exemption from military service. The jurists differentiate among those who submitted without fighting (*sulhan*) and others who were defeated in the battle (*anwatan*). The former were treated leniently. Initially Christians, Jews and Sabaeans and later Zoroastrians were known as *dhimmis* (non-Muslims). Shafites, however, maintain that *jiziya* may be imposed only on Jews, Christians and fire worshippers; while for Malikis all unbelievers are *dhimmis*. Abu Hanifa (c. 699-767) and Abu Yusuf (d. 1199) opine that *jiziya* could be paid by those who worked. Thus, women, children, illiterates, lunatics, slaves, monks, old men and persons without property were exempted from it. Foreigners who were not permanent settlers in the region were also exempt. The tax was not imposed uniformly on all classes. The rich paid 48 *dirhams* (= Rs. 3); middle class 24 (=Rs. 6, *annas* 4) and poor paid 12 *dirhams* (= Rs. 3, *annas* 2) annually. It was not compulsory (*wajib*) for the *imam* to impose tax nonetheless it was lawful (*jaiz*). In return the *dhimmis* were ensured protection to life and property and religious freedom, etc. Thus those who paid the tax could not be enslaved and they were to be governed by their own laws.

Kharaj was the land tax assessed either on the basis of the proportion of the produce or as per the actual area cultivated. Measurement was done with the help of *jarib* (rope). In fixing the *kharaj* quality of the soil, nature of the crops sown and methods of irrigation employed were taken into account. The state's share on the basis of crops ranged from one half to one fifth. In case of natural calamities certain

concessions were made. Mode of extraction depended upon the nature of assessment. It was made in kind and was claimed at the harvest time. In case of cash it was extracted on annual basis.

Initially Muslims were exempted from its payment but later it was to be paid by both uniformly. Muslim jurists also recommend provisions for advancing loans to the cultivators. In case of the inability of the cultivator to pay state reserved the right to let out the land to someone else but it was soon restored if the owner/holder showed his willingness to pay the revenue.

Zakat (sadaqa) formed another source of income to the state. It was primarily a religious tax. It was incumbent upon all Muslims to pay. It was levied on both movable and immovable properties ranging from dwelling houses, clothes, slaves, drought animals, food-stuffs, gold, silver, etc. *Zakat* was not to be imposed upon infants, slaves, lunatics, debtors, insolvent and the non-Muslims. Tax imposed on immovable property was known as *ushr*.

Tithe was another tax extracted only from the Muslims. It was levied on actual produce of the soil and was distinct from *kharaj*. Minors, lunatics, and *waqfs* (religious institutions) were not exempted from its payment. It could be extracted in the form of grains, vegetables, etc. The rain fed crops and wild fruits were taxed at the rate of one tenth of the produce while crops grown with the help of artificial means of irrigation had to pay one half of the produce. Abu Hanifa insists that tithe could be imposed only on the tithe lands. It suggests that both, *kharaj* and tithe can not be levied together. However, Shafites differ and insist that both could be imposed simultaneously.

19.3 LAND TAX

The major portion of peasants' surplus was extracted through land tax during the medieval period. It will be interesting to find that the pattern of imposition of land tax was more or less uniform across regions. In this Section we will discuss the nature of land tax from Sultanate to the Mughals. It assumed its classic form under Akbar and then onwards continued to be extracted on the same pattern throughout the 17th century. The Deccan and South India are dealt with separate Sub-sections. It will be interesting to see how with Mughal penetration in the Deccan process of assimilation took place. Existing regional systems adjusted to new forms nonetheless retained regional identities.

19.3.1 North India

Agricultural surplus constituted the bulk of the state's income during the medieval period. The new ruling class (Turks), coming from a different environment, with different cultural background, possessed a different vision to look at issues. That is evident in every sphere. It took them little time to penetrate into the rural areas. Initially, Turks settled over lumpsum tribute from the subjugated overlords of the previous regimes, without disturbing the age old norms at the grass root level. That too was at times not possible for them to firmly insist, particularly in the 'rebellious territories' (*mawasat*). It took almost hundred years to the new ruling class to interfere with the established rural set up. It was Alauddin Khalji who tried to impose uniform taxation.

Alauddin imposed *kharaj - o jiziya* on all classes "without any exception". The land was measured and the yield per unit of the area assessed. By multiplying it by the area under cultivation the demand was fixed at one half of the produce uniformly on all including

the superior right holders *khots*, *muqaddams* (village headman), and *chaudhuris* (headmen of group of 100 villages). Barani (1357) mentions that it was imposed uniformly on *khots* to *balahar* (village menials). The demand was assessed in kind but payment could be made in cash. Possibly the revenue collectors' preference was for cash. However, we do get references that in the *khalisa* territories in and around *Doab* Alauddin encouraged the collection in kind. The assessment appears to have been done on individual basis, but it is doubtful whether in practice it was the norm.

Ghiyasuddin Tughluq did attempt to please the intermediaries – *khots* and *muqaddams* by exempting them from paying *kharaj - o jiziya* in lieu of their services in revenue collection.

However, Muhammad Tughluq not only reverted back to Alauddin's system of taxation but also enhanced it substantially. Barani terms it in 'order of one to ten and one to twenty'. Yahya bin Ahmad Sirhindi informs us that they measured the fields and calculated officially decreed yields (*wafa-ha-i farmani*) with officially decreed prices (*nirakh-ha-i farmani*). On account of officially decreed yields i.e. standard yields (and not actual yields) and officially decreed prices (not the actually prevailing prices) tax must have inflated heavily since the officially decreed yields and prices were probably much higher than the actual prices in most of the localities. (Irfan Habib, Cambridge, 1982). However, Firuz not only reversed Muhammad Tughluq's ventures, but went a steps further. He made concessions by abolishing cesses, limiting it to 4 per cent of the *kharaj*.

We do not have details on the pattern of land tax under the Saiyyids and the Lodis, but we do hear that on account of sharp decline in prices Ibrahim Lodi asked his officers to extract the revenue in 'food grains'. It suggests that on account of scarcity of 'coin money' (there was unprecedented shortage of silver world over), Ibrahim insisted on collection in kind. But prior to Ibrahim Lodi probably the land tax continued to be extracted in cash.

Land tax assumed its "classical" form under the Mughals. The foundation was laid by Sher Shah Sur. Akbar largely expanded and refined the legacy he received from his predecessor. It will be interesting to find that the land tax (*mal*; in Rajasthan it was known as *bhog*) was actually not a tax on land instead it was a tax on crops.

In India the earliest form of extracting land revenue was *ghalla-bakhshi* or *batai* which was based on actual harvest when the crops were still in the fields. Sher Shah assessed the *rai* '(productivity per *bigha*; in Rajasthan it was known as *rekh*) by assessing the productivity of three different categories of land – good, middling and bad. An average of the three *rai*' was assessed and the total demand was fixed by multiplying the per *bigha* productivity by total area under cultivation and later the demand was commuted as per prices prevalent at the court/camp. This system was commonly known as *kankut* (*kan*=grain, *kut*=measurement). It greatly reduced the official expenses. However, it led to excessive reliance on the part of the state upon local officials and since the prices used were those prevalent at the court it were generally quite high than the prevalent market prices. Thus, it fell heavy upon peasants and was not favorable to them. It also involved delays since the procedure of commutation used to take long. Besides, uncertainties prevailed for the state did not know how much would be an annual estimated income in the current year. Abul Fazl informs us that instead of fixing *rai* 'at each harvest Akbar ordered a standard schedule (*dasturs*). To prepare a standard schedule an average of last 10 years' (1570-71 to 1579-80) rates (*dahsala*) were taken and an average of the prevalent prices of the same 10 years' were calculated. By commuting these average prices with average yields a standard 'final *dasturs*' (cash revenue rates per *bigha*)

were worked out. Thus the revenue demand was assessed and cash revenue demand per unit of the area for each crop was fixed. This was the *zabt* system operational under Akbar. Now neither the cultivator nor the official had to bother, both knew in advance what one had to actually pay or else what the state had to extract by simply multiplying the cash rates per *bigha* with the total area sown. The only deviation being the *nabud* i.e. the area that was left uncultivated for which remission in taxation was provided by the state. The core area where *zabt* system was in operation under Akbar comprised Delhi, Agra, Allahabad, Oudh and Lahore (from Indus to Ghaghra). It was known as *zabti* provinces on account of the prevalence of *zabti* as dominant form of revenue extraction. Later, under Shahjahan and Aurangzeb the system further stretched towards Deccan. However, in due course even this annual assessment was done away with (subject to some revisions time to time by official decrees) and previous year's area statistics were generally taken into consideration to determine the land revenue demand. The practice was commonly called *nasaq*.

Here the important point to remember is that when we call a particular area '*zabti*' it means that '*zabti*' was the 'dominant' form of assessment in the region. However, other methods also co-existed. In Kashmir and Sind crop-sharing was the dominant form of assessment. In Bengal the prevalent form was *muqtai* in which a fixed lumpsum amount was to be paid. In Rajasthan both the crop rates, *batai* (also called *batai jinsi*) and *zabti*, were prevalent but the area under *batai jinsi* was much larger than *zabti*. There were also regional variations. In *suba* Multan, Thatta, and Siwistan three types of revenue rates prevailed – *dastur* (official rates), *kam dastur* (concessional rates), and *batai* (crop-sharing). In the eastern tracts, particularly in the hilly tracts, to encourage cultivation large concessions were granted. The peasants were to pay only the nominal rent (*khil*) in the first year and in the second year the demand was reduced even further (*kum*). Here Akbar's rates were not in operation.

You will find that differential rates of assessment existed under the Mughals and the incidence of revenue demand varied from region to region depending on the fertility of soil and also from harvest to harvest. Under Sher Shah 1/3 of the produce was a standard claim. However, Akbar, under *zabti* demanded almost 1/2 of the produce as standard. In certain fertile tracts of Gujarat the demand was as high as 2/3. However, in arid regions it was much lower. The average revenue demand in western Rajasthan ranged between 40 and 42.5 per cent suggesting it was lower than the Mughal territories. (Bhadani, 1999). In the Marwar region land revenue demand varied as per the nature of crop and season. *Pargana* Merta records show that here in the 17th century proportion fixed on *kharif* crops was 1/2 while for *rabi* different rates for rain irrigated and irrigated lands were in operation. It was 2/5th (*pachdui*) on the former and 1/3 of the produce on the latter. In *pargana* Pokharan we get references to revenue demand imposed as per *baori* (step-well) at the rate of 1/3 of the produce; while at places like *pargana* Sanchar, western Rajasthan, assessment was made on the basis of ploughs/*hals* known as *muqata*. Revenue demand also varied as per the caste of the peasant/cultivator. In *pargana* Jalor (western Rajasthan) banias, *ghanchi* (oil pressers), *sabugar*, *kunbhai*, *pinjar* (cotton carder) were paying at the rate of 1/3 of the produce while Rajputs 1/4th and Malis 1/5th. Here land tax was even imposed an *mehtar* (headman of menials) at the rate of 1/6th of the produce. (Bhadani, 1999). Thus, superior right holders and higher castes were assessed at much lower rate as compared to ordinary peasants. This was the main reason behind the reluctance and insistence of the Mughal emperors not to convert *raiyyat kashta* (peasant holdings) into *khwud kashta*. S.P. Gupta's findings for eastern Rajasthan also shows that the *raiyyats* were assessed at much higher a rate as compared to the privileged strata.

Land Revenue Demand in Crop-sharing in *Dastur* Circle Sarkar Alwar, *Suba* Akbarabad

Peasants (revenue-payer)	<i>Pargana</i> Jhak 1715	<i>Pargana</i> Mauzpur 1713	<i>Pargana</i> Antela Bhabhra
<i>Palti (raiyat)</i>	50%	40%	50%
<i>Patel</i>	40%	33%	40%
Mahajan	40%	33%	33%
<i>Jot</i> Rajput, etc.	33%	-	-
(i) Sheikhwat	-	-	25%
(ii) Others	33%	33%	33%
<i>Pahi</i> (pa'i)	40%	-	33%
<i>Kamin</i> , Barber and Chamar	-	33%	40%
<i>Chaudhuri & Qanungo</i>	25%	-	25%
Tenant (<i>basai</i>) and <i>Baradari</i> of Rajputs-		-	33%
Brahman	33%	-	-
<i>Sardar Kotri zamindars</i>	25%	-	-
<i>Purohit</i> , Charan similar to Rajputs	33%	-	-
<i>Qazi</i>	-	33%	-

Source: S.P. Gupta, 'The Magnitude of Land Revenue Demand in the Mughal Administration during the Late 17th and Early 18th Century', *Proceedings Indian History Congress, 1990, Calcutta, 51st Session, Table III (A), p.341.*

Though assessment was made on individual basis (*asamivar*) the basic unit of collection was the village. During the medieval period generally the collection was done at three different levels: (a) where state was collecting revenue directly employing its own machinery of officials. Such system was in operation in the *khalisa* territories under the Mughals. (b) Revenue assignees were permitted to collect the revenue in lieu of their salaries called *iqta* (under Delhi Sultans) and *jagir* or *tuyul* (under the Mughals). Here revenue assignees were sending their own agents (*gumashtas*) for collecting revenues. (c) In the third category largely come port towns and their hinterlands where altogether a separate system was in operation.

State was very strict as far as the collection of revenue was concerned. Refusal to pay it was deemed equivalent to rebellion. Imprisonment, massacre of adult male population, and enslavement of women and children were common forms of punishment.

We do not have much information regarding the revenue *administration* under the Delhi Sultans but an elaborate system of revenue collection prevailed under the Mughals. There were different systems in operation for *khalisa* and *jagir* lands but unfortunately we do not have much information on how the *jagir* lands were administered. The information that we have largely pertains to *khalisa* territories. At *pargana* level there were *amils* (or *amalguzar*, former *shiqdar*) and *amin*. In the 19th R. Y. (1574-75) year when Akbar introduced *karori* experiment *karori (amil)* was made incharge of both assessment and collection. It was Shahjahan who separated the assessment from collection and appointed separate *amins* for each *mahal* and from his reign onwards *amins* looked after assessment while the *amils (karoris)* performed the job of revenue collection. In *jagir* lands probably *amil* combined all the functions of revenue assessor, collector and treasurer. Separate *amins* were appointed to collect *jiziya* called *amin-i jiziya*. At village level the *chaudhuri* occupied important place. Usually a *zamindar* performing the duty of revenue collection was known as *chaudhuri*. In lieu of his services

he was entitled for *nankar* (5-10 per cent of the gross revenue collected). *Qanungo* was another important semi-hereditary official who was appointed both at *pargana* and village level. He was chiefly connected with revenue assessment and maintained the revenue records.

19.3.2 Deccan

Prior to the Mughal occupation of the Deccan (1686-87) revenue demand as well as collection was *done* in kind was the Deccan. Another prominent practice that prevailed in the Deccan was 'farming through an elaborate series of lease and sub-leases' (Richards 1975). Even the post of governors (*sar-samatu*) could be held on farming terms i.e. they were to pay a lumpsum amount annually in lieu of the post held. These governors were mere 'speculators' for they immediately used to sub-let the land on high profit. These sub-letees were known as *havalgars*. There did exist state appointed *amil*s but their prime concern was to ensure the state's revenues. The only check, however, came from the local dominant land-holding castes – Razus, Valamas, Kammas, and Kapus (Reddis), and Brahmans in *agrahara* villages. They were not simple cultivators but formed 'warrior cultivating' castes, 'wielded immense political, economic and military power in the countryside.' (Richards, 1975). In Gujarat such Rajput warrior cultivators were ejected after long drawn clashes but in the Golconda region they worked together in full cooperation with the Telegu warriors. Qutb Shahi rulers appointed *deshmukhs/desais* who maintained retainers and helped the *havalgars* and *karkuns* (accountant) in revenue collection. In return they received 5 per cent of the revenues collected. In each *paragana* *deshpandes* (counterpart of *qanungoes*) were appointed to maintain the records who were generally Brahmans. Their remunerations were nearly the same as those of the *deshmukhs*, but a little less. At village level there were *muqaddams* (village headmen who belonged to dominant castes) and *kulkarni* (village accountant; who was a Brahmin). This system helped 'continued productivity of agriculture in Golconda despite a seemingly ruinous tax system.' (Richards, 1975).

The major reforms in the land revenue system in Deccan took place at the time of Aurangzeb's tenure as governor of Deccan in 1652. He entrusted Murshid Quli Khan, *diwan* of Berar-Balaghat with the responsibility. Thus he made the beginning of the *zabt* form of assessment in the Deccan. Murshid appointed trusted *amins* (assessors) and surveyors to measure the land. He got detailed records made of the individual holding (*raqba*) and distinguished the arable land from rocky and hilly soils, rivers, lakes, etc. After the assessment was done he introduced crop sharing on the basis of three rates: a) state charged ½ of the produce on crops depended on rainfall; state demand was fixed 1/3rd in food grains 1/9th to 1/4th in case of cash crop; crops depend on well-irrigation; and on lands irrigated by canals the demand varied considerably. At times it was much lower than the lands irrigated by wells. The average rate of assessment amounted to 1/4th of the produce. Murshid assessed revenue rates on the same lines as were under the *zabt* in the north. They were assessed per *bigha* on the basis of actual area sown, prevailing market prices, and quality and quantity of crops produced. They were commonly known as *dhars* in the Deccan. The village constituted the basic unit of assessment. Murshid's system with little modifications largely continued during the 18th century.

After the Mughal occupation of Deccan in 1689-90 (30 R.Y. of Aurangzeb) Muhammad Shafi, *diwan* of Hyderabad carried out a survey and fixed the revenue afresh (*jama-i kamil* i.e. an estimated income). These figures were *pargana* and *sarkar*-wise for the entire Mughal occupied Deccan and were compiled in early 18th century (c.1705-07) in *Deh-be Dehi*. It continued to form the standard revenue in later periods as well under

Nizam-ul Mulk (vizier of Muhammad Shah. Later founded independent state of Hyderabad).

The general Mughal rule was to take $\frac{1}{2}$ as state's share. But it varied depending on 'other' factors – poor harvest, famine, etc. One document from Rajahmundry of 1741-42 reveals that in 39 villages the range varied from 3.3 per cent to as high as 68 per cent (in all but 7 villages the rate was more than 50 per cent).

All documents pertaining to land revenue assessment were to be signed by *zamindars* confirming that they agreed/consented to pay the agreed amount in the presence of *deshmukh* (revenue collector) and *deshpande* (accountant). Muhammad Shafi attempted to establish contacts with the local officials of the region. In Telengana he recognised their position and perquisites and conferred *sanads* (a document confirming emoluments, grants, etc. under official seal) upon them on payment of their annual allowances. The amount fixed was existing allowances multiplied $7\frac{1}{2}$ times. In Hyderabad *suba* (province) there was an average increase of 13 per cent; while in interior Telengana the increase made was approximately 10 per cent. But there was a steep rise in the coastal Andhra areas. The average enhancement was 20 per cent (12% for Machilipatnam, 24 for Murtazanagar, 43 per cent for Rajmundry, 43 per cent for Mustafanagar). Though the amount could be paid in instalments, it must have been detrimental to the peasantry.

Mughal officials on parallel lines were implanted in the Deccan as well – *chaudhuri* and *qanungo* (*deshmukh* and *deshpande*). But we are not sure whether other local officials on similar lines were also appointed there. Richards mentions that in the Telengana region Mughals had to still depend largely 'on the goodwill, loyalty and efficiency of the Reddi, Valama and Kamma *deshmukhs* and to a lesser extent the Brahmin *deshpandes*.' However, the situation in the 6 districts of the coastal Andhra was somewhat better and linkages with the local *deshmukhs* were more 'direct'. *Amin* and *faujdar*s appointed at the coastal districts could establish direct contacts with them. However, immediately after the settlement Muhammad Shafi found it difficult to get information regarding annual collections. Thus, a *qanungo* was appointed as provincial recorder to maintain the revenue records in Hyderabad and Hyderabad Karnatik. (Please note that in the north *qanungoes* were appointed at *pargana* and village level.) Here his position appears to be much higher than his counterpart in the north. The first *qanungo* appointed was Babu Pandit. He was officially designated as *zamindar* holding a *mansab* 200/70 (we do not hear any *qanungo* ever holding a *mansab*). Later his *mansab* was enhanced to 300/100. He was also exempted from branding the horses. It clearly suggests his distinct position as compared to his counterpart in the north. We do not come across appointment of such *qanungoes* prior to Aurangzeb. The first reference to it comes from 1670 when 3 brothers were appointed as provincial *qanungoes* but they were not allotted *mansabs*; instead they received 0.5 per cent of the total revenues of the provinces. Soon Babu Pandit bought the post of accountant (*kulkarni*) of *sair* collections from the capital and Golconda fort. Here it is important to bear in mind that no such buying of posts from the state was a norm in north India, though we do hear of the sale of *zamindari* rights. His powers so increased that he was dismissed in 1702 but again got re-appointed in 1708.

19.3.3 Malik Ambar's Settlement and the Maratha Land Tax

Malik Amber (1549-1626), the Prime Minister of the Nizam Shahi kingdom of Ahmednagar revolutionised the land settlement in the Deccan to the extent that it formed the basis of all land-reforms in the *Deccan*. Marathas also adopted the same system with little modification.

Malik Amber ordered the land of his entire kingdom to be surveyed and measured. Prior to that generally revenue farming was the norm. For measurement *kathi* (a measuring stick; it was 5 cubit and 5 close fists; 400 square *kathis* constituted a *bigha* and 120 square *bighas* made a *cavar*). Marathas called it *Sivasahi kathi*. Malik Ambar classified the land into four categories on the basis of quality of the soil and the nature of crops sown. (Compare Mughal system of fixing the *rai* 'on the basis of good, middling and bad lands). During Shivaji's period three assessments were done by Dadoji Kondadeo (1636), Moro Trimal (1648-49) and Annaji Datto (1678) successively. Revenue officials were to visit a *tapa*, a hilly, a marshy village, and a village with black soil and thus prepared the estimates. Annaji Datto made a provision that *pargana* and village officials and the villagers must agree upon the estimates of the produce. This practice of involving villagers as you have seen was also continued in the Mughal Deccan. Waste lands, common pastures, and land under trees were exempted from assessment. Measurement once done was not followed annually; (initially Mughals emphasised annual assessment but later *nasaq* became the norm) only in case of complaint or need, fresh measurement was generally ordered. The demand was fixed both in cash and kind. In case of kind it amounted to 2/5th of the produce; but when it was demanded in cash it was 1/3 of the total produce. Differential rates were charged when a new area or cultivable waste lands brought under cultivation. There is an interesting document dated 1561 pertaining to town Shirwal, *pargana* Shirwal. The areas near a tank in the *pargana* were lying fallow for long. To get it cultivated the following rates were charged (for 30 *bighas* of land i.e. ¼ *cavar*).

Differential Rates Applicable for Fallow Lands

Years	Rates Pertaining to Shirwal AD 1561		Dadaji Kondadeo's Rates (c. AD 1636)
	Cash Rates	In Kind	Cash Rates (per <i>bigha</i>)
1st Year	No rates were charged	No rates were charged	1/12 <i>ruka</i>
2nd Year	-do-	-do-	¼ <i>ruka</i>
3rd Year (<i>salsa</i>)	½ <i>taka</i> 6 <i>rukas</i> for village land ½ <i>taka</i> for town	Grain 2½ <i>Maunds</i> Grass 26 <i>bushels</i>	½ <i>ruka</i>
4th Year (<i>arba</i>)	¼ <i>taka</i> for land village	Grass 50 <i>bushels</i>	¾ <i>ruka</i>
5th Year	3¼ <i>takas</i> 6 <i>rukas</i> for village and town land	Grain 3½ <i>mounds</i> Grass 75 <i>bushels</i>	4 <i>rukas</i> or ¼ <i>rupee</i>
6th Year	2½ <i>takas</i> for village land	2 <i>takas</i> for town land ½ <i>maund</i> and 3¾ <i>seers</i> Grain 1 <i>khandi</i> Grass 100 <i>bushels</i> Cotton ¼ <i>khandi</i> Cotton 1 <i>maund</i>	8 <i>rukas</i> or ½ <i>rupee</i>
7th Year	-	-	One <i>rupee</i>
8th Year assessment			Malik Amber's

1 *ruka* = 1/40th of a *taka*; 1 *taka* = ¼ *rupee*

Source: B.G. Tamaskar, *The Life of Malik Amber*, Delhi, 1978, p.260; A.R. Kulkarni, *Maharashtra in the Age of Shivaji*, Bombay 1969, pp.163-64

The important aspect of the two documents is what Malik Amber had started was probably not something totally novel; rather the practice was already in vogue in the region. However, we do not know whether prior to Malik Amber the practice of actual measurement was in operation or not. It appears that Malik Amber, by introducing measurement, refined the existing system. Another interesting aspect related to AD 1561 document is that separate cash rates were in operation for *town* and *village* lands. We do not know how the cash rates were determined but differential rates were charged on the basis of soil. From a record of village Rahimatpur, *pargana* Var in Maharashtra rates were mentioned from the best lands 120 *takas* per *cavar*; middling 90 *takas* and on bad lands 60 *takas* per *cavar*.

Crops rates also differed not only from crop to crop but also in certain cases for the same crops different rates were charged. In case of rice we find as many as 12 rates applicable in Shivaji's dominion:

<i>Uwul</i>	-	12½ <i>mans</i> per <i>bigha</i>	<i>Bawnl</i>	6¼ <i>mans</i> per <i>bigha</i>
<i>Doon</i>	-	10 <i>mans</i> per <i>bigha</i>	<i>Khuree</i>	6¼ <i>mans</i> per <i>bigha</i>
<i>seer</i>		8 <i>mans</i> per <i>bigha</i>	<i>Kureyat</i>	6¼ <i>mans</i> per <i>bigha</i>
<i>Charon</i>		6¼ <i>mans</i> per <i>bigha</i>	<i>Ruho</i>	5 <i>mans</i> per <i>bigha</i>
<i>Ranpal</i>		8 <i>mans</i> per <i>bigha</i>	<i>Toorwutor</i>	5 <i>mans</i> per <i>bigha</i>
<i>Kharwwut</i>		7½ <i>mans</i> per <i>bigha</i>	<i>Katahnee</i>	½-¼ <i>mans</i> per <i>bigha</i>
			<i>Manut</i>	5 <i>mans</i> per <i>bigha</i>

Source: A.R. Kulkarni, *Maharashtra in the Age of Shivaji*, Bombay, 1969, p.167

Produce from the garden lands was generally assessed in cash. Rice and garden lands were charged under Shivaji at full rates only in the 4th year. When the land enjoyed such concession and it was not cultivated the amount due from such a land was deducted from the total demand of the village. It is interesting to find, as we have seen in case of Rajasthan as well where different rates were applicable for well and canal irrigated lands, in the Deccan and the Maratha territories also such differential rates were applicable as the state charged 'extra' for the 'services'.

Cash Rates on Well and Canal Irrigated Lands Under the Marathas

Crop	Well Irrigated per <i>bigha</i>	Canal Irrigated
Sugarcane	2 <i>hons</i>	2 <i>hons</i>
Ginger	2 <i>hons</i>	3 <i>hons</i>
Turmeric	2 <i>hons</i>	3 <i>hons</i>
Vegetables	1-1½ <i>hons</i>	2 <i>hons</i>

Hons/ Huns = corruption of *Honnu*, a Kannad language word; a gold coin in the south.

Like Rajasthan, under the Marathas as well certain lands were assessed on the basis of ploughs possessed. Similarly, certain service providers of the village who received lands (known as *thikanati*) were charged at much lower rate i.e. *maund* per *bigha*. Pulses produced from inferior lands were charged by 'appraisal' called *nazar pahani* under Malik Amber.

Shivaji also introduced *batai* settlement in the year 1676 in Paunmaval and subsequently in Rohidkhore. Shivaji charged ½ of the produce on such *batai* lands as state's share. As a result there occurred sharp rise in the prices of foodgrains in the region on account of the scarcity of grains in the market.

In the Maratha territory, the village *patil* was responsible for revenue collection and *kulkarni* was the village accountant. Their counterparts at *pargana* were *deshmukhs* and *desais*. Shivaji attempted to establish direct contact with the peasants for that he appointed separate officers who were to visit each village.

19.3.4 South India

Land tax in south India was also, as was the case in the north, a tax on yields/crops and not on land.

The village was divided into arable lands and pastures. The arable lands in turn were further divided into wet lands (*niraramba*; *nanjai/nancai*) and dry lands (*kadaramba*). The former were used for rice and sugarcane cultivation and garden crops, while the latter depended entirely on rainfall.

For assessment, the nature of village and land tenures, regional location of the land, crops grown, and soil patterns were taken into consideration. Even differentiation was done on the basis of a particular crop grown on dry land or wet lands. An account was taken of first whether a village was *devadana* (temple village); *brahmadeya* (brahmana village); *dalavay agrahara* (village given in lieu of military services) or else a *karagrama* (revenue village). Tax also varied depending on the sowing capacity of a 'unit' of land i.e. in Telegu districts land required to sow a *tum* (a cubic measure) of seeds was assessed at 8 *varahas*. Land tax was also assessed as per number of ploughs.

Land was surveyed and measured. It appears that during Krishnadevaraya's reign two assessments old and new (applicable from AD 1513 onwards) were prevalent. However, no standard measuring rod could be used. Even in one single village different rods could be found in use. It definitely created problems in imposing any 'uniform' rate of assessment.

The incidence of revenue demand varied from 1/6th of the produce to 1/3 and in certain cases 1/2. An important feature of tax imposition, as we have seen in North India as well, was that the higher classes, temples and Brahmanas were assessed at much lower rate than the ordinary cultivator. The Lord paid 1/4; the cultivator 1/2; *sarkar* (government) 1/6; the temples paid 1/30, and the Brahmanas 1/20 of the gross produce. Newly formed villages by forest clearings assessed at differential rates. However, no uniformity was followed in such cases and it varied from region to region.

Revenue demand on *niraramba* (wet) lands was generally fixed in kind. Peasants could pay both in cash as well as kind. However, revenue demand on *kadaramba* (dry) and garden lands were generally imposed in cash.

For revenue collection different methods were adopted: 1) the state used to appoint its own machinery to collect the revenue. 2) the state instead of dealing individually used to deal with a group of people or specific bodies/assemblies (*sabha*, *nadu*) who were responsible for collecting revenue from group of people of a village or villages. In north India also *chaudhuris* used to collect the revenues from the peasants of a village or a group of villages. However, we do not come across any reference to such assemblies performing the duty of revenue collection in north India. These assemblies generally used to guard the interests of the community.

At the helm of affairs was imperial revenue secretariat (*atthavanam*, *athavana*). It

was sub-divided into small sub-sections headed by a superintendent for collecting various taxes. Village revenue records (*kavilas*) were kept by *karnam* (the village accountant). At *tappa* and district levels (*sthala* and *sima*) these accounts were preserved by *cavadis*.

In the *nadus*, *nattavar* (district assembly) were responsible for the collection of revenue. *Nattavar* maintained separate tax register and village accounts. However, in later years gradually their power declined and they started disintegrating. They were replaced by revenue collectors and revenue farmers.

19.3.5 Relief Measures

We have already discussed in Unit 16 how state's concern was to ensure and optimise its revenues. State's insistence was not to leave the cultivable land fallow. State used to make liberal grants in the form of *taqavis* (see Unit 16) to buy seeds, etc. During harvest failures other concessions were also given to peasants. Under the Mughals where crop sharing was in operation state extracted its share at much lower rate, while in *zabti* system *nabud* (crop less) did not form part of assessment though the maximum limit for such concession was 12½ per cent of the total area sown.

The same was true for Deccan and south India. At the time of natural calamities necessary remissions were provided by the state. Shivaji, in certain cases instructed the revenue officials to remit past arrears to those who deserted the village but were willing to return. Shivaji asked the revenue officials that in no case were peasants to be disturbed or pressed at the time of ploughing and sowing. Sabhasad informs us that peasants were provided with seeds, cattle and money for cultivation and the money was to be recovered in easy instalments. The newly recovered lands were assessed at concessional rates. At times, peasants were lured to settle in new areas by offering exemption from house tax as well. Shivaji suggested that if peasant had no money to pay arrears but wished to continue the cultivation may be exempted from arrears. His implements or bullocks were not to be confiscated to recover the arrears. Nuniz informs us that Krishnadevaraya distributed lands to people which were irrigated by the waters of his new channel at Nagalapur (Hospet) and allowed the lands to be irrigated free for 9 years. Krishnadevaraya also exempted the tenants of newly colonised village Arasarkoyil from all taxes in the first year; however, from the next year onwards they had to pay certain taxes. Villages that were left untilled on account of inundation, etc. for certain periods/years and later again brought under cultivation were also generally taxed at concessional rates after they were brought under re-cultivation. Peasants were granted due reliefs during plunder, draught, etc. Nagappa Nayaka, during Sri Ranga's reign remitted taxes to merchants and weavers on account of a plunder.

19.4 ABWAB/CESSES

Besides land tax peasant had to bear several impositions in the form of *abwab* (cesses). These were 'parallel' imposts that peasants were required to pay largely to meet the cost of revenue assessment, collection and maintenance of revenue officials; certain taxes were occasion specific. The revenues so generated were generally not credited to the state's account instead these either went to the coffers of the hereditary officials in lieu of their services or used to meet the cost of revenue collection, or else utilized for specific purposes. The total imposts extracted varied from region to region and the amount ranged between 10 and 25 per cent of the

total land revenue extracted. Alauddin Khalji with a stroke of pen abolished all the cesses/*abwab* resulting in a lot of dissatisfaction among the rural intermediaries – *khots*, *muqqadams*, *chaudhuris*. Ghiyasuddin Tughluq restored all such concessions. However, once again Muhammad Tughluq reverted back to Alauddin's policy and limited the amount of such exactions not exceeding 4 per cent of the revenue.

In western Rajasthan tax levied on peasants to meet various expenses in the process of collection of revenue was known as *kharach bhog*. It varied as per method of revenue assessment and collection and also from *pargana* to *pargana*. For crop sharing it was approximately 7 per cent of the land revenue; while for *zabti* it ranged between 8.5 and 5.50 per cent of the revenue. It varied as per the caste and nature of land holdings. During the 17th century in *pargana* Sojhat from *rabi* crop it was imposed on *karsas* (peasants) at the rate of 20 per cent while *pahis* were to pay 12.5%. At *pargana* Pokharan it was 18.75 per cent on peasants while *Mahajans* and *Banias* were paying 15.62 per cent. However the Brahmanas were generally exempted from paying it. (Bhadani, 1999).

In western Rajasthan peasants had to bear the expenditure of *kanwar* (*shahna* in eastern Rajasthan) and *Hujdar*. Their job was to keep a watch on the crop at the time of the harvest and ensure fair division. The cess imposed was called *chaukosi*.

Bhogbhara was extracted to meet the expenses on the transportation of grains collected as revenue. When grain stalks were still on the threshing floors each peasant had to pay a separate tax known as *tali* (per threshing floor). Small charges in the form of duties were also paid by the peasants like – *bharoti* (receipt), *likhawani* (expenses for maintenance of accounts), *patha ra* (expenses for paper), *dawat puja* (expenses for ink), etc.

Dues for the maintenance and for the services of the revenue officials were also to be borne by the peasants. There were separate impositions for supplying woollen clothes, etc. in winter. Such dues paid by peasants were known as *dhumalo* in western Rajasthan. Peasants had to pay for incurring the expenditure for buying blankets for horses. *Milani* was to be paid by the village at the time of the appointment of an official. *Kotwali* was charged for the maintenance of the office of *kotwal* in Maharashtra. Similarly, *thanapatti* was to be paid to meet out the expenses of the *thana* in Maharashtra.

In Maharashtra *vethbegari* was a *hak* (privilege) of the hereditary officials. Both skilled and unskilled labour had to provide their services for certain days free to the hereditary officials. *Pharmais* was also similar to *vethbegari* in Maharashtra. Sign of prevalence of forced labour is also visible during the Vijayanagara period. For deepening lakes (*eri kuli vetta*), digging canals (*arrukkalvetta* and *vaykkalvetta*), for constructing temple walls, and even for supplying wood people had to render their services free. In Karnataka those were exempted from it had to pay a tax *kottage* in return.

Deshmukhs used to extract a licence free (*mohatarfa*) from merchants for allowing them to set-up their shops in the weekly market in Maharashtra. Villages had to pay for the visit of the officials on route. In Maharashtra it was known as *ulphapatti*. *Toranabheti* was probably paid in Maharashtra for decoration during royal visits.

State Imposts on Hereditary Officials

Inampatti was to be paid by the revenue free holders to the state in Maharashtra. *Deshmukhs*, *deskulkarni*, *patil* and *kulkarni* were to pay *miraspatti* for making

profits out of their offices'. We do not know the exact rate they had to pay but one of the documents pertaining to Sirval *pargana* in Maharashtra shows that in 1674 the total amount collected under *miraspatti* from the *pargana* was 1000 *hons* (a gold coin).

19.5 TAXES OTHER THAN LAND TAX: SAIR JIHAT

Prior to Alauddin Khalji's reign we do not get much information on the pattern and nature of exactions other than land tax. However, all taxes were not imposed uniformly all over the periods. Rulers were not necessarily collecting all the taxes directly, particularly in south India and Deccan; instead for some the right was auctioned to tax-farmers.

House Tax

The first reference to its imposition during our period in north India comes from Barani (1357). He informs us that Alauddin Khalji along with land tax imposed *ghari* and *charai*. As is evident from its name *ghari* was a tax on houses. In western Rajasthan a tax called *jhumpis* (hut-temporary settlements) was levied on pastoral communities. The levy was 15 *duganis* (1/40th of a rupee) per *jhumpi*. It was a tax on their settlements. In Maharashtra it was known as *ghartaka*. In the Vijayanagara Empire people of different communities were charged at different rates as house tax as per the constructed area as well as the social background of the occupants.

Stored house	: 2 <i>panams</i>	House of a Vaisya	: 1 <i>panam</i>
House with inside verandah	: 1 <i>panam</i>	House Kottil of the Vettis	: 1/8 <i>panam</i>
House of villager	: 3 <i>panams</i>	Each vasal	: 1 <i>panam</i>
House of a Tantiriman	: 1½ <i>panams</i>	outhouse	: 1 <i>gadyana</i>
House of a makkal	: 1½	Timmayya Appayya community	: ½ a <i>ga</i> per house
Varandahs with sloping roofs	: ¾ <i>panam</i>	Rajayya Lingayya Community	: 1 <i>ga</i> per house.

Panam – a coin; 1/10 in of a pon (a gold coin); T.V Mahalingam, I (1969), p.57

Tax on Cattle

Alauddin Khalji imposed *charai*, a tax on milch cows. The tax appears to have continued till Firuz Shah Tughluq's reign. Afif (c. 1400) records that Firuz forbade extraction of both – *ghari* and *charai*. Afif, commenting on repercussions of *charai*, mentions that on account of such imposition peasants were left with no choice but to keep one cow each. In Maharashtra cowherds paid ½ a *seer* of butter and the owner of flock of sheep gave 1 sheep annually to the *watandar*. A separate goat tax (*adatere*) was charged by the Vijayanagar rulers; shepherds had to pay *sadaikkadamai*. Even wood cutters had paid *kondagutta* for cutting woods for the market.

Taxes on Pastures

There were separate taxes on usage of pastures. In western Rajasthan it were known as *ghasmari*, *pancharai* and *karabghas*. *Ghasmari* was a tax on live-stock feeding on grass while *pancharai* was imposed on feeding the animals on leaves. It was extracted from camel owners. Bhadani (1999) has calculated for western Rajasthan that such levies on pastoral communities /pastures ranged between 3.34 and 7.34 per cent of the total taxation in the 17th century.

Irrigation Tax

Firuz attempted to establish vast network of canals in his dominion. He extracted from the villages served by canals *haqq-i shurb* (water tax). It amounted to 1/10th of the produce. In western Rajasthan *mal* was a sort of irrigation tax imposed on Persian wheel. It amounted to less than 5 per cent of the total land revenue. The rate of imposition was higher in the *khalisa* territories than in the *pattas* (areas assigned in *jagirs*). In *pargana* Sojhat we hear *arhat madli* imposed on Persian wheel.

Chauth

Chauth has a long history. Koli Rajas of Ramnagar (Konkan) were collecting *chauth* from the Portuguese much before Shivaji levied it. That is why the Portuguese used to address the Koli Rajas as *chauthia* Raja. The first instance of Shivaji asking for *chauth* occurs when Shivaji subdued (after the conquest of Ramnagar) Kolis and demanded the same *chauth* from the Portuguese. They resented it and there followed a tussel between them over the issue. Sometimes they delayed the payments and at times avoided paying in full. Gradually, Marathas imposed the levy on regular basis even from those Mughal territories over which they had claim/ indirect control. It was a tax amounting to ¼ th of the revenue realized by the Maratha state. It is roughly estimated that the income of Shivaji from *chauth* alone was approximately 90 lakh *hons*.

Sardeshmukhi

It was imposed by Shivaji in his own dominion (*swaraj*) on the basis of his claim as hereditary *sardeshmukh* of the dominion. Thus, it was claimed by Shivaji as a matter of right unlike *chauth*. It was 10 per cent of the total revenue realized. *Sardeshmukhi* was fixed along with *jamabandi*. Sabhasad (Krishnaji Anant) has estimated the income of Shivaji's empire from *sardeshmukhi* alone to 1 crore *hons*.

Peshkush

All *zamindars* (in case of Deccan *deshmukhs*, *deshpandes* and *munivars*) and the tributary chiefs were liable to pay *peshkush* as mark of submission. The revenues collected went directly to the imperial treasury. In the Deccan we have seen that officials had to pay a price for retaining their posts. In Hyderabad they had to shed off 7½ years' income to the treasury. In Orissa areas under the native princes who surrendered paid a fixed annual *peshkush* known as *garhjats*. Though they acknowledged Mughal suzerainty, they yet enjoyed complete freedom in their internal affairs. In the Deccan trans-Godavari tract in Srikalulam was largely held by tributary *rajars* who used to pay annual tribute.

Jiziya

The first reference to *Jiziya* imposed in India comes from as early as Mohammad bin Qasim's conquest of Sind (AD 712).

Prior to Firuz's reign *jiziya* (poll-tax) formed part of *kharaj* (land tax) and was commonly known as *kharaj-o jiziya* (for rationale see section 19.2). Firuz Shah Tughluq introduced poll tax (*jiziya*) side by side *kharaj*. Thus from Firuz's reign onwards the two were assessed separately and not together. Irfan Habib (Cambridge, 1982) remarks that 'it is interesting to consider whether *jiziya* here was simply replacing *ghari* since Firuz abolished *ghari* (house tax). His argument is based on the basis: a) women and minors were exempted from paying, and b) it was a tax not on individuals but on (heads) of houses.

Akbar abolished *jiziyah* first in 1564 and finally in 1579. However, Aurangzeb reimposed it in 1679. Here we are not touching upon the issues pertaining to Aurangzeb's motive behind re-imposition of *jiziyah*. But as Irfan Habib puts it was an extremely regressive tax and was *hardest* on the poor. According to him it formed one month's wage of an urban unskilled worker. The tax was imposed strictly as per Islamic principles. From 1st class it was extracted at the rate of 48 *dirhams*; on second 24 and on the third 12 *dirhams*.

After Mughal occupation of Golconda in 1687 Aurangzeb imposed *jiziyah* in the Deccan. It amounted to 4 per cent of the land revenue that *jagirdars* were to pay to the state and in turn they were extracting it from the peasants. For Golconda alone Richards (1975) has calculated the income from the tax approximately at 1 million rupees. While referring to it as 'a sharp economic bite' Richards argues that it 'represented a handsome increment for Aurangzeb's hard pressed treasury and a new burden for his new subjects in the eastern Deccan'. It aroused a lot of resistance and finally in 1704 on account of Maratha raids Aurangzeb stopped the collection of *jiziyah* in the Deccan.

Salt-Tax

Nainsi records the state's income for Pachpadra pits alone (western Rajasthan) at 10,000 *duganis*/Rs. 250. Bhadani (1999) has calculated that it contributed approximately 35 per cent of the total *sair* collection of *pargana* Siwana. In 1671 Shivaji imposed salt tax 12 *rukas* per maund. In the Vijayanagara Empire *uppinapale* was imposed on the manufacture of salt as per salt pan.

Taxes to Meet the Expenditure of the Army

In western Rajasthan to supply ration to the army *rasad* and *khicharo* dues were imposed. *Faujbal* was to be paid for the maintenance of those soldiers who assisted in revenue collection.

Marathas extracted *ghasadana* (lit. grass and grain) in the territories invaded by them to provide provisions for the invading army. This was usually taken as a lumpsum amount or imposed on a summary basis and realized in cash. *Raiyat* never paid *ghasadana* willingly. When an envoy was sent a separate tax *hejibpatti* was charged in Maharashtra to meet his expenses; similarly *kapur paik* was charged to meet the expenses of the torch bearer. Besides, *gadavani* was charged for housing the soldiers. Probably the amount so extracted was used for erecting temporary structures for the soldiers.

Even in Maharashtra villagers had to pay in kind for the maintenance of the fort in their environs. It was called *karsai*. To meet out the expenses of an expedition people had to pay *mohimpatti* in Maharashtra.

In south India *vartaria* was paid by the *ryots* for the maintenance of the fort. *Dalavili* and *padai-kanikkai* was paid for the maintenance of the army. Even for the repairs and maintenance of the forts villages had to pay a separate tax in the Vijayanagara period called *ottai-magamai*. Similarly, *dannayakasvamy* and *dannayakarmagamai* were paid as the contribution to the military commanders. We get an evidence of a separate tax for cannons from Nellorepet. For possessing bows, swords, or tridents one had to pay a separate license fee.

Festival Dues and Community Taxes

On the occasion of festivals like *holi*, *rakshabandhan*, *diwali*, etc. separate dues were charged. Nainsi mentions about such impositions in western Rajasthan. In Maharashtra

also separate taxes were realised on different festivals *dasrapatti* (on Dushehra); for the maintenance of *jangams* (Lingayat priests) *jangampatti* and *mejwanipatti* for other spiritual leaders was to be paid by the villagers. Shivaji remitted certain taxes like *idsubharati* (paid by oil men for illumination on the occasion of id); *bakrid*; *Humayunpatti*, *uruspatti* (offerings at the shrine), *but-pharosi* (on image seller) and *mulanasara* (for paying *maulana*). *Simhasthapatti* was imposed once in 12 years on the occasion of Nasik *kumbh*. *Ganacari* was to be paid by Lingayats of Sholapur. Later, in 1647, *khan-kusi* was imposed on them. *Maharajaprayojanas* was a tax extracted by Vijayanagar rulers on the occasion of great royal festivals. Saivas were to pay *ganacara-tere* to their Lingayat priests – *jangamas*; while Vaishnavites paid to their *guru/jiyar jiyaratere* for their maintenance. *Idangai* and *valangai* sects had to pay separate communal obligations (*inavari*).

For the maintenance of village temple and village deity separate tax *pidarivari* was imposed in south India by the Vijayanagara rulers. Even for celebrating festivals in the temple people had to pay a separate levy.

For the maintenance of the Brahmana *ryots* had to pay *vipravinodi-pannu*. During the Vijayanagar rule an interesting tax was levied upon people to be paid to the Dommaras tribe of acrobats known as *Dommara-pannu/dombaria-pannu* for their performances and maintenance. Besides, people had to pay a separate entertainment tax (*angasalai vari*). Even beggars were not left without payment. They were to pay a fee called *ganacaradera*. Similarly, a licence fee was to be paid for organising meetings.

Marriage Tax

People had to pay separate tax on a marriage procession. It was ¼ rupee in Maharashtra called *varadtaka* or *lagnataka*. Even a separate charge was to be paid (*patdam*) by the peasants at the rate of ¼ rupee. In Vijayanagara period *pendli-sunka* or *maduveya-sunka* was the tax realized at the time of marriage. Marriage tax charged by the Vijayanagara rulers was 101 *madas*. Even people celebrating their marriage had to pay separate taxes for marriage *pandala* (shed) for taking out married couples in the processions in palanquins around village streets. It was considered a highly oppressive tax and there were efforts by Timmarasa, prime minister of Vira Narasimha to abolish it. However, the tax again revived by the *amaranayakas* during Achyuta Raya's reign. Sadasiva, however, reduced the amount from 101 *ma* to 16 *ma* per marriage. At local level under the Vijayanagara rulers they appointed 'caste elders' to perform the duty of dispensing justice pertaining to community related disputes. These 'caste-elders' were to pay a fixed sum to the state; in return they used to extract customary dues from people in the form of fines, etc. To perform their duty they used to appoint *dasaris*. T.V. Mahalingam (1969) argues that judging from the nature of their imposition 'it is not likely that these taxes would have pressed heavily on the people'.

19.6 CUSTOM AND MARKET DUES

Market dues generally formed part of the *khalisa* income. To collect such taxes separate machinery was in operation. There used to be separate accountants (*karkuns*; *kulkarni*), *daroghas* (superintendent), *amin* (assessor) a *mushrif* (auditor) and a treasurer (*fotedar*, *tahvildar*). Each market was treated as separate fiscal unit (*mahal*). In the Deccan *kulkarni* was to keep an eye and supervise the local officials (*muqiman*) posted at each *mahal*. He was also incharge of the *chauki* (custom posts) of the city.

In the Deccan and Maharashtra to regulate the market there used to be chief merchants (*seth, sete*). In the Deccan they were to pay a price to attain the post. Timna was asked to pay Rs. 10,000 towards his appointment. There were separate headmen (*chaudhurian*) for each commodity market (e.g. grain, textiles, etc.). However, none of the positions were hereditary or permanent. In the *ghat* areas *Ghatpande* was appointed. His position was hereditary and he was incharge of the maintenance and upkeep of the *ghat*. *Patki* was incharge of a *chauki* and assisted by *pansare* who performed weighing. Both helped *Ghatpande* to collect octroi. There were also guards called *gujaras* or *metkaris*. They helped caravans to pass through and provided them protection. To guard *ghats* they charged 1 *ruka* per ox as their fees; *patkis* charged 2 *rukas* per ox carrying grains and salt, and for pulses 3 *rukas* per ox. Rates varied for other articles – for tobacco they charged 6 *rukas* and for bundle of cloth 12 *rukas*. *Modvi* (peon) helped *ghatpande* in supervising the collection of dues. In Maharashtra *cungi* and *majura* denote octroi imposition.

In south India the practice of collecting customs and transit dues directly by the state was hardly the norm. Instead, it was generally farmed out to the highest bidders. The rates for custom duties extracted differed from place to place in the same district/city. That encouraged the merchants to follow that *kattes* (custom house) where they had to pay less. Custom dues on goods coming to the town for sale was known as *sthalasunka/sthaladayam*; while imports on transit goods i.e. goods passing through the city/district was known as *margadayam/carasunka*; and *mamuladayam* or *peta sunkam* was dues imposed on goods sold in the market. During Vijayanagara period separate taxes were imposed on the shopkeepers who had their shops in their houses (*manaikkadaiyar*). It was 3 *panams*.

In western Rajasthan it was known as *kayali* and *tolvantai* were levied on weighing grain. It was probably a sales tax on grain brought to the market.

Customs and Transit Dues

Different commodities were charged at different rates. In the Marwar region for transporting stones 1 *taka* was charged per cart. On transporting marbles also separate tax was levied.

One of the records pertaining to Chaul Mamla, in Maharashtra we get the following charges levied as custom dues:

Article	Import Duty	Export Duty
Rice and Nagli per sack (<i>goni</i>)	12 <i>rukas</i>	12 <i>rukas</i>
Jaggery per load	20 <i>rukas</i>	30 <i>rukas</i>
Spices per load	36 <i>rukas</i>	36 <i>rukas</i>
Sugarcane per load thousand	1½ <i>laris</i>	1½ <i>laris</i>
Ginger per head load	10 <i>rukas</i>	10 <i>rukas</i>
Tobacco per load	½ <i>lari</i>	12 <i>rukas</i>
Cloth Bundle (per piece)	8 <i>rukas</i>	6 <i>rukas</i>
Yarn per load	24 <i>rukas</i>	24 <i>rukas</i>
Blankets per piece	8 <i>rukas</i>	6 <i>rukas</i>
Horse	1 <i>lari</i>	¼ <i>lari</i>
Buffalo	½ <i>lari</i>	¼ <i>lari</i>
Bullock	18 <i>rukas</i>	18 <i>rukas</i>
<i>Khudra</i> (scrap) per head load	10 <i>rukas</i>	10 <i>rukas</i>

Source: A.R. Kulkarni, *Maharashtra in the Age of Shivaji*, Bombay, p.114.

During Krishnadevaraya's reign following were the custom dues/tolls levied:

	Per bag
Millet, salt, mangoes, fruits, nuts	$\frac{1}{2}$ paikam
Gram, wheat, oil seeds, pulses, cotton, yarn	1 paikam
Vegetables (onion, turmeric, fenugreek, cumin, mustard, etc.)	1 damma
Coconut, jaggery, cleaned cotton,	2 dammas
Ghee, iron, steel, sugar, cotton thread, betel-leaves	4 dammas
Spices, copper, tin, lead	6 dammas

T.V. Mahalingam, I (1969), pp. 60-61.

19.7 TAXES ON PROFESSIONS AND MANUFACTURERS

Separate taxes were levied on various professions and manufacturing units. In western Rajasthan each weaver (*salwi*) was to pay one man of yarn (*sut*) annually; while cotton carders were taxed as per carding bow. Each cotton carder (*pinjar*) was to pay 1 rupee annually on their carding bow. In south India it was known as *pinjani garu*. In Maharashtra tax on weavers was known as *magataka*. It was assessed $\frac{1}{4}$ taka per loom. In Maharashtra if a shepherd was also a wool-dealer then he had to pay 5 pounds of wool per flock; in case of being a weaver he had to give 1 blanket per loom. In south India tax imposed on weavers was known as *maggadere/maggari*. During Vijayanagara period *Saliya* weavers were charged 9 *peranams* per loom annually.

In western Rajasthan leather cleaners (*khatik*) were paying 12 *fadiyan* (a coin) per month; while cobbler (*mochi*) had to give one pair of shoes monthly. In Maharashtra it was known as *paiposi* and the nature of tax was the same as it was in western Rajasthan.

In South India during the Vijayanagara period barbers had to pay 1 *visa* per day for their profession. We also hear a separately tax paid by the washerman in South India. Both the chief barber and chief washerman were charged 4 *panams* annually. During Sadasiva's reign barbers were exempted from paying all taxes levied on them

In western Rajasthan soap makers (*sabugars*) were to pay half a man of soap monthly.

Potters were also charged in case the goods were produced for the market. In south India under the Vijayanagar rulers it has known as *kumbaraterege/tirigaiyam*. The chief potter was charged 5 *panams* annually.

Refined oil producers and sellers in western Rajasthan had to pay a tax called *ghiyani*; while oilpressers (*ghanchi*) were levied $1\frac{1}{4}$ man annually on each press. In Maharashtra it was known as *telapatti* and it was $1\frac{1}{2}$ seers of oil per oil mill per year; while *ganagari* was paid by oil mongers ($\frac{1}{2}$ panam annually was taken from oil mongers; while the chief oil mongers were to pay 20 *panams* annually). and *ganagutta* was charged by the Vijayanagara rulers on oil mills.

Aleya sunka was charged by the Vijayanagara rulers on sugarcane mills. We also hear *kabbina, sunka* imposed on sugar cane.

In western Rajasthan wine distillers (*kalal*) were paying 12 *fadiyas* per month.

Saraffpatti was levied upon the *sarrafs* (money changers) in Maharashtra. In south India blacksmiths, carpenters, silversmiths and goldsmiths were to pay 5 *panams* annually in the Vijayanagara period.

Iron furnaces were also taxed in south India. It was called *homalagutta* and was imposed proportionately to the quantity of iron produced.

In south India there appears to be clear distinction between the taxes imposed by the state and local taxes. Taxes imposed by the state could not be remitted by the local authority. Similarly, in the imposition of new taxes or remission of local taxes state's orders were advisory and not mandatory. Though Krishnadevaraya remitted marriage tax but it continued to be levied during Achyuta Raya's reign. Taxes imposed on artisans were also part of local taxes and were not imposed uniformly in all regions/localities. In Kanaganipalli inscription (Dharmavaram taluk, Anantapur district) mention is made of remittance of several taxes on *pancalamvaru* (artisan castes) on account of which earlier they immigrated to Kundripisime and Pakalasime from the nearby areas suggest that in the nearby *sime* either no tax was levied on them or the burden was comparatively less. Similarly, trustees and Alagiya Nayinar temple at Tiruvamattu, south Arcot district farmed out some miscellaneous taxes to local Kaikkolas (weavers); in return they promised to pay 6 *panams* per loom per annum.

19.8 REVENUE ASSIGNMENTS

Generally speaking during the medieval period we find three types of revenue assignments/lands: *khalisa* (crown lands), *jagir* (secular land assignments), and *inam*.

Crown Land

Khalisa land's revenues were received by the royal treasury. These lands were governed directly by the state. The proportion of *khalisa* lands varied under the Mughals. Under Akbar it constituted $\frac{1}{4}$ th; while under Jahangir it reduced to 5 per cent of the total revenues. Shahjahan increased it to $\frac{1}{7}$ th while under Aurangzeb it formed $\frac{1}{5}$ th of the total revenues.

In the Deccan it were known as *sarkarchi sheri*, *sherichen shet* or *khalisa jamin*; while in south India as *bhandaravada/pandarvadai*. Noboru Karashima argues that there occurred a change in its meaning. During the 16th century it did not represent the crown land; instead 'simply taxable land as distinguished from non-taxable land held under manya tenure'. The *dannaik* (governor) looked after the *bhandaravada* villages.

Jagirs

Jagirs were revenue assignments given to the nobles in lieu of their services. Under the Delhi Sultans such assignments were known as *iqtas*. Later under the Mughals it came to be known as *jagir/tuyul*. The holders of *iqtas* were designated as *iqtadar*, *muqti/wali* and those of *jagirs* and *tuyul/jagirdar* and *tuyuldar*. However, there were certain differences between the two. Firstly, *iqtadars* combined fiscal and administrative charges. But *jagir* assignments hardly coincided with administrative assignments. Though *iqtas* were initially frequently transferable, by Firuz Tughluq's reign it became hereditary and permanent. Initially *iqtadar* had to send *fawazil* (excess amount) to the state treasury but as a result of concessions granted by Firuz it got permanently fixed and the practice of paying back excess amount practically ceased. Firuz even started the practice of paying his troopers not in cash but in the form of revenue assignments (*wajh* – small *iqtas*); thus he brought in hereditary and permanent character. Largely the Mughal bureaucracy was paid in the form of *jagirs* and its holder was designated as *jagirdars*. Unlike *iqtas* their administrative and

financial assignments were never coterminous. They were frequently transferred. The average span of a *jagirdar* was usually not more than 3-4 years.

Jagirdari Crisis

During the closing years of Aurangzeb's reign problems in the proper working of the *jagir* assignments began to emerge. While the land available remained limited, the number of *jagirs* allotted swelled. Abul Fazl Mamuri says that 'the world became *jagir* less (*be-jagiri*) and there was no *paibaqi* (lands yet to be assigned as *jagir*) left.' Mamuri attributes it directly to the influx of the Deccani nobility. In one of his letters addressed to Azam Khan, Aurangzeb himself admitted that there was shortage of *pai baqi*. Scarcity of *jagirs* to be assigned to the new recruits must have definitely affected the smooth functioning. We do hear of insistence on having a patron (*murabbi*) and an agent (*wakil-i dil soz*) to get the *jagirs* in their favours. Even instances of paying bribes (*sakht-i rishwat*) became a common feature. The *jagir* crisis definitely created 'ripples, rivalries, and factionalism' among the ruling elite. However, we do not hear any instance or situation assuming the shape of an armed struggle during Aurangzeb's reign. (Habib, 1963)

Mokasa, Jagir and Saranjams

In the Maratha territory *mokasa*, *jagir* and *saranjams* were often used interchangeably. However, *jagirs* were more permanent in nature than *mokasa*. They were military tenures though theoretically temporary and were transferable and could be confiscated. But in practice they assumed hereditary character. Officials were largely paid in the form of *mokasas* or *jagirs* in lieu of their services. It is interesting to find the presence of the practice of sub-letting of the *mokasas* a feature totally absent in north India. *Saranjams* were divided into *jat* and *fauj* (parallel to Mughal *zat* and *sawar* ranks). *Jat* denoted personal pay while *fauj* was given for the maintenance of the troops. It is interesting to find that the revenues assigned to these *mokasadors* only after deducting *sardeshmukhi*, *chauth*, and *batai*. Shivaji discontinued granting *mokasas* or *saranjams*, and instead preferred to pay his officials in cash. However, soon after Shivaji's death his son Raja Ram revived the practice of granting *mokasas*. There was the tendency on the part of *mokasa* holders to convert their grant as *inam* or *watan* to make it hereditary. A.R. Kulkarni finds the tendency to convert *mokasas* into hereditary tenures as 'feudal'.

Amaram or Nayankara

In South India such service tenures in lieu of military service were known as *amaram* and *nayakankara*. The major transformation from Cholas to Vijayanagara rulers was the emergence of local military chiefs (*nayaks*) in large numbers. Noboru Karashima calls it a 'turning point' in Vijayanagara rule. The term *amara-nayankara* itself signifies an office (*kara*) possessed by a military chief (*nayaka*) in command (*amara*) of a body of troops. They served as intermediaries between the *raiyat* and the states. Fernao Nuniz mentions the presence of 200 *nayaks* in the early 16th century and it is estimated that during the Vijayanagara period almost 75 per cent of the land was held in *amaram* tenures. Cynthia Talbot argues that, '*nayankara* right generally pertain to a *sima*, a territorial unit encompassing numerous villages, *amara* often appears in relation to a single village.' It was military service tenure held by *amaranayakas/nayaks* at king's pleasure in lieu of or on condition of military service like the Mughal *jagirdar*, but they were much more powerful. Bunton Stein calls them 'territorial magnates in their own right'. Every year they had to send a specific

amount of money as 'tribute'. In case of lapse the *amaranayaka* was punished and their *amaragani* was lapsed. It varies from 3.3 per cent to 50 per cent of the total revenue collected. The tenure like Mughal *jagirs* were neither hereditary nor permanent. They were not allowed to stay in their territories for long. These *nayaks* used to administer their territories through their agents called *karyakarta*. However, for *durga-dannaik* it was not mandatory to attend the court in person. They were entitled to collect *durga-danayi nivartana* in return for the protection provided by them to the inhabitants.

The *nayaka* system took actual shape in the Tamil region during late 15th century and it reached its classic form under Krishnadevaraya. The territories held by these *nayakas* were known as *nayakkattanam* in Kannada and *nayankaram* in Telegu. These *nayakas* were generally of Telugu origin (largely Kannadigas). In the Pudukottai region, however, *arasus* (local chiefs) were prominent and *nayaka* system could hardly take roots. These *arasus* wielded fiscal powers and extracted tax for watchmanship (*padikaval*). However, in the Andhra region Cynthia Talbot traces the presence of *nayankara* under the Kakatiyas back to the 13th century, though she agrees that their presence increased manyfold during late 15th and early 16th century in this region. *Nayakas* during the Vijayanagar period possessed a certain territory as their *nayakkattanam*, a feature not to be seen during the 14-15th centuries. Noboru Karashima argues that the change displayed more clearly the characteristic of 'feudal' lords. During the late Vijayanagara period we do get references to *nayakas* as lease-holders of temple land which they were getting cultivated by cultivators. Their lease rights were hereditary and saleable suggesting that *nayaks* emerged in the long run as actual owners or lords of the leased lands.

Inam

Inam lands were revenue free assignments made to the pious, needy and the scholars. The names used might vary from region to region but the nature and pattern of distribution was almost uniform throughout. In north India *inam* grants were known as *madad-i maash/suyurghal*, *aimma*, etc. During Akbar's period these ranged between 2 and 5 per cent in different regions. *Madad-i maash* holders were exempted from paying land revenue and other taxes.

The *inam* tenures in south India were known as *manya*. *Inam* lands granted to both institutions as well as individuals. Primarily there were four such types of grants - 1) *inam* lands held by Brahmans were known as *brahmadeyas/agraharas*; b) lands given to the temples were known as *devadana*; c) *mathapuraa* were revenue free lands held by traditional educational institutions or *maths*. *Inam* grants made to the *maths* were actually given to the chief teacher for the upkeep of the *math*. However, temple grants were held by a 'trust' who were temple 'managers'. They maintained the temple in the name of the deity to whom actually the grant was made. Contrary to the *madad-i maash* grants of north India *devadana*, *brahmadeya* and *mathpura* villages were governed by the grantees and the state did not interfere in their affairs. There were also *sarvanya* grants where the grantee had no obligations.

Watan and *inam* were used as synonyms in Maharashtra with the difference that these had no obligation attached to it. *Watan* tenures were largely held by village officials – village headmen (*patil/muqaddam*), village accountant (*kulkarni*), *changula* (assistant of *patil*), *shete mahajan* (village market officer), and the *mahar* (village watchman), temples, priests, etc. These were hereditary and permanent so long as they performed the duty but in practice it continued to be enjoyed by the

family in perpetuity so long as its members performing their duties. It was in fact service tenure. Interestingly, *inam* lands were not completely tax free. They had to pay 1/3rd or 1/4th of the revenue collected to the state depending on the nature of the *inam* tenure (if *inam-nimai* 1/2, if *inam tizai* 1/3rd if *inam chauthai* 1/4th). *Inams* were of two types *diwan nisbat inam* and *gao nisbat inam*. The former was granted by the state through a *sanad*; while the latter were made by the village community. It was known as *dehangi-inam* and was granted to village artisans and servants.

Revenue Farming (*ijara*)

The state or *jagirdar* could assign portions of lands on *ijara* (farming, contract) to a *mustajir* (revenue farmer). The agreement bond (*tamsak*) between the two was stamped by the *qazi*. *Ijaradar* was entitled to retain the difference of the actual revenue collected and the amount agreed upon to pay. However, during the Mughal period instances of granting *khalisa* lands on *ijara* are rare. The practice was always resisted and hardly approved of by the state. In 1676 Aurangzeb forbade giving lands on *ijara* in Gujarat. It was oppressive for the *ijaradars*' attempts were to extract as much money as possible from the peasants. Generally *ijaradar* was a local person. In Rajasthan granting of *ijara* was a common practice and it became more frequent during the 18th century.

With the weakening of the centre particularly after 1719 Mughal *mansabdars* possessing *jagirs* near Rajput *watan* preferred to transfer their *jagirs* to the Rajput rulers on *ijara*. Rajasthani records shows that *jagirdas* and *ijaradars* tried to bargain while fixing the terms of *patta*. But largely the deal went in favour *ijaradar*. Even during the 18th century from Rajasthan we get a few instances of *ijara istamrari* (long term or permanent grant). After Sawai Jai Singh's death (1743) granting of *khalisa* lands in *ijara* became a 'common' feature. We also hear even grant of *tankhwah ijaras* (granted to the officials in lieu of salary). It greatly attracted *sahukars* and *mahajans*. They used to provide sureties on behalf of the *ijaradars* in Rajasthan. At times they themselves opted for *ijaras*. The positive side of the practice was it did bring deserted villages and abandoned lands under cultivation.

Ijara was a common feature in the Deccan and Maharashtra. It was not confined only to farming out lands but was also quite widespread in assuming official posts. In south India the state as well as *nayaks* used to let the lands to the contractors. They were to pay in return *gutta* (rent).

19.9 STATE AND TAXATION

Barani (1357) commenting on Alauddin Khalji's revenue policy mentions that the tax was imposed 'uniformly' upon *khots* to *balahar* so that the 'burden of the strong should not fall upon the weak.' But the very fact that the demand was imposed on all set the cycle of exploitation. Those who possessed large holdings must be under less pressure than those with small holdings. For a cultivator with small holdings, parting with half the produce must be detrimental. Commenting on the nature of revenue reforms of Alauddin Khalji Irfan Habib (Cambridge, 1982) remarks that '...the tax would have remained very heavy and regressive. A government levying such a tax could therefore hardly have protected the 'weak', except in so far as it tried to exclude or restrict further exploitation by the rural upper strata in order to safeguard its own share.' There appears to be a 'dramatic' increase in the burden of taxation during Muhammad Tughluq's reign. Muhammad Tughluq for assessment took into account a 'standard' yield in place of 'actuals'; similarly in place of actual

prices he used the officially determined prices which were much higher than the actuals. It must have definitely inflated the tax burden resulting in one of the most serious agrarian rebellion of the *Doab* peasantry (c. AD 1326-30) led by the *khots* and *muqaddams*. Its impact lasted long. When Ibn Battuta (d. 1377) visited the territory in 1342 around Kol (modern Aligarh) he still found the territory in the hands of 'rural rebels'.

Thus it is beyond doubt that during the Sultanate period land tax was regressive and quite harsh upon the peasants. For the Mughal period our data is comparatively rich and we get finer details as for pattern of revenue extractions are concerned. Revenue demand, as we have seen, ranged from 1/3rd to a 1/2 of the produce; state preferred to extract the revenue in cash. In the *zabti* areas the revenue demand itself was fixed in 'cash'. Though *jinsi* or *batai* was also the norm 'the incidence per unit of area varied according to crop, and not according to the size of the tax payers holdings' (Habib, Cambridge, 1982). Further, the incidence of demand also varied as per caste and power and position held by the individuals. The superior right holders *zamindars*, *muqaddams*, *chaudhuris* and so also higher caste people such as Rajputs, Brahmans, *Mahajans*, Baniyas were assessed at much less rate than the common *raiyat*. Peasants were to pay the highest amount. Those producing cash crops in comparison to food crops felt the burden much less for cash crops fetched high profits. But cultivation of cash crops was also generally beyond the capacity of the common *raiyats*. It involved lot of expenditure in terms of more ploughing and irrigation, etc. Thus, common *raiyats* were under pressure all through the medieval period. Besides, the land tax *raiyats* were to pay many other taxes, dues, and cesses. In such cases as well differential rates on the basis of caste and social hierarchy prevailed. Imposition of *jiziya* was no less regressive upon small peasant. Thus, during the medieval period *raiyats* were constantly under pressure and taxation was highly regressive. In spite of *abundance* of land peasants were constantly under debt to local Mahajan and Baniyas. The gap between the higher and lower strata instead of bridging widened. Peasants' conditions were miserable and they lived their life almost below the subsistence level. Any calamity meant total ruin for them. History of our period is full of references to frequent migrations of peasants at the time of famines, etc. under distress. (for details see Unit 16) The exploitation was such that Bernier (1656-68) mentions that:

These poor people, when incapable of discharging the demands of their rapacious lords, are not only often deprived of the means of subsistence, but are bereft of their children, who are carried away as slaves. Thus it happens that many of the peasantry, driven to despair by so execrable a tyranny, abandon the country and seek a more tolerable mode of existence, either in the towns, or camps; as bearers of burdens, carriers of water, or servants to horsemen. Sometimes they fly to the territories of a Raja, because they find less oppression, and are allowed a greater degree of comfort.

Irfan Habib argues that "in the seventeenth century the belief had become deep rooted that the system of *jagir* transfers led inexorably to a reckless exploitation of the peasantry. It was a result which the imperial administration might check for sometime but could not ultimately prevent.'

Agrarian Crisis

The presence of inherent contradiction in the working of the *jagir* system further aggravated the exploitation of the peasants. *Jagirs* were frequently transferred so that the *jagirdars* could not develop local roots. But it also led them to exploit the

peasants as much as they could for they had no long term interests there. They showed no 'compassions'. Bernier mentions that:

The Timariots [*jagirdars*], Governors and Revenue-contractors on their part reason in this manner: "Why should the neglected state of this land create uneasiness in our minds? and why should we expend our money and time to render it fruitful? We may be deprived of it in a single moment, and our exertions would benefit neither ourselves nor our children. Let us draw from the soil all the money we can though the peasant should starve or abscond and we should leave it, when commanded to quit, a dreary wilderness.

For Maharashtra A.R. Kulkarni concludes that though 'burden of taxation fell heavily on the poor 'we rarely come across people revolting or grumbling against these taxes.' However, in Maharashtra as well we do get references to people protesting against illegal exactions. *Inamdar* from *pargana* Poona challenged the levy of *miraspatti*.

The picture appears to be no different in the Deccan and South India. Nuniz laments that the peasants were allowed to retain only 1/10th of the produce and remaining was either taken by the state or the *amaranayakas*. Even if we do not take his statement at face value it does suggest the distress on the medieval peasant. Peasants of Sri Musnam village were said to have migrated from their village on account of excessive taxation and returned only when in 1513 Krishnadevaraya's officer Sinnapa Nayaka fixed favourable rates for them. In one of the *Kaifiyat* of Kavutalam (Adoni *taluk*, Bellary district) *ryot* deserted the village on account of oppression of the state officials.

Owing to the absence of orderly government the *ryots* of the Kavutala sime. having deserted their native villages, migrated in a body to the Manaveya sime on the other side of the Tungabhadra. While Acyuta was ruling at Vijayanagara, his brother-in-law Salakaraju Cikka Tirumala Maharaja, having visited Adavani, gave a fresh *kaul* to all the gaudas of Kavutala, and made concessions to them for reclaiming cultivable land from the jungle which had grown up during the period of desertion. Although these concessions were published by means of a *sasana*, the *gaudas* and *kulkarnis* alone returned, but not the cultivators who had lost all their faith in the government. Therefore, Tirumala Maharaja had to open negotiations afresh. The *ryots* gathered near Hanuman's shrine at Kavutala, where they came to an agreement with the government. They then returned to their old homes. The terms of the agreement were recorded on a stone slab which was set up at the place of meeting.

N. Venkata Ramanayya, *Studies in the History of the Third Dynasty of Vijayanagara*, Delhi, 1935, p.244.

At times peasants were forced to sell their lands to meet the revenue demand. The heavy burden of taxation pressed the cultivators as well as artisans to an open rebellion in AD 1429 against the landlords and intruding Vijayanagara commanders. The state was forced to grant temporary reliefs:

- 1) We, the people belonging to Valangai 98 and Idangai 98 of Valudilampattu-uchavadi, assembled in this temple in full strength and let the following be engraved on the wall of said temple.
- 2) In this *mandalam* (Valudilampattu), even if the *uchavadi-pradhani* (the local Vijayanagar governor *Vanniyar* (military people) and *jivitakkarar* (holders of official tenure) coerce us, or the Brahmana and Vellala *kaniyalar* (holders of *kani* rights) try to oppress us in collusion with the *irajagarattar* (government officers), we shall never submit to such oppression.

- 3) If there appears any single person among us who helps the intruders, betrays us, violates the grant given by *Chikkarasar*, or destroys the (current) measuring rod, we shall assemble as of today and enquire into it.
- 4) Among those who were born in this *mandalam*, no one should write accounts (for the government), let others write the accounts or collude with the government officers and *jivitakkarars*. If there appears one such person, we shall degrade him in the caste hierarchy.

Summary of Four Inscriptions Pertaining to AD 1429 Uprising. Noboru Karashima, 1992, p.142.

The absence of such 'conflicts' from the later half of the 15th century led Noboru Karashima to conclude that after the decline of the Chola power there occurred socio-economic changes resulting in open confrontations. Once the power got consolidated under Vijayanagara rulers no such revolts occurred.

19.10 SUMMARY

Land tax formed the bulk of the state's income. There existed regional variations with regard to the methods of revenue assessment and collection. State's efforts were to maximise its revenue returns. Since land was in *abundance* it was in the interest of the state to keep the peasants tied to the land. State used to take all precautions to restrict peasants' flight. In trying circumstances state's efforts were to extend all possible help. In general the taxation was harsh and repressive specially for the small peasants across regions throughout the medieval period. State directly extracted the revenues in the *khalisa* territories but large portion was granted to the ruling elite in lieu of their salaries (*jagir, moqasa, nayankara*). For the effective working of the empire it was essential to keep this class of revenue grantees in complete check.

19.11 EXERCISES

- 1) Give a brief account of the nature of Islamic theory of taxation. To what extent the Turks and the Mughals implemented the Islamic practices?
- 2) Critically examine the methods of assessment under the Mughals with special reference to *zabt*.
- 3) Analyse the process of penetration of Mughal revenue system in the Deccan.
- 4) Discuss briefly Malik Amber's settlement. To what extent Marathas borrowed from him?
- 5) State briefly the pattern of land tax in south India. Compare it to that of Mughal land tax.
- 6) Enumerate the taxes other than land tax.
- 7) List the taxes imposed upon various professions and industries.
- 8) Critically examine the nature of land tax during the medieval period. Assess state' attitude towards the peasants.
- 9) What relief measures did the state undertake to handle the calamities?
- 10) Write a brief note on various types of land tenures during the medieval period.

UNIT 20 URBAN CENTRES IN MEDIEVAL INDIA

Structure

- 20.1 Introduction
- 20.2 *Qasbas*, Cities, Ports and Forts
- 20.3 Rural-Urban Continuum
- 20.4 Growth of Towns
- 20.5 Urbanisation : Some Views
- 20.6 Morphology of a Medieval Town
- 20.7 Patterns of Governance
- 20.8 Summary
- 20.9 Exercises

20.1 INTRODUCTION

Studies on urbanisation and urban centres during the medieval period have largely remained a neglected and relatively less explored field. We do have several studies done on specific towns, cities and *qasbas*. But these got limited to ‘eulogies’ and biographies. One can hardly put it in the category of ‘urban history’. Nonetheless, they simply cannot be brushed aside for they reflect, as S.C. Misra puts it, ‘what the town was in the minds of its citizens.’ Nonetheless, one must differentiate between an ‘urban history’ and an ‘urban biography’. The former relates and opens up enquiry into critical issues – subject of course to modification or rejection.

There is also hardly much work done to study the pattern of linkages between the towns, townships, and villages within the region as well as across regions.

Medieval cities are generally seen as ‘parasitic’ depending largely on countryside, extracting large surplus to its own advantage while hardly giving back anything in return. Yet vibrant commercial activities provided a town a distinct character.

In the course of our discussion certain issues are worth attending to: whether towns were mere extension of a village? If partly the manufacturing was done in the village why did the populace have to migrate to the cities? Which section of rural population was subject to migration? Whether such migrations were seasonal? And above all, what was the relationship between the urban and rural population? Whether they totally dissociated themselves or rural-urban continuum was there? If so then what was its nature? What role did the state play in the growth of urban centres? It is very difficult to provide answers to all these questions in certain terms. Nonetheless, all these issues are important to view the growth of urban centres and the process of urbanisation in medieval period.

In our course MHI-01 we have dealt in detail with the growth of urban centres in the context of medieval world. This Unit will be useful as a background to the present Unit.

20.2 QASBA, CITIES, PORTS AND FORTS

In modern times an urban centre is defined on the basis of density and size of population. 1951 census has defined a town possessing a density of 1000 persons per square miles and minimum size devised was 5000 persons. However, barring a few average estimates made by European travellers pertaining to big cities data available to us for medieval period could hardly subscribe to above criteria. Fray Sebastian Manrique (1629-43) for Patna and Alexander Hamilton (1688-1723) for Surat have estimated the population of both the cities at approximately 200,000. English factors' estimate for the town of Samana, *suba* Delhi was 11,000 persons. Henri Pirenne has defined a medieval town as possessing a population engaged in 'industry and commerce'; had legal constitution and institution and was an 'administrative' centre with a 'fort'. The Islamic towns are characterised with possessing a *Jama Masjid* and a 'permanent market'. Medieval Indian towns can also be defined in terms of market centres; centres where resided a sizable population making a living not off agriculture but off other modes of production.

Medieval Persian sources refer to *balda/shahr* (city) and *qasba* (small town, township) to differentiate between a large and a small town. Similarly, big ports were differentiated from the small ones by addressing them *bandar* and *bara* respectively. In south India also such hierarchy of towns is clearly evident. *Pattinam* were 'emporia' while *valarपुरam* were prosperous coastal towns. In between existed *nagarams* which could loosely be equated with *qasbas* of the north and Deccan, nonetheless possessed district features.

Qasbas

Nizamuddin Ahmad in his *Tabaqat i Akbari* has defined *qasba* as an administrative centre, a *pargana* headquarter. Nizamuddin Ahmad clearly differentiates between a *qasba* and a *shahr* (city). As per his estimates there existed 3200 *qasbas* and 120 towns (*shahr*) in Akbar's empire. If we take Nizamuddin's definition then by 1647 the number of *qasbas* rose to 4350 and later in early 18th century (c. 1720) their number increased to 4716. However, it was not necessary that a *pargana* should have only one *qasba*. In *pargana* Barsana (western Rajasthan) there existed twenty *qasbas* in early 18th century. In western Rajasthan *qasbas* generally surrounded by forts (*garhi*) or fortresses (*garh*) with town-walls.

Qasbas in the medieval context were largely an extension of a village. A large village with a market centre possessed all potentials to turn into a *qasba*. In Barsana (western Rajasthan) villages Harigarh, Kundi, and Kakurmi reported to be villages in the 17th century elevated to *qasbas* in the early 18th century records. Sometimes, villages got attached to a fort on account of the protection they received and developed into *qasbas*. But the first category of *qasbas* was more common. In western Rajasthan Daulatganj was established as a market village annexing lands from Rojhari in AD 1785. Such a market town when declined form part of the *qasba* as a village to which it originally belonged. Many *qasbas* also emerged out of market towns. *Qasbas* with suffix *ganj* were largely 'market' towns where weekly markets (*hats*) and fairs (*melas*) were also held. Such *qasbas*, however, emerged more prominently from mid 18th century onwards in western Rajasthan. B. L. Bhadani and Sato's studies on the growth of *qasbas* in western Rajasthan suggest that during the 18th century growth of market towns from villages, etc. continued unabated. But during the 19th century the pace slowed down.

The important point here is what makes a town 'exclusive' and 'distinct' from a *qasba*. Satish Chandra has analysed that the connotation of a *qasba* varied from period to period and differed from region to region. According to him during the Sultanate period a *qasba* was a village with a fort. By Mughal period it came to be referred to as a village with a market. These centres not only served as market for agricultural produce but were also 'centres' of craft production. However, Sunil Kumar has argued that during the 13th century they did not perform the role of 'market' centres. Instead they were 'fortified encampments' and not always 'associated' with a large town (*shahr*). But we do get references to commercial functions of a *qasba*, like Baran, etc. It were at these *qasbas* that agricultural products were disposed of.

Sometimes *qasbas* developed around a *sarai*. Traders and travellers used to travel during our period on horseback or carts. The maximum journey they could perform in a day was 10-12 miles. After that they required a resting place. This led to establishment of *sarais*. Some of these *sarais* (Mughal *sarai*, etc.) later emerged as *qasbas* or small towns.

Nobles also contributed their bit. We get numerous references to mandis and orchards established by them. In certain cases these mandis developed as *qasbas*. Jaisinghpura Jihanabad (Delhi) was initially a *mandi* (market-place) and in the 18th century Rajasthani records its recorded as a *qasba*.

Nagaram

In south India *nagaram* were the market centres and could be equated with *qasbas* of the north and the Deccan. There was the presence of at least one *nagaram* (market centre) in a *nadu*. Coastal towns depended much for its supplies on hinter lands. *Nagarams* were able to link surrounding villages. Here itinerant merchants 'negotiated' the local produce for cash or commodities not produced locally. Here local merchants probably bought commodities in wholesale from itinerant merchants and then distributed it in retail at local level.

Interestingly, *nagarams* were at time developed by administrative order. In one of the instances *nadu* and *nagaram* met to convert a local village into a market town. It worked as collecting and redistribution centre and was the chief link between the local merchants/producers and the itinerant merchants.

Ports and Forts

Port towns were the chief centres of vibrant urban life during the medieval period. W.H. Moreland has differentiated Indian seaports from the European ports of the India Ocean. Ports had a peculiar relationship with the hinterlands. They depended largely for their survival on hinterlands, they too in turn survived on the prosperity of their feeder town/s.

In Maharashtra on account of constant warfare and disturbed conditions forts occupied unique place as a) royal centres and posts for protection of urban centres and trade, and b) places of distribution of foodgrains in the markets. At Shivaji's capital fort Raigad there existed a *peth* of Pachad where traders and merchants converged and provided supplies to the fort.

These forts were generally situated either on the highway or trade routes or else near the towns and ensured protection to the nearby urban centres resulting in

expansion of trade and commerce in the region. Forts like Shivneri, Purandar, Raigad (Mahad), Panhala served as guarding posts, and offered protection to the town like Pune (Shivneri), Junnar (Purandar), and Kolhapur (Panhala). Even forts like Khanderi, Undari, Kulaba provided protection to the port towns. However, urban complexes on hill forts soon broke down once the Mughals occupied Raigad and focus shifted to the urban centres like Poona, Satara, etc.

20.3 RURAL - URBAN CONTINUUM

Pelsaert (c. 1626) mentions that Indian towns were merely an extension of a village. He elaborates that Agra was merely a village in the jurisdiction of Bayana and suddenly grew into a city. The reason he attributes to its rise was that emperor Akbar 'chose it for his residence in the year 1566'. Here my purpose is not to provide a critique of Pelsaert's statement for Agra already emerged as capital town under Sikandar Lodi. The important point, nonetheless, is his observation pertaining to the 'rural' base of medieval Indian towns. Being predominantly an agrarian economy, rural base of towns cannot simply be ignored. Even urban upper strata, on account of their land based income, had rural base. This rural-urban continuum remained one of the chief features in the growth of urban centres during the medieval period. It carried the same socio-economic 'unities and attitudes', what S.C. Misra calls 'peasant urbanites'. He argues that 'the presence of this rural-urban continuum retarded the growth and emergence of features/factors that could be designated as 'purely urban'.

It is generally argued that medieval Indian towns were 'parasitic'. Towns were largely depended upon countryside for food supply and raw material. However, in return Indian villages were hardly receiving much. Irfan Habib has argued, '...since the village had few claims upon anyone outside its limits, its own inhabitants' needs had to be met largely from within itself, and it had therefore to function as a self-sufficient unit.' However, Chetan Singh has emphasised the existence of a 'symbiotic' relation between the town and the country and 'town country sphere' was not an isolated self-sufficient entity. He argues that in Punjab towns were largely developed in the agriculturally developed zones. The decline in demand of raw material (which the village were the supplier to the urban centre) equally affected the cultivators.

Henri Pirenne has emphasised that while towns were production centres, villages were mere suppliers of raw materials and food stuffs. His model presents towns as mere 'exploiters.' However, medieval Indian villages were also manufacturing centres. Textiles and indigo were produced at villages. We have discussed in Unit 18 the presence of exclusive weavers' villages; various villages were exclusively involved in dyeing and beaching in Gujarat. K.N. Chaudhuri's study on textile industry in the 17th century shows that while textile production was town centric in northern and central India, south India and Bengal presented a contrast and it spread over throughout the region.

20.4 GROWTH OF TOWNS

The beginning of our period saw rapid growth of urban centres in north India. The process got accelerated later in the 16-17th centuries. It is interesting to find that the growth of urbanisation was much faster under the Mughals than in British India. Irfan Habib and Shireen Moosvi have calculated the population growth over 15 per cent in Mughal India as against 13 per cent growth rate in England around 1600.

Muhammad Habib in his introduction to Elliot and Dowson's *History of India as Told by its Own Historians*, Vol. II has put forward the thesis that Turkish conquest led to 'urban revolution' in north India. He argues that prior to them the higher classes appropriated the cities and towns exclusively to themselves while the workers lived in unprotected villages and in settlements outside the city walls. With Turks such barriers were broken. 'When the Turks entered the cities, the Hindu low-caste workers entered along with them. And they came to stay... The cities under the new regime were developing into thriving centres of industry and commerce. Thus, according to Muhammad Habib this 'revolution' became possible: a) because the new ruling elite was urban/town based. b) The Turks succeeded in emancipating the working class. This way they brought a sea change in the overall growth and pattern of town life. However, Irfan Habib has expressed his doubts whether at all the city workers enjoyed greater degree of emancipation under the Turks.

On the basis of 'dominant growth factor' one can identify medieval cities as religious, economic and political. The growth of political cities largely depended upon the status of the political power from which it derived its strength. Religious and economic cities were comparatively more 'secure' and stable. V.D. Divekar calls religious cities 'eternal' for one rarely finds sudden rise or decline of such cities. Cities that derived their strength from trade and manufactures largely depended on their 'hinterlands' or 'trade routes', or 'ports'. Any change in their configuration definitely affected the growth of that particular city but, since they were largely self sustaining survived much longer on account of their inner strength.

The most fragile were the cities deriving their strength from political patronage. No sooner was such patronage withdrawn, the decline was 'inevitable'. Population of such political cities largely consisted of ruling elites, and administrators. These were 'consuming classes.' V.D. Divekar mentions that political cities were organised in an 'inverted pyramid' where manufacturing classes were at the bottom. He argues that, 'the political city always faced the danger of being reduced to a small town or village as a result of some untoward political upheaval... The death of a political city was much more sudden as compared to a very slow passing away of an industrial or commercial city.' The foundation of the city of Vijayanagara was laid on a desolate tract. It saw unprecedented growth and reached its zenith in the 16th century under the royal patronage. However, soon after the defeat of Vijayanagar ruler in the battle of Talikota (1565), it was all in ruins. Italian traveller Caesaro Federici, who visited the city immediately after (1567) refers to the desolate state of Vijayanagara with houses uninhabited by people and largely 'the city was the abode of beasts and tigers.' Similarly, Bijapur, the Adil Shahi capital, emerged on the debris of Vijayanagara, reduced to a small town soon after the rise of Maratha power in the region. Pune achieved the status of a vibrant city under the Marathas from a small village once the Marathas made it their chief centre of power. It was about to face the same fate had the British not made it their second capital of the Bombay presidency.

K.N. Chaudhuri has divided the Mughal cities on the basis of their functional hierarchy – *primate cities* – these influenced the whole empire; region cities – nodal to a region; and provincial and district towns – their area of influence and operations being the respective provinces and districts (*parganas*). He puts all the capital towns – Agra, Delhi, Lahore, Patna, Burhanpur and Ahmedabad in the category of *primate cities*. For him the 'economic role of these categories may not necessarily differ.' He elaborates that, 'At the height of the Mughal imperial power the main function of these *primate cities* was political; their strategic or military significance was only secondary. But there was an additional string of garrison towns, such as Gwalior,

Allahabad, Chunar, Aurangabad, and Junnar which provided the military sinews of the empire...(these) satellite primate cities functioned as central places exchanging political information.'

Fortunes of the city of Sirhind depict the growth and decline of a strategic town. Sirhind rose to prominence with the decline of Pakpattan-Fazilka-Samana route. Once the Delhi-Lahore route gained prominence Sirhind occupied an important place and no sooner achieved the status of second largest town after Lahore in Punjab. In Muhammad Tughluq and Firuz Tughluq's scheme of defence Sirhind occupied great strategic importance. Firuz Tughluq separated Sirhind from the shiq of Samana and got the fort strengthened and repaired. He also dug-up a canal and brought that upto Sirhind. Sirhind was also strategically placed for Muhammad Tughluq's northern campaigns. Its proximity to the hills also placed it strategically at key point for Chinese and Tibetan goods. However, soon after the decline of the Mughal power Sirhind also declined particularly with the rise of Sikh power in the region.

20.5 URBANISATION: SOME VIEWS

R. Redfield and M.B. Singer maintain that generally speaking Indian cities emerged out of political, administrative, and cultural concerns and their commercial and industrial functions were 'insignificant'.

Hamida Khatun Naqvi has highlighted the importance of political stability in the growth of medieval Indian towns. She argues that, 'The highly centralized Indian states with base at Lahore, Delhi or Agra worked to foster viability and endurance in urban concentrations. The rise and fall of medieval Indian towns corresponded largely to the vigour or weakness of the central political power.' Lahore enjoyed important place as early as Ghaznavid period. It had a fort. Sultan used to conduct his durbar here. However, in Firuz Tughluq's scheme Lahore was practically out; as a result the city was in ruins. During his period Hissar Firuza, Samana, Ludhiana, Bahlolpur, Sultanpur and Sirhind flourished and patronised by him. But under the Mughals Lahore again revived its past glory. Lahore almost became the second capital of the Mughals. Hamida Khatun Naqvi emphasises that on account of peace and tranquility that was achieved under the Mughals, Lahore and other towns of Punjab received unprecedented growth.

K.N. Chaudhuri has focused upon the 'complementarity of economic nodality and political attributes.' He defines commercial towns of Mughal period as a case of 'flag following the trade.' For him 'political skills were essential to preserve their economic interests.'

Satish Chandra, however, argues that the political integration resulting in unprecedented growth of towns is actually over emphasised. He questions, if that was so then why after the Tughluq period following the disintegration of the political power, did not result in the decline of towns? Satish Chandra, instead, links the growth of towns to agricultural expansion. He argues, taking the case of Firuz Shah Tughluq's reign when the Sultanate shrank to half its size, that the period is marked by emergence of many new towns. As a result of Muhammad Tughluq's network of canals and impacts of new technology (Persian wheel, etc.) and expansion of horticulture all this led to the growth of agrarian sector. He has emphasised that we cannot simply dismiss the Afghans as 'merely warriors'. Instead, unlike the Turks, Afghans settled in the countryside suggest that they must have had something more to do with agriculture. He applies the same argument to the 18th century as well. He

argues that evidence pertaining to the decline of cities during the 18th century comes largely from literary traditions (*shahr-i Ashob*). There is no doubt that Delhi faced a decline but only as a chief administrative centre. In 1772 Delhi is mentioned by Shah Nawaz Khan as a flourishing city filled with all sorts of crafts. Dargah Quli Khan in his *Muraqqa- i Delhi* speaks about the grandeur of markets of Shahjahanabad city. Chetan Singh has also emphasised the growth of urban centres, particularly manufacturing centres in well developed agricultural zones away from the main trade routes.

Irfan Habib however, relates 'urban decline' to 'agrarian crisis'. Mughal cities declined in the 18th century because the existence of towns and cities depended on agricultural surplus. K.N. Chaudhuri also accepts that the 'economic existence (of the cities) depended on the ability of the countryside to produce a surplus and the way in which the latter was distributed'.

Henri Pirenne has linked growth of medieval towns to long distance trade. In the Indian context R.S. Sharma in his well researched monograph *Indian Feudalism* also argues that the growth and decline of long distance trade resulted in the growth and decline of the towns during early medieval period (for details see Block 2, Unit 11), although other historians have expressed doubts about the thesis of urban decline.

I.P. Gupta while denying any significant role of administrative and military factors in the growth of urbanisation and urban growth argues that 'administrative and military influence in all the major cities and towns remained subdued to economic activities (in Gujarat).' His estimates reveal that roughly 80-90 per cent of the activities in the large urban centres in Gujarat were 'economic'. There is no instance where a 'fort' assumed the status of an 'urban centre.' Out of the 33 forts reported in Gujarat in the 17th century only 9 were located at the big and small towns. Even 'religious' and 'educational' centres were predominantly manufacturing centres. His study shows that Gujarat towns were largely performing the role of either manufacturing centres, or collection centres, and distribution centres, or else were port towns. Ahmedabad, Surat, Broach, Cambay performed such multifarious activities. *Qasbas* (townships) were largely the collecting centres and served as hinterland towns for onward transfer, and distribution. Mostly the towns were located at 'nodal' points of communication, or on important land routes. Hardly towns emerged on account of being administrative centre. Instead, it assumed the place of an administrative centre on account of its being important as 'commercial' centre. He points out that the rate of growth was faster at manufacturing centres and larger towns; smaller towns developed at much slow a pace. I.P. Gupta elaborates that the process of urbanisation in Gujarat was at a much faster pace than other parts of the country during the 17th century.

Chetan Singh has also emphasised the economic base of the urban centres. Though some towns derived their strength as important administrative centres their importance as thriving manufacturing centre as well as market and transit points cannot be ignored. He argues that though Lahore was an important administrative town, it derived its strength 'as a centre of considerable manufacturing and commercial activity'. It was situated on the major land route providing connectivity across India to Middle East and Iran. Its economy was 'not entirely dependent upon the Mughal ruling class or upon imperial patronage. He highlights the decentralising tendency of the urban centres in the Punjab region that, 'No single town was economically important enough to control the urban artisanal production of the region.' Such growth according to him, was instrumental in 'the incorporation of hitherto peripheral areas into the urban network.'

Though K.N. Chaudhuri has emphasised the main function of the 'primate' cities was political, to assume the status of 'primate' city the components he speaks of are largely economic – favourable geographical location; convergence of long distance trade routes, favourite markets, etc.

Nihar Ranjan Ray and Arun Das Gupta have linked the rise of Islam to urbanisation in Bengal. However, Aniruddha Ray argues that, 'the thesis of Islamisation and revival of Bengal's overseas trade is difficult to accept, for Bhakhtiyar Khalji's attack on Bengal occurred in early 13th century. But by 13th century already one finds the presence of many flourishing towns like Harikela, Nadia, Vikrampur, Bakla, Lakshmanavati. Aniruddha Ray attributes two major factors to the rise of urban centres during the 12-17th centuries in Bengal: a) Decline of central power during the 15th century saw the rise of many semi-autonomous principalities/kingdoms, that led to rise of a number of new urban centres. Champaner, Sonargaon, Pandua, Lakhnauti, Chittagong, etc. b) Changes in the riverine courses also resulted in growth and decline of towns. Growth of Pandua is attributed to change in the course of Mahananda that began to flow close by. Similarly, Lakhnauti declined because river Ganga moved much towards west, Gaur also faced the same fate once Bhagirathi moved further westwards.

20.6 MORPHOLOGY OF A MEDIEVAL TOWN

K.M. Ashraf has stressed upon the changing morphology of towns during the Turkish period. According to him the character of towns gradually started changing. To the old, pre-Turkish towns new features were added – mosques, tombs, domes, etc. K.N. Chaudhuri has also emphasised that 'the architectural expression of Islam in India were typically centred on the mosque adjoining markets, the great public square and the palace.' He argues that, Islamic character of the North Indian towns cannot be questioned. In the south and in parts of western India the Hindu influence and ideas were, of course, still strong.' European travellers frequently refer to lofty gates, walls, mosques, gardens and hammams as characteristics of a 'Moorish' town.

Another feature of town-building activities in our period was the emergence of planned and walled cities. Firuz Shah Tughluq was the first among the Delhi Sultans who undertook massive town-building projects. He laid the foundations of as many as 17 cities and forts. Though Delhi all through its history witnessed construction of many 'capitals' within its territorial limits, prior to Firuz, who laid the foundation of Firuz Shah Kotla, Siri (1303, Alauddin Khalji), Kilughari (1286-87, Kaiqubad, grandson of Balban) and Tughluqabad, (1322, Ghiyasuddin Tughluq) were built. The successive capitals laid down in and around Delhi in the Mughal period were – Dinpanah (Humayun), Purana Qila (Sher Shah) and finally the massive aggrandisement of Shahjahan – the Shahjahanabad. The common features of all these capital cities were: a) While choosing the site, efforts were made to ensure two major aspects – defence and water supply. Even as early as Firuz Shah's reign, while erecting his new hunting resort at Hissar Firuza, Firuz ensured water supply and brought the canal water down to Hissar Firuza from river Yamuna through his famous western Yamuna canal. One of the major reasons for abandoning Ghiyasuddin Tughluq's Tughluqabad to his (Firuz's) new abode (Firuz Shah Kotla) appears to be scarcity of water in that region. Shahjahan, while building Shahjahanabad, also ensured proper supply of water. Muhammad Salih Kambo in his *Amal-i Salih* records Shahjahan's main reason behind shifting his capital from Fatehpur Sikri/Agra to Delhi was the hot weather and the scarcity of water. Shahjahan not only re-excavated Firuz Shah's western Yamuna canal but also got it extended another 30

kurohs (75 miles) and laid out beautiful channels running through the middle of the Chandni Chowk leading inside the fort. b) All the officially commenced cities/capitals were planned and provision for their proper garrisoning were ensured. They possessed wide streets, *bazaars*/shopping centres, etc. within the fort complex.

Apart from imperial establishment inside the fort, a town consisted of houses of nobles, *bazaars*, *mandis*, merchant settlements, houses of artisans, labourers, mosques, temples, *sarais*, *dharamshalas*, crematoriums, gardens, tanks, wells, slaughter houses, etc. Generally, gardens, tanks, crematoriums, slaughter houses, etc. were not situated at the centre of the town.

Mughal Town Farrukhabad: AD 1714

In 1126 H. (Jan. 6th 1714-Dec. 27th 1714) the foundations were laid... All the buildings at Farrukhabad or Muhamdabad were built after the plans and under the care of Adam, mason... There were twelve gates to the city: 1, Kutb gate; 2, Paen gate (also called the Husaini gate); 3, Ganga gate; 4, Amethi gate; 5, Kadiri gate; 6, Lal gate; 7, Madar gate; 8, Dhalawal gate; 9, Khandiya gate; 10, Jasmai gate; 11, Taraen gate; 12, Mau gate... To seven of the gates, *sarais* were attached, so that from whatever direction a traveller arrived, he might find a convenient resting-place... At each gate were stationed five hundred armed men and two guns, one on each side. The Nawab's sons and slaves (Khanazads), who had troops in their pay, were allotted places of abode round the outer part of the city. It was intended that money-changers, merchants, and the working-classes generally should occupy the centre. The whole was surrounded by an earthen wall. For each of his twenty-two sons, Muhammad Khan built a brick fort and women's apartments. At each house he planted a private garden (Khana bagh) surrounded with a high wall Round the city wall was a ditch, with sloped and levelled sides, fifteen yards wide and thirty feet deep. So long as Muhammad Khan lived, this ditch was cleaned every day, and the gates were kept in good order.

Round the fort were the houses of the chelas who were on duty day and night. Many groves were planted, especially noteworthy were the Naulakha and Bihar Baghs beneath the fort, which did not contain any mango trees, but consisted entirely of guava, ber, custard-apple and orange trees. The Nawab's sons and chelas had orders to plant groves outside the city wherever they pleased. The soil is very favorable to the mango and it comes to great perfection; the water-melons are also very large and sweet and plentiful...

Two entire villages, Bhikampura and Deothan, were included within the walls, besides portions of other villages. It was intended that each trade should occupy a separate bazar, hence we have the quarters named after trades such as Kasarhatta (braziers), Pasarhatta (druggists), Sarafa (money-changers), Lohai (iron-mongers), Nunhai (salt-dealers), Khandhai (sugar-merchants) and so forth. Other quarters were set aside for particular castes, such as Khatrana (for the Khatris), Mochiana (for shoe-makers), Koliaana (for Hindu weavers, Sadhwara (for Sadhs), Bamanpuri (for Brahmans), Julahpura (for Mussulman weavers), Rastogi muhalla, Agarwal muhalla, Kaghzi muhalla (for paper-makers), Mahajanpura, Bangashpura, Khatakapura, Sayuadpura, and soon.

S.M. Waliullah, *Tarikh-i Farrukhabad*, William Irvine, 'The Bangash Nawabs of Farrukhabad – a Chronicle (1713-1857)', in *Journal of the Asiatic Society of Bengal*, Vol. IV, 1878, pp.278-280.

A town was divided into a number of *kuchas* (streets) and *mohallas*. In each such *mohalla* people of different crafts, profession and caste used to reside. Such division never appear to be on the basis of religious affinity. Likewise, each street (*kucha*) was also famous for the sale of specific crafts/commodities. *Chawri bazaar* in Delhi (Shahjahanabad) still possesses shops of copper and brass utensils and *paiwalan* area near Jami mosque is famous for sale of fire works.

Chandni Chowk, Shahjahanabad

Chandni Chowk is the most beautiful and profusely decorated passage in the city. It is a centre of recreation for the pleasure seekers and a gallery of rareties for the interested buyers. Displayed in the shops and ready for sale are varieties of cloth and other goods. The nooks and corners are replete with unique objects procured from different parts of the world. The paths are broad as a wide forehead and bountiful like the blessings of God. The canal is full of good and clean water and seems as though it is flowing in paradise. Rubies and gems from *Badakhshan* adorn the shops and their counters abound with pearls and precious stones. The proprietors sit contentedly on one side of the passage while their subordinates carry out the daily trade. On the other side are cloth merchants becoming loudly in their sing-song voice to attract the attention of all the customers. All day long they carry on a one sided conversation irrespective of whether anyone is interested or not. The *Attars* selling varieties of perfumes and essence carry out a brisk trade with the help of their agents and smooth talk. Their perfumes send vapours to the minds of its lovers who come to buy them without any beckoning on the part of the shopkeepers. The heart is completely taken in by the swords, these arched and glistening objects, but one should take care lest the hand is allowed to slip on the sharp blade. On beholding these snake like daggers one wishes the enemy were close for attack and it is better to keep some distance from them. All the self control one imposes here on oneself melts away at the sight of the China crockery and a variety of colourful and gilded *huqqas* of glass. Bowls, jugs and exquisite wine cups are displayed in the shops which attract even the aged pious to savour a drink. Men can be found standing on the roads selling such a range of choicest clothing that the wares of the shopkeepers are dull by comparison. Perhaps even the houses of the nobility do not have such things. Besides, in the evening when the sun spreads its rosy hue, the vivid and the kaleidoscopic scene which meets the eye is not to be found even while strolling in the gardens.

Around the *chowk* are many *Qahwa khanas* where eloquent poets are to be found reciting their verses and eliciting praise from those present. The nobles, irrespective of their status are unable to suppress their desire of taking a stroll here. The assortment of rare and unique goods available in this market cannot be bought at one time even if the treasury of *Qarun* was (son of Moses) at one's disposal.

A son of a [deceased] nobleman wanted to stroll in this *chowk*. His mother, convincing him of her inability (to give more money) handed him an amount of a lakh of rupees from the wealth left behind by his father. [She said] that rare things cannot be purchased from this *chowk* for this small sum, but, however as he is inclined to go there, some essential items of his choice can be obtained.

Dargah Quli Khan, *Muraqqa-i Delhi*, (1739-40) (tr.) Chander Shekhar and Shama Mitra Chenoy, Delhi, 1989, pp. 23, 25.

These *kuchas* were either named after a prominent personality or a craft, i.e., *gandhi gali* (perfumers) or *kucha-i-Bulaqi Begum*, *kucha Batasha wala* (still known as *batashe wali gali* (all in Shahjahanabad, Delhi).

Mohallas also named after a prominent individual or a craft – *mohalla churigaran* (bangle sellers), *mohalla dhobiwala* (washer man). Some were even named after a prominent symbol of the area, e.g., *chah-i rahat* (well with a Persian wheel) (all in Shahjahanabad, Delhi).

Large markets were known as *chowk* (e.g., Chandni Chowk in Delhi); while smaller markets were known as *bazaar*, e.g., *jauhari bazaar* (jewellers' market), etc. Similarly, *bazaars* with retail and wholesale commodities were known as *ganj* (e.g., Daryaganj, Delhi). *Dakakin* was the word used for shops, e.g., *dakakin bisatiyan* (general merchants). Similarly, *mandi* used to denote wholesale market, e.g., *Sabzi-mandi* (vegetable market), *mandi gulfarosh* (flower market). *Katras* were

wholesale markets or place used for godowns/stocks. Cities also had *chhattas*. Literally, it means covered lane but it used to denote a place where artisans of specific crafts used to reside – *chhatta momgaran* (wax makers); *chhatta maimaran* (masons), etc. Generally, probably for security considerations each *mohalla*, *katra* or *bazaar* used to have one entrance only.

In south India each *nagaram* consisted of *angadi* (permanent shops) where transactions were conducted on regular basis while *kadai* was a place where people from outside the ‘community’ brought goods for sale. At these market centres periodic fairs (*tavalam*) were organised.

A sort of hierarchy appears to have prevailed in terms of house complexes. A *haveli* was a house complex with an entrance (*deorhi*), courtyard (*sahan*), living quarters (*mahal saras*), *bala* and *jilau khana* (upper stories), offices (*diwan khana*). Some *havelis* even had *burj* (towers). Houses of lower echelons were simply termed as *makan* (houses). *Kothis* used to denote factories of European companies and at times upper class residences. We hardly find prevalence of usage like *banglas* and *manazil* in our period. It got popularised during British period.

There hardly existed the concept of private gardens, though gardens as pleasure resorts were built by the royalty and the elites. In Delhi itself we have several gardens (like Roshanara Bagh built by Aurangzeb’s sister) built by the aristocracy.

Largely the houses of the common populace at Patna, Delhi, Burhanpur described by foreign travellers consisted of thatch or bamboo. Dacca was filled with unassuming houses of carpenters and boat builders. However, Benaras was praised for its large and well built houses of bricks and stones.

Thevenot on the Houses of Surat

The Houses of this Town on which the Inhabitants have been willing to lay out Money, are flat as in Persia, and pretty well built; but they cost dear, because there is no Stone in the Countrey; seeing they are forc’d to make use of Brick and Lime, a great deal of Timber is employed, which must be brought from Daman by Sea, the Wood of the Countrey which is brought a great way off, being much dearer because of the Land-Carriage. Brick and Lime are very dear also; and one cannot build an ordinary House at less charge than five or six hundred Livers (= 400 mughal rupees) for Brick, and twice as much for Lime. The Houses are covered with Tiles made half round, and half an Inch thick; so that they look white when they are used, and do not last; and it is for that reason that the Bricklayers lay them double, and make them to keep whole. Canes which they call Bambous serve for Laths to fasten the Tiles to; and the Carpenters work which supports all this, is only made of pieces of round Timber. Such Houses as these are made for the Rich; but those the meaner sort of People live in, are made of Canes, and covered with the branches of Palm-trees.

Now, it is better building in the Indies in the time of Rain, then in the fair weather, because the heat is so great, and the force of the Sun so violent, when the Heavens are clear, that every thing dries before it be consolidated, and cracks and chinks in a trice; whereas Rain tempers that heat, and hindering the Operation of the Sun, the Mason-work has time to dry. When it rains the work-man have not more to do but to cover their work with Wax-cloth, but in dry weather there is no remedy; all that can be done is to lay wet Tiles upon the Work as fast as they have made an end of it; but they dry so soon, that they give but little help.

The Indian Travels of Thevenot and Careri, ed. S. Sen, New Delhi, 1949, pp 22-23.

towns. As big towns as Surat possessed large floating population. Surat was filled with innumerable people at certain periods particularly at the time of ships ready to depart (January- March). Babur has also highlighted this very nature of Indian towns:

In Hindustan hamlets and villages ... are depopulated and set-up in a moment! If the people of a large town, one inhabited for years even, flee from it, they do it in such a way that not a sign or trace of them remains in a day or a day and a half. On the other hand, if they fix their eyes on a place in which to settle ... they need not build houses or set-up walls. Khas grass abounds, wood is unlimited, huts are made and straight away there is a village or a town.

Zahiruddin Muhammad Babur, *Baburnama*, trs. A.S. Beveridge, New Delhi, 1970, pp. 487-88.

An important aspect related to the morphology of town is the distribution pattern of urban dwellers. Largely a town consisted of ruling class/administrators, manufacturers and artisans, traders, educationists, etc. At the urban centres middle classes constituted considerable in size and practically formed the backbone of the city life. Hamida Khatoon Naqvi argues that, "as long as the urban middle class pursued its various engagements and callings in peace and security, the towns flourished. But bereft of power and authority, this urban middle class sought refuge in the safer rural precincts if the signs of deterioration in law and order situation surfaced in the towns." (for their contribution in cultural fields see our Course MHI-06). G.D. Sharma's study suggests that for western Rajasthan apart from ruling elite largely Rajputs and Muslims, *Mahajans*, *Banias*, and *Kayasthas* also formed important section of urban morphology. However, artisans hardly enjoyed higher status and largely clubbed in the category of lower castes. Among these artisans *julahas* (Muslim) and *bunkars* (Hindus) weavers constituted a sizable chunk. Next in strength were shoe makers. Besides them, there were *sunars* (goldsmiths), *lohars* (ironsmiths), *telis* (oil pressers), etc. This pattern suggests the growing concentration of textile production in the urban centres. Interestingly, G.D. Sharma's study shows that outsiders, even the *sodagars* and *Multanis*, who were important merchant groups were not given higher place in the urban morphology.

Bernier has described Mughal cities as 'camp cities', a 'military encampment'. Following Bernier Stephen P. Blake has also characterised Shahjahanabad (Delhi) as a 'great camp' whose population fluctuated. When the king and his nobles were in residence the population suddenly swelled. When the camp was not in town it gave a desolate look. Thevenot also pointed out that during the emperor's stay there was 'an extraordinary crowd in the streets' otherwise it looks 'to be a desert'. To consider Delhi, or similar other capital towns mere military camps is perhaps an exaggeration. No doubt Delhi assumed importance after becoming the imperial capital after the construction of the Shahjahanabad fort. However, even prior to it Delhi possessed sizeable merchant class. Bernier himself has given a vivid description of the merchants and of their dwelling houses. Rich merchants lived mixed with the *mansabdars*, petty *omrahs* (*umara*), offices of justice, etc. in the streets. The ordinary merchants had their dwellings over their warehouse, at the back of the arcades.

Commenting on the morphology of Mughal capital town Shahjahanabad, Stephen P. Blake has analysed it in terms of 'patrimonial-bureaucratic' state/capital. For him, 'the sovereign city was an enormously extended patriarchal household'; the emperor ritually dominated the society. Blake has compared it as a regional variant of 'early modern patrimonial-bureaucratic capitals'.

20.7 PATTERNS OF GOVERNANCE

The governance pattern of medieval towns can be studied at two levels. One, governed through self-administering institutions; it largely determined and regulated by traditions and social ethos; while the other one was city administered by state-determined rules and state-appointed officials. It had at the back of it 'state' power to support them.

Max Weber differentiates between the 'Occidental' (European) and 'Oriental' (Asian) cities on the basis that 'civic' community was present only in the 'Occident'. In 'Oriental' cities artisans lacked 'corporate' status and largely relied on state patronage. Thus they possessed no separate 'identity' bereft of state power. It is true that medieval Indian towns hardly possessed municipal institutions wielding legal/political power. Nonetheless, there operated some system of local governance established by tradition that was equally honoured by the state.

There did exist some autonomous urban institutions. Town consisted of several *mohallas* (in Gujarat it were known as *pols*). As we have seen, these *mohallas* or *pols* generally formed the residence of a particular 'caste' or profession. These *mohallas* or *pols* served as 'self-governing' bodies. *Mirat-i Ahmadi* refers to superintendents of each *mohallas* (*mir-i mohalla*). These references clearly point to the presence of some sort of local units. State administration was to mediate and work in coordination with these local bodies. We have seen, while discussing the morphology of a medieval town, how each *mohalla* was provided with just one entrance to shield against aggression. Close watch was kept on any outsider entering in. Besides, these *pol/mohalla* organisations, there also existed parallel organisations of various crafts and artisans. Abul Fazl in his *Ain-i kotwal* refers to guilds (*juki*) and guild masters (*sar-i giroh*). Similarly, there was presence of *mahajans* in each urban centre. These *mahajans* were concerned with 'occupational' regulations. It was a body of a group of elders of the community headed by a *sheth/seth*. S.C. Misra points out that, 'He (*Sheth*) maintained the traditional craft ethos within the group, regulated trade relations, laid down the price line, in sum secured internal harmony, outlawed unfair internal competition, and generally made a fair distribution of work'. The *seth* was the 'real' mediator and spokesperson of the community. Even the 'state' machinery made use of them when the need arose. These craft specific *mahajans/seths* confederated into a larger body headed by *nagarseth/nagarsheth*. He was the 'titular' head of all the crafts and artisanal groups in the town. He used to negotiate on their behalf in times of need. In one such instance the *Nagarsheth* of Ahmedabad saved the town from Maratha attack by paying 'ransom'. In return the *mahajans* of the towns agreed to give a part of town duties in perpetuity. It also suggests that his position was probably hereditary. Though *mahajans* were free as far as their internal matters were concerned, in case of disputes among *mahajans*, *nagarseth/nagarsheth* mediated. This mediation, as S.C. Misra puts, 'necessarily introduced a significant element of indirectness in administration.' Even the state valued their power and position. In 1723, when merchants of Surat submitted their petition to the *mutasaddi* (incharge of port-town) of Surat, Momin Khan acknowledged the authority and importance of the *mahajans* and merchant bodies:

'In future all matters relating to commerce be settled with the assistance of the merchants, and all cases concerning the *mahajans* (bankers) in consultation with the *mahajans*. Let imprisonment and execution not take place.'

The *Mutasaddi* Momin Khan replied, "In future such shall be the practice."
M.P. Singh (1985) p. 269.

Kotwal was the overall incharge of town administration in north India. He was appointed by the emperor at the recommendation of *mir-i atish*. He was responsible for the maintenance of law and order and safety of the town population. To prevent theft, murder, etc. was the responsibility of the *kotwal*. He also supervised and controlled the markets. His office in the city was known as *chabutara-i kotwali*. At each city gate guards were posted, headed by a *darogha*, who shut the city gates after sunset and no one was allowed to leave or enter the city without the written permission of these guards. *Daroghas* (superintendents) were also appointed to look after and supervise public works, purchases, stores, *bazaars*, etc. There was a separate *darogha* of *dak* (post).

Aurangzeb, in 1659, created the office of *muhtasib* who was incharge of public morals. He was to enforce standard weights and measures, etc. All through the empire, and so also in the cities intelligence officers – *waqai navis*, *sawanih nigar*, *khufia navis* and *harkaras* were posted. They were to send secret reports of the working of the area under their jurisdiction directly to the emperor. *Qazi* was the incharge of overall judicial matters. Fiscal administration of a town (*sair mahal*) was looked after by *amin*, *karori* (revenue collectors), *qanungo* (keeper of accounts), *chaudhuri* (head of traders), *mushrif* (treasurer), *tahvildar* (cashier), etc. Separate *mutasaddis* were appointed for market administration. *Nigahban* (watchman) and *piyadah* (foot soldiers) were also appointed at each market.

Port administration differed from other towns of the empire. Ports were placed under a *mutasaddi* (he was otherwise a small revenue official in normal towns). Momin Khan, *mutasaddi* of Surat's statement in 1723 addressed to the merchants of Surat throws light on *kotwal*'s position vis-à-vis the *mutasaddi* of the port. Merchants complained to the *mutasaddi* of Surat that 'Under the former governors the *kotwal* was appointed by the *mutasaddi*. At present Bundhi (Shondhe) Khan has been appointed by the court (*sarkar*). He injures people. It is prayed that he should not have any authority in judicial matters (*muqaddamat-i qazaya*).'

The *mutasaddi* wrote (to the merchants): "The *kotwal* is *kotwal* of his own house only. What business has he with the city? If he injures anyone, he shall be reprimanded." In general officers of a normal Mughal town continued to be the same at ports performing similar functions. However, in port towns there also existed certain departments that did not figure in other cities: a) *Faiza*: It looked after the seaborne trade. His duty was to check goods coming in and collect customs. The custom-house was known as *khushk-i mandi*, etc. b) *Khushk-i langar jahajat*: It was counterpart of *faiza* on land. It dealt with inland trade. c) *Jihat Godi (Goda)* or *Marammat-i sair*: It dealt with ship repairing and ship-building. d) *Mahal Jahazat*: It looked after the movement of outgoing and incoming ships, anchor (*langar*), collected *haq-i langar* (anchor fees) and looked after insurance (*bima*) of goods.

Port town in Maharashtra was known as *mire*. *Ghat* areas (*Sahyadri* belt) in Maratha territories were placed under *ghatpandey* who was incharge of the maintenance and upkeep of the area. He provided regular patrol for which he appointed guards called *gujaras*. *Ghatpandey* was helped in the octroi collection by *patki* (incharge of chauki), *dangi*, *pansare* (weighman), *modvi* (peon) and *metkari*. *Ghatpandey*'s position was hereditary. In medieval Maharashtra, the person incharge of the development and maintenance of *peth* was called *sete*. In lieu of his services he received revenue free grants. *Sete* was to collect the custom dues and assess impositions on the shopkeepers. He also served as *kotwal* of the market. In that

capacity he exercised his police powers as well. He assisted *ghatpandey* in the collection of octroi.

In south India the representatives of *nagaram* assembly were known as *nagarankalilar*. It consisted of local merchants. Their job was to administer the local market. They provided police protection and were responsible for the cleaning of streets, garbage collection, etc. For these services a fee was collected by *nagaram* from merchants. *Angadikuli*, *angadipattam*, *taragu* (brokerage fee) were fees charged from the shops and *karai-irai*, *kadaipattam* was the fees charged from *bazaars*. It had fulfilled machinery of sweepers, policemen, market officials, accountants, etc. *Nagaram* possessed the right to authorise a wholesale dealer for a specified commodity.

20.8 SUMMARY

The beginning of our period saw unprecedented growth of towns. The process continued, even got accelerated upto the close of our period. Medieval towns were centres of manufacture and commercial activities. There appears to have existed hierarchy among the towns. There were *qasbas* and *balda/shahr*; *baras* and *bandars*. Certain cities were 'primate' cities largely depending upon state patronage for their power and position. Nonetheless they were vibrant centres of commercial and manufacturing activities. This hierarchy was also markedly present within the town itself. There were palaces, *havelis*, on the one side, while at the lowest level people lived in hutments. Medieval towns were marked by 'rurban' characteristics what S.C. Misra calls 'peasant urbanites'. Between town and country there existed a 'symbiotic' relationship.

20.9 EXERCISES

- 1) Define the distinguishing features of *qasbas*, towns and ports.
- 2) Critically examine various approaches to study the medieval Indian towns.
- 3) Discuss the pattern of governance of a medieval town.
- 4) Analyse the chief features of a medieval town.
- 5) Distinguish between port and town administration with special reference to the powers enjoyed by the *mutasaddi* and the *kotwal*.

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CHRONOLOGY OF RULERS: 1200-1750

NORTHINDIA

Delhi Sultans : 1206-1526

Ilbaris

Qutbuddin Aibak	: 1206-1210
Aram Shah	: 1210-1211
Iltutmish	: 1211-1236
Raziya	: 1236-1240
Bahram Shah	: 1240-1242
Masud Shah	: 1242-1246
Nasiruddin Mahumd Shah I	: 1246-1266
Ghiyasuddin Balban	: 1266-1287
Kaiqubad	: 1287-1290

Khiljis

Jalaluddin Khalji	: 1290-1296
Alauddin Khaliji	: 1296-1316
Qutbuddin Mubarak Shah I	: 1316-1320

Tughluqs

Ghiyasuddin Tughluq	: 1320-1325
Muhammad Tughluq	: 1325-1351
Firuz Tughluq	: 1351-1388
Ghiyasuddin Tughluq Shah-II	: 1388-1390
Nasiruddin Muhammad Shah	: 1390-1394
Mahmud Shah Tughluq	: 1394-1412

Sayyids

Khizr Khan	: 1414-1421
Mubarak Shah	: 1421-1434
Muhammad Shah	: 1434-1443
Alauddin Alam Shah	: 1443-1451

Lodis

Bahlol Lodi	: 1451-1489
Sikandar Lodi	: 1489-1517
Ibrahim Lodi	: 1517-1526

MUGHALS : 1526-1750

Mughals

Babur	: 1526-1530
Humayun	: 1530-1540

Sur Interregnum

Sher Shah	: 1540-1545
Islam Shah	: 1545-1553
Others	: 1553-1555

Mughals (Continued)

Humayun	: 1555-1556 (Restored)
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Akbar	: 1556-1605
Jahangir	: 1605-1627
Shahjahan	: 1627-1658
Aurangzeb	: 1658-1707
Bahadur Shah I	: 1707-1713
Zulfiqar Khan & Jahandar Shah	: 1712-1713
Farrukh Siyar	: 1713-1718
Rafi-ud Darajat & Rafi-ud Daulah	: 1719
Muhammed Shah	: 1719-1748

DECCAN AND SOUTH INDIA

Yadavas

Somesvara IV	: 1187
Simhana	: 1210-46
Krishna	: 1246-60
Ram Chandra	: 1271-1311-12

Kakatiyas

Kakati Rudradeva	: 1162 A.D.
(Pratapa Rundra I) Ganapati	: 1199-1262
Rudrambe	: 1262-96
Pratapa Rudra Deva II	: 1295-96-1326

Hoyasalas

Ballala II	: 1173-1220
Narasimha II	: 1234-63
Narasimha III	: 1263-91
Ballala III	: 1291-1342

Pandya

Maravaraman Sundara Pandya I	: 1216-1238
Maravaraman Sundara Pandya II	: 1238-1251
Maravaraman Kulsekhar Pandya	: 1268-1310

Bahamani

Alauddin Mujahid	: 1375-1378
Shamsuddin Dawud II	: 1397-1422
Ahmad I	: 1422-1436
Ahmad I	: 1436-1458
Humayun Shah	: 1458-1461
Ahmad III	: 1461-1465
Muhammad III	: 1463-1482
Shihabuddin Mahmud	: 1482-1518

Vijayanagara

Krishnadeva Raya : 1509-1529
Achyut Raya : 1529-1542
Sadasiva Raya : 1542-1567

Ahmednagar

Ahmad Nizam Shah Bahri : 1496-1510
Burhan Nizam Shah I : 1510-1553
Husain Nizam Shah I : 1553-1565
Murtaza Nizam Shah II : 1565-1588
Husain Nizam Shah II : 1588-1589
Ismail Nizam Shah I : 1589-1591
Burhan Nizam Shah II : 1591-1595
Ibrahim Nizam Shah I : 1595
Ahmad Nizam Shah II : 1595
Bahadur Nizam Shah I : 1595-1600
Murtaza Nizam Shah II : 1600-1610
Burhan Nizam Shah III : 1610-1631
Husain Nizam Shah III : 1631-1633
Murtaza Nizam Shah III : 1633-1636

Bijapur

Yusuf Adil Khan : 1489/90-1510
Ismail Adil Khan : 1510-1534
Mallu Adil Khan : 1534-1535
Ibrahim Adil Shah I : 1535-1558
Ali Adil Shah I : 1558-1580
Ibrahim Adil Shah II : 1580-1627
Muhammed Adil Shah : 1627-1656
Ali Adil Shah II : 1565-1672
Sikandar Adil Shah : 1672-1686

Golconda

Sultan Quli Qutbul Mulk : d.1543
Yar Quli Jamshed : 1543-1550
Subhan : 1550
Ibrahim Qutb shah : 1550-1580
Muhammad Quli Shah : 1580-1611
Muhammad Qutb Shah : 1611-1626
Abdullah Qutb Shah : 1626-1672
Abul Hasan Qutb Shah : 1672-1687

UNIT 21 INLAND AND MARITIME TRADE

Structure

- 21.1 Introduction
- 21.2 Intra-Regional Trade
- 21.3 Seaborne and Coastal Trade
- 21.4 India and the Asian Trade
- 21.5 The West Coast
- 21.6 The East Coast
- 21.7 Historiography of Asian Trade
- 21.8 Summary
- 21.9 Exercises
- 21.10 Suggested Readings

21.1 INTRODUCTION

The proposition that the medieval Indian economy was predominantly agrarian in character hardly needs any emphasis. Though the absence of census and similar data for the period makes it impossible to assign precise values to the sectoral origin of output and the occupational distribution of the work force, there can be very little doubt that the agricultural sector accounted for an overwhelming proportion of both the total output and the total employment in the economy. By the same token, the bulk of the state revenue was also provided by this very sector in the form of land revenue. Each of the other two sectors viz. the non-agricultural sector producing mainly handicraft goods and the services sector, including the trade sector, was comparatively much smaller in size though obviously no precise estimates of the respective sizes are possible.

When one looks at the structure of the economy in these broad terms, the trade sector in medieval India was undoubtedly a comparatively small sector. It generated a comparatively small proportion of total income and provided a comparatively small proportion of total employment. But it is important to realize that these proportions may be a grossly inadequate measure of the role that trade and exchange are likely to have played in the working of an economy such as that of medieval India. According to circumstances, the role of trade and exchange can vary a great deal as between economies and the size of the trade sector is not necessarily a reliable indicator of its importance in the overall working of the economy. Trade in medieval India at the local, inter-regional as well as the international level performed certain very crucial functions which had far-reaching implications for all sections of the community including peasants and artisans.

It is quite true that the bulk of the population in medieval India lived in villages whose needs for goods and services were satisfied largely through production for use. But at the same time, it must be recognized that there was an impressive and large scale exchange of goods at various levels. To take into account one important factor, on an average between 40 to 50% of the gross agricultural produce in Mughal India was collected as land revenue paid in or eventually converted into cash. This extremely high proportion of marketed to total agricultural output naturally involved a great deal of exchange and trading activity notwithstanding the fact that the agricultural sector's own demand for the products of the non-agricultural sector was minimal. The towns were dependent on the villages for the supply of not only primary products but also a large part of the manufactured goods they consumed. Even for industries based in the urban areas, a large part of the raw materials originated in the country-side.

21.2 INTRA-REGIONAL TRADE

A large volume of internal trade in items such as foodgrains, other agricultural produce such as cotton, other raw materials and finished manufactured goods across the length and breadth of the country contributed a good deal to the growth of productivity in both the agrarian and the non-agrarian sectors. The achievement of an extra-ordinarily high degree of market dependence is suggested by bits of evidence like the poor peasants of the rice-growing riverine systems of southeastern India consuming not the expensive paddy crops which they produced, but millets and dry grains from the interior. Foodgrains, raw materials and finished products travelled long distances for eventual consumption in production centres and markets providing the highest return. Bengal was known to be the 'granary' of the subcontinent and provided large quantities of items such as rice, sugar and oil to many parts of the country besides neighbouring countries such as Sri Lanka and the Maldiv Islands. The cotton textile industry of the Coromandel coast depended for a large part of its raw material on Maharashtra and Berar. In Bengal, while the finest Dhaka muslins were woven from high-grade cotton grown in the vicinity of Dhaka itself, the bulk of the cotton used in the extensive cotton textile industry in the province was imported from areas such as Gujarat. The important silk textile industry in Gujarat, in return, obtained the bulk of its supply of high-grade raw silk from Bengal. The large volume of trade between the east and the west coasts was done via the heartland of the Mughal empire. Luxury silks and muslins were a staple item in the cargo sent from Bengal to Agra for use by the Mughal aristocracy. Some of these goods were re-exported from Delhi and Agra to the west coast along with indigo from Bayana and clothes produced in Hindustan. They were exchanged, among other goods, for Gujarati silk textiles and luxury items from the Middle East. The trading communities in north India included Punjabi Khattris and the Rajasthanis, but perhaps the most dominant group was that of the Gujarati merchants who controlled the great cross-country trade route from Surat to Murshidabad. Indeed, on the basis of their excellent market information and large capital resources, many of these Gujarati merchants had settled down in various parts of the country including Bengal, several branches of whose trade, both by land and water, they eventually came to dominate.

There were also significant overland trading links with Persia and Central Asia via the northwest. The route to Persia stretched from Agra to Lahore to Qandahar on to Isfahan – the central market of Persia (see Map on page 8). The volume and value of the trade on this route seems to have been reasonably large with 20,000-21,000 camel loads travelling each year from Lahore to Isfahan in the early part of the seventeenth century with all kinds of relatively high-value goods manufactured or grown in the north Indian plains. Ordinarily, overland transportation, particularly when it also involves a certain amount of protection cost payable to the tribes through whose jurisdictions the caravans would have to pass, is more expensive than transportation by sea. But in the case of the Indo-Persian trade, the Dutch East India Company factors at Agra maintained that the land route between Agra and Isfahan via Lahore and Qandahar cost less per unit of goods transported than the land-cum-sea route which would involve the transportation of the goods from Agra to Surat by land, on to Bandar Abbas by sea and finally from Bandar Abbas to Isfahan by land.

The route connecting the Mughal heartland with central Asia also started at Agra and continued on to Lahore and Peshawar reaching Kabul via the Khyber Pass. It then continued on to a chain of Indian trading settlements which stretched far up into central Asia to Astrakhan and Lake Balkh. This was a significant trade which took Indian spices, textiles and other goods up to Bokhara and beyond in search of gold and silver, horses,

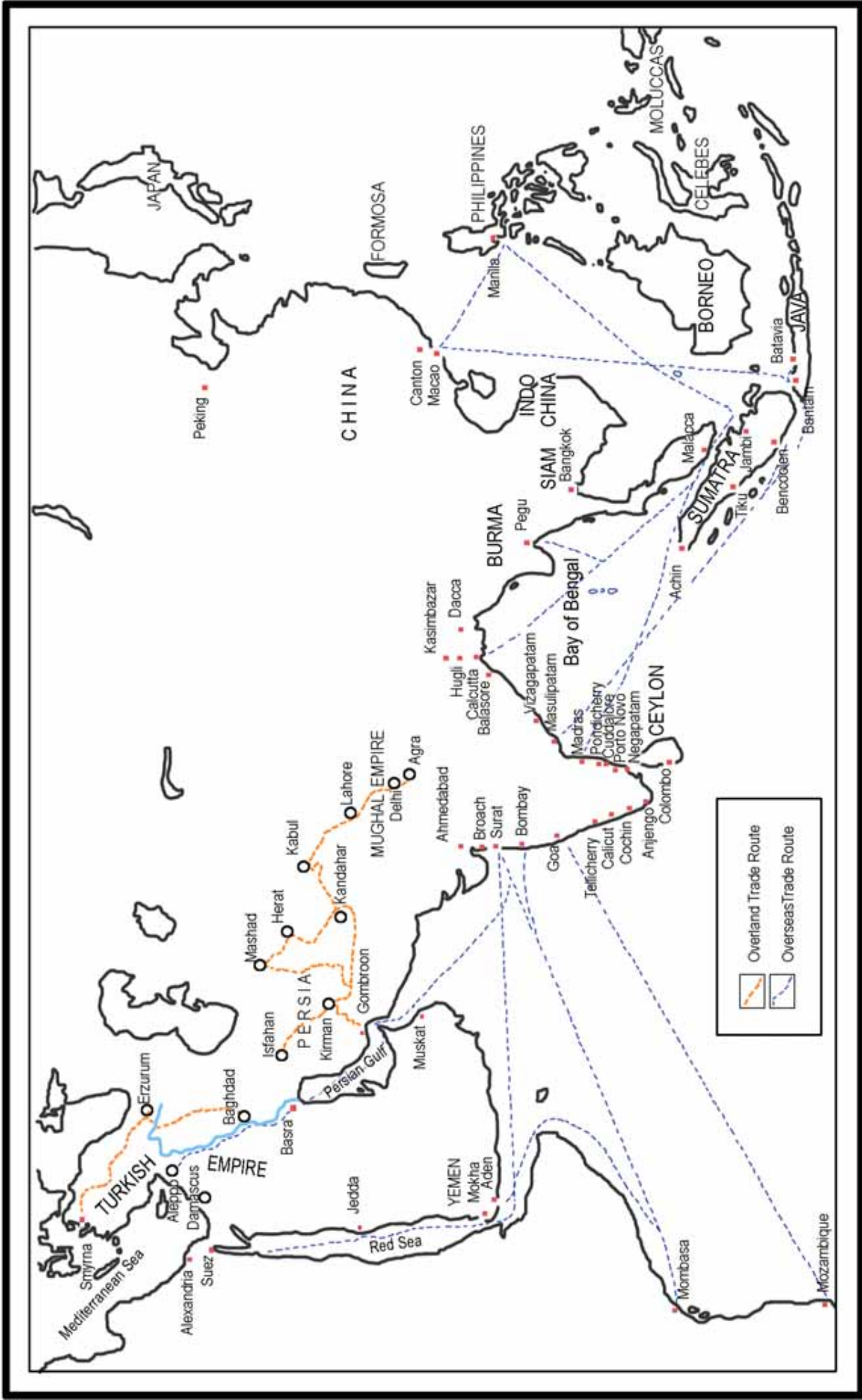
silks and Chinese porcelain. The scale of this traffic may be judged by the effect of a single accidental fire in Peshawar fort in 1586. The disaster destroyed 1,000 camel-loads of goods belonging to the merchants who had sheltered there when the route was temporarily obstructed. As long as the chiefs of the Afghan and other tribes were given their usual cut, the caravan trade on this route ordinarily moved quite smoothly.

21.3 SEABORNE AND COASTAL TRADE

In addition to a fairly impressive amount of internal trade and a certain amount of external trade by land, the medieval Indian economy was characterized by a large scale coastal and high seas trade carried on from its extensive coast line. On the eve of the arrival of the Europeans into the Asian Seas at the beginning of the sixteenth century, maritime trade from India was an important constituent of the Indian Ocean trade, alternatively referred to as Asian trade. Traditionally, the great arc of Asian trade included the Persian Gulf and the Red Sea in the northwest and Japan in the northeast. The principal natural divisions of this huge area were the Arabian Sea, the Bay of Bengal and the South China Sea. Within each of these zones, there were important blocks of ports across which a large amount of trade had traditionally been carried on. The western or the Arabian Sea zone included ports in the Persian Gulf, the Red Sea, those on the East African coast and on the west coast of India. The Bay of Bengal network included ports in Sri Lanka, the Coromandel coast, Bengal, Burma, Thailand, Malaya and Acheh in Sumatra. Ports such as Canton and Zaiton in the South China Sea had extensive contacts both with the Indonesian ports as well as with ports in the straits of Malacca (see Map on page 8).

India played a central role in this structure of Asian trade. In part, this indeed was a function of the midway location of the subcontinent between west Asia on the one hand and southeast and east Asia on the other. But perhaps even more important was the subcontinent's capacity to put on the market a wide range of tradable goods at highly competitive prices. These included agricultural goods, both food items such as rice, sugar and oil as well as raw materials such as cotton and indigo. While the bulk of the trade in these goods was coastal, the high-seas trade component was by no means insignificant. The real strength of the subcontinent, however, lay in the provision of large quantities of manufactured goods, the most important amongst which was textiles of various kinds. While these included high value varieties such as the legendary Dhaka muslins and the Gujarat silk embroideries, the really important component for the Asian market was the coarse cotton varieties manufactured primarily on the Coromandel coast and in Gujarat. There was a large scale demand for these varieties both in the eastern markets of Indonesia, Malaya, Thailand and Burma as well as in the markets of the Red Sea, the Persian Gulf and East Africa. While it is impossible to determine precisely what proportion of total domestic demand for mass consumption textiles in these societies was met by imports from India, the available evidence would seem to point in the direction of this not being altogether insignificant. India's capacity to manufacture these textiles in large quantities and to put them on the market at highly competitive terms made it in some sense the 'industrial' hub of the region surrounded by west Asia on one side and southeast Asia on the other.

This circumstance also determined to a large extent the nature of India's demand for imports from the rest of Asia. This demand consisted essentially either of consumption goods which were not produced domestically for soil, climatic or other reasons, or of minerals and metals of various kinds whose domestic supply was either nil or substantially below the total demand. In the first category were items such as fine spices like cloves, nutmeg and mace from Indonesia, and horses and rosewater from west Asia. The second



Indian Ocean in the 17th and 18th Centuries (After K.N. Chaudhuri, *Trade and Civilization in the Indian Ocean: An Economic History from the Rise of Islam to 1750*, Delhi, OUP, 1985, p. 96)

category included rubies and other precious stones from Burma, as well as metals – both precious and non-precious. By far the most important non-precious metal imported was tin from Malaya. Precious metals, mainly silver, were imported overwhelmingly from west Asia. It was for this reason that, from the sixteenth century onward, the port of Mocha was repeatedly referred to as the ‘treasure-chest’ of the Mughal empire. It is really immaterial for our purposes whether the imported precious metals are treated as a commodity import or as a means of settling the adverse balance of trade that the concerned trading partner of the subcontinent had with it. The important point to emphasize is that by virtue of her relatively more advanced structure of manufacturing production and her capacity to provide large quantities of basic manufactured consumption goods such as inexpensive cotton textiles at highly competitive terms, India significantly enhanced the basis of trade in the Asian continent. She not only provided the textiles and, on a more modest scale, the foodgrains and the provisions in great demand in the neighbouring societies but also provided an important outlet for their specialized agricultural, mineral and other products. Trade satisfied different kinds of consumption needs for India as compared with her numerous trading partners in the Indian Ocean region. This by itself provided an excellent basis for a significant and growing level of trade. It is really in this sense that the critically important role of India in the structure of early modern Asian trade needs to be assessed.

21.4 INDIA AND THE ASIAN TRADE

The key position of India in the structure of Asian trade was also reflected in the important role of the Gujarati and other Indian trading groups in the actual conduct of this trade. This role, if anything, was strengthened in the course of the fifteenth century which witnessed the fragmentation of Asian trade into well-defined segments. Increasingly, the participation of the Arab merchants became confined to the trade between west Asia and the west coast of India. This left the trade between the west and the east coasts of India on the one hand, and the eastern Indian Ocean region on the other, almost exclusively in the hands of Indians – the Gujaratis more than anyone else, but also the Chettis, the Chulias and other groups from the Coromandel coast, besides the Oriyas and the Bengalis. The participation of the Chinese merchants was now restricted by and large to controlling the trade between China and Malacca, while the Indonesian and the Malay merchants hardly seem to have ventured beyond the inter-island and the port-to-port trade in the Malay-Indonesian region. In sum, Indian merchants from different regions of the country constituted an important trading group operating in the Ocean.

From the vantage point of India, the two principal segments of maritime Asian trade were the western Indian Ocean and the Bay of Bengal. In the west, the link through the Red Sea and the Persian Gulf extended overland to the southern coast of the Mediterranean. The Bay of Bengal littoral extended through the straits of Malacca to the South China Sea going all the way to Japan. In the west, the area of operation of the Indian merchants stopped at the Red Sea and the Persian Gulf ports, while in the east it extended as far as Malacca. While there were clear-cut and by and large autonomous areas of operation and linkage in each of these two broad segments and there is a certain amount of merit in analysing each of these separately, it must be recognized that there was a considerable amount of interdependence and interaction across the two segments and that neither of the two should be regarded as a fully autonomous and self-contained system. One only needs to refer to the large volume of direct trade between Gujarat and Indonesia to realize the significance of this caution. This was equally true at the level of coastal trade as well, and one only has to remind oneself of the regular trade links in the fifteenth century between the ports of Bengal on the one hand and those of the west coast – in both Malabar and Gujarat – on the other.

In both the Arabian Sea and the Bay of Bengal, a considerable amount of trade was carried on both on the high-seas as well as on the coastal trade circuits. The coastal circuits were often dominated by trade in agricultural products such as foodgrains and other bulk goods, and were usually characterized by the use of relatively small craft which would ordinarily not be usable on the high-seas runs. Also, in comparison to the high-seas connections, the role of the monsoon winds was comparatively limited in determining the rhythm of trade on the coastal circuits.

21.5 THE WEST COAST

The west coast of India could conveniently be conceived of as consisting of four distinct segments divided roughly at the ports of Chaul, Karwar and Cannanore. To the north of Chaul lay the Gujarat coast; from Chaul to Karwar was the Konkan coast; south of Karwar to Mount Eli immediately to the north of the port of Cannanore was the Kanara coast; and to its south the Malabar coast. During the fifteenth century, the ports of Cambay in Gujarat and Calicut in Malabar were the two major international ports on the west coast of India, and between them they handled a considerable amount of re-export trade. Gujarat was a major trading area in the subcontinent and the Gujaratis – mostly Muslims but also including Hindu traders – had traditionally been a dominant group amongst the Indian mercantile communities. The most important of the new ports to emerge during the fifteenth century was Malacca, to which the Gujarati merchants shifted their trade from the Javanese and the Sumatran ports on which they had concentrated until then in their eastern trade. The growth of Malacca continued in the second half of the fifteenth century, and so did the Gujarati share in the trade of the port. The goods that the Malacca-bound ships leaving Cambay carried were, in part, coloured woollen clothes and glassware from the Mediterranean, and items such as rosewater, opium, indigo and silver from west Asia. But a large part of the cargo would seem to have consisted of textiles manufactured in Gujarat – mainly of coarse cotton, though more expensive varieties including those manufactured from fine-quality cotton and silk also seem to have figured in the list. The cargo obtained in exchange at Malacca included Chinese goods such as silk and porcelain, Indonesian spices such as pepper, cloves, nutmeg and mace, besides woods and aromatics, and precious and non-precious metals such as Malayan tin. In addition to Malacca, the Gujarati ships from Cambay called at ports such as Acheh, Kedah, Tenasserim/Mergui and Pegu. The goods carried to these ports were broadly similar to those carried to Malacca: the goods brought back were largely of local origin, rather than cosmopolitan as in the case of Malacca.

There was also a large amount of coastal trade carried on between Cambay and other smaller ports of Gujarat on the one hand, and ports on the Konkan, Kanara and the Malabar coasts to the south, and those in Bengal, on the other. The principal commodity procured in the Konkan ports of Chaul and Dabhol was textiles, while the main item procured in Kanara and Malabar was pepper. A certain amount of rice was also procured in Kanara. At Calicut, limited quantities of Chinese and Indonesian goods were also picked up. Bengal provided foodgrains and provisions such as sugar, butter and oil in addition, of course, to textiles of different varieties.

A part of the large conglomerate of goods brought to Cambay was obviously destined for consumption in Gujarat, as well as the large north Indian hinterland supplied by it. But a good proportion would seem to have been re-exported mainly to west Asia, the most important ports in the region at this time being Aden and Jeddah. The other important constituent of the cargo to west Asia was textiles manufactured in Gujarat. These were predominantly those manufactured from coarse cotton and intended for mass consumption,

though superior varieties manufactured from fine cotton and silk also figured in the list. The route from Cambay to Aden would seem to have been dominated by the Arab, Persian and other west Asian merchants, though the Gujarati merchants also operated on this route in an important way.

21.6 THE EAST COAST

The two principal trading regions on the east coast of India were the Coromandel coast and Bengal. The Coromandel coast is conventionally defined as including the stretch between Point Godavari and the island of Manar, south of which lies the Fishery coast. To the north of Point Godavari is the Gingelly coast which is sometimes also included in the Coromandel coast. For our purposes, Bengal would be defined as including the Orissa ports of Pipli and Balasore. There was a fair amount of coastal trade between the ports of the two regions, dominated, it would seem, by the merchants of Bengal. At the beginning of the sixteenth century, the principal Coromandel port was Pulicat linked via Tirupati and Penukonda to the imperial city of Vijayanagar to the northwest. In Bengal, by far the most important port was Chittagong which was linked to the capital city of Gaur. Satgaon was next in importance until about 1580 when, due to the silting up of the waterway on which it was situated, it was succeeded by Hugli. Pipli and Balasore in Orissa were the other important ports in the region.

The high-seas trade from Pulicat was basically in two directions: to Mergui and the ports of the Irrawaddy delta in southern Burma on the one hand, and to Malacca and ports further east in the archipelago on the other. While the trade with Mergui was marginal, that with Pegu and lower Burma, in particular the ports of Martaban and Cosmin, was more substantial. The principal exports from Pulicat consisted of textiles produced all over the Coromandel coast and red yarn from the Krishna delta. The imports into Coromandel included items such as gold, rubies, timber, tin, ivory and copper. The link to Malacca was perhaps even more important. Until its capture by the Portuguese in 1511, the annual traffic to the port from Coromandel usually consisted of one large ship and as many as five smaller ships. The principal items imported into Pulicat included Indonesian spices, various kinds of wood, Chinese silk and other goods, gold and non-precious metals such as tin, copper, quicksilver and vermilion. A major trading group at Pulicat was that of Muslims, a few of Arab origin, but mainly members of the Muslim communities of coastal southeastern India, known as Chulias in parts of southeast Asia and as Marakkayars in Coromandel. The trading community also included Telugu-speaking Chettis of the Balija and Komatti communities as well as Armenians. At the Malacca end, the mercantile community consisted largely of the so-called *keling* merchants of Tamil and Telugu origin led by people like Nina Chatu and Nina Suryadev. The Sultan of Malacca himself is also known to have participated in this branch of commerce. There was regular trade between Bengal and Coromandel based on the import into ports such as Masulipatnam of rice, gram, wheat, long pepper, opium, clarified butter and Bihar saltpetre by an annual coastal fleet from Bengal. While the ships from Bengal usually returned from north Coromandel itself, those from the Gingelly coast went further south to supply central Coromandel as far as Pulicat and São Tomé. The Coromandel cargo carried back to Bengal was raw cotton, tobacco, iron and crucible steel, and some textiles, but the profit seems to have been made largely on the outward journey.

As far as Bengal was concerned, in addition to the coastal trade with southeastern India, the major commercial links extended to the eastern littoral of the Bay of Bengal and Malacca, to Sri Lanka, the Maldives and Malabar, and finally to the Gujarat, the Red

Sea and the Persian Gulf complex. The eastward trade was dominated by the trade to Malacca. The exports from Bengal included textiles, rice, sugar and conserves, while the imports were a varied lot. These included Borneo camphor, Moluccan spices, pepper, sandalwood, Chinese porcelain and silk, precious metals – perhaps mainly silver – as well as base metals such as copper, tin, lead and mercury. The connection with Burma was mainly through the ports at Martaban, Dagon and Cosmin.

The exports to Sri Lanka, the Maldives and the Malabar coast were again mainly textiles and foodstuffs, including large quantities of rice. Indeed, besides Kanara, Bengal was the principal rice surplus area in the entire region and areas such as the Maldives depended mainly on Bengal for their rice requirements. The principal items brought back by the Bengal vessels were cinnamon and areca from Sri Lanka, cauris (used extensively in Bengal both for ornamental purposes as well as in the form of low denomination currency) from the Maldives, and pepper, of which again Bengal was an important consumer, from Malabar. The trade to Gujarat was carried on primarily through Cambay, while the trips to Mocha in the Red Sea were often made after a stopover at the Maldives. The principal goods carried were textiles, sugar and long pepper, while the principal item brought back from Mocha was silver.

The accounts of Portuguese travellers Tome Pires (1512-1515) and Duarte Barbosa (c. 1518) also enable one to decipher the principal components of the mercantile community operating from Bengal. The indigenous merchants of Bengal are described as ‘merchants with great fortunes’ and were an important constituent of the trading community. But a large part of the trade would seem to have been controlled either by merchants based at the partner ports or by foreign merchant groups settled in the Bengal ports. Thus the trade with Malacca was dominated by the *keling* merchants settled there. The pepper trade with Pasai and Pidie was carried on by Persian merchants settled at the port of Chittagong. This last-mentioned group would seem also to have dominated the trade to the middle and the western Indian Ocean ports, though the traders on these routes also included Turks, Arabs, Rumis, Abyssinians and merchants from Chaul, Dabhol and Goa.

The essentials of the Indian maritime trading network as outlined above remained by and large unchanged over the course of the sixteenth, the seventeenth and the eighteenth centuries. The arrival of the Portuguese into the Asian Seas at the beginning of the sixteenth century did indeed introduce some elements of change in the functioning of this network but it is important not to over-emphasize the nature or the magnitude of such changes. It is, for example, simply not true to claim that on the strength of the superior fighting power of their vessels operating in the Asian Seas, the Portuguese were able to dominate the Indian Ocean trade at the cost of Indian and other Asian trading groups. Devices such as the *cartaz* system which obliged Indian ships operating on specific routes to seek prior permission of the Portuguese and paying customs duties at the ports controlled by the latter were at best minor irritants involving a small additional cost from the point of view of the Indian maritime merchants and nothing more. More direct intervention by the *Estado da India* (lit. State of India; functioned on behalf of the Portuguese Crown) through devices such as the concession system on a reserved route basis again did indeed cause a certain amount of dislocation and inconvenience to say the merchants operating from a Coromandel port such as Pulicat. But the response of the Indian merchants was to create an alternative network of ports in the Bay of Bengal and avoid the Portuguese controlled ports. It would seem to be almost certainly the case that the overall implications of the Portuguese practices and policies for the fortunes of the Indian maritime merchants were practically nil.

With the arrival of the English and the Dutch on the scene at the beginning of the seventeenth century, the overall situation did not undergo any fundamental change. Though both these Companies formally took over the *cartaz* system, it was never enforced with any vigour by either. Of the two, only the Dutch East India Company engaged in intra-Asian trade and was concerned about competition from Indian merchants operating on the same routes, but there was very little the Company could do about it. The Europeans had no option but to participate in the maritime trade from India as simply another group of merchants doing business in the region.

This situation was eventually altered to a certain extent in the second half of the eighteenth century when the English East India Company wrested *diwani* rights (right to collect revenues on behalf of the Mughal emperor) in the Bengal *subah* (province) in 1765 from the Mughal emperor. The employees of the Company engaged in trade on their private account took full advantage of the political power now available to the Company. This power was often used to create unauthorised monopolies of various kinds, particularly in highly profitable items of trade such as opium. The trade of the rival Indian merchants was also sought to be hindered in a variety of other ways. It is, however, a great tribute to the basic strength and the resilience of the Indian maritime merchant that he steadfastly refused to be overwhelmed by the fair and unfair competition provided by the English private traders. If the trade with China where opium figured in a big way now became unviable for the Indian merchant, he sought new markets in South-East Asia and by and large made up for the loss of the China market. The point is that while it was indeed the case that the newly found power of the English created problems for the Indian maritime merchant, he displayed sufficient flexibility to be able to stay in business.

21.7 HISTORIOGRAPHY OF ASIAN TRADE

In order to put our discussion in perspective, it might be useful to refer briefly to some key concepts that have emerged in the historiography on Asian trade over the last three quarters of a century or so. The pioneer in the field was a Dutch sociologist-historian Jacob van Leur who argued that the Asian merchant was no more than a pedlar and that the trade was overwhelmingly in luxuries. The role of the merchant was confined to hawking his wares from market to market and the only change in the trade was the waxing and waning in its volume. Van Leur was clearly wrong in maintaining that trade in luxury goods was a principal characteristic feature of Asian trade. We now know on the basis of detailed research that it was indeed the trade in ordinary goods – the most important component of which was Indian textiles of everyday wear – that dominated the Asian trade. But Van Leur's pedlar hypothesis found a strong supporter in Niels Steensgaard, a Danish historian who further refined the hypothesis and developed it almost into a theory. Steensgaard argued that the pedlar of the Indian Ocean operated in a world of non-transparent markets and did not enjoy the protection of buffers such as intermediaries and stocks against possibly large price fluctuations. An Indian historian, the late Ashin Das Gupta argued that the concept of pedlar was not necessarily in conflict with the fact that in addition to the predominance of small merchants who travelled the maritime routes in the Indian Ocean with their bundle or two of coarse cloths, wealthy ship-owning merchants such as Mulla Abdul Ghafur also participated in the Indian Ocean trade in an important way. He agreed with Steensgaard that the markets in the Indian Ocean were small, easily glutted and exceptionally erratic. Das Gupta wrote, "Price was fixed by matching demand and supply, only no one could tell the state of demand and supply much beforehand. This meant that even the large operators were the victims of the eccentricities of the market. If insecurity be accepted as the real hall-mark of peddling trade, then the Indian Ocean market in the early 18th century was a pedlar's market".

Another concept that Niels Steensgaard developed in the context of the growing European participation in the Indian Ocean trade in the sixteenth and the seventeenth centuries was that of Asiatic Trade Revolution. Steensgaard argued that the Portuguese European-Asian trading network, using the newly discovered all-water route via the Cape of Good Hope on an exclusive basis, was essentially a redistributive enterprise which basically meant that the Portuguese state used its monopoly power over the route to force the Portuguese merchants to share their profits with it and by and large acted as a parasite. This situation, according to Steensgaard, changed radically from the beginning of the seventeenth century onward with the establishment of the Dutch and the English East India Companies. He drew a sharp contrast between the seigneurial and redistributive nature of the Portuguese enterprise on the one hand and the rational and productivity – maximizing policies of the Companies on the other. Thus, “the Portuguese pepper monopoly was not a business but a custom-house.” On the other hand, the success of the Companies was not based upon government monopolies or the use of violence but on their ability to compete in the market. For by adopting specific policies in relation to stocks, pricing and the mode of disposal of their goods, the Companies made impressive gains in the transparency and the predictability of the markets in which they operated.

In his writings, Om Prakash has argued that recent work in the field would seem to suggest that while certain key elements in Steensgaard’s formulation continue to be valid, the overall characterisation of a redistributive enterprise for the entire Portuguese trading operations both between Europe and Asia as well as those within Asia is in need of revision. This is partly because the Companies were not quite as devoid of the use of monopoly and violence as Steensgaard’s model in a pure form would seem to imply. More importantly, we now know that the Portuguese enterprise was indeed very much more than a simple Euro-Asian trade in pepper, the commodity mainly responsible for the characterisation of the trade as redistributive in nature. From about the last quarter of the sixteenth century onward, pepper increasingly lost ground to other goods in Portuguese Euro-Asian trade. Also, in addition to the Euro-Asian trade, there was a considerable amount of trade the Portuguese private traders carried on within Asia in respect of which too the redistributive characterisation will really not apply. The manner in which the trade was carried on was in its essentials not very different from the way the northern European corporate groups and private traders carried on their trade.

Om Prakash has also suggested in his work that in the context of the European trading operations in the Indian Ocean, there indeed was an Asian Trade Revolution taking place from the seventeenth century onward but of a kind very different from that suggested by Steensgaard. This Asian Trade Revolution consisted partly in the phenomenal expansion in the volume and value of Euro-Asian trade and partly in a major diversification in the composition and the origin of the Asian cargo entering this trade. Initially, both the Dutch and the English concentrated on the procurement of pepper and other spices which, as in the sixteenth century, continued to account for an overwhelming proportion of the total Asian imports into Europe. But unlike, and indeed mainly because of, the Portuguese, the Dutch and the English procured their pepper in Indonesia rather than on the southwest coast of India. The result was a marked shift in the Asian loci of the Euro-Asian seaborne trade from India to the Indonesian archipelago. This was the Asian counterpart of the shift of the European loci of this trade from Lisbon to Amsterdam and London. It was nearly three quarters of a century before the Asian loci shifted back to India in response to the change in European fashions assigning an increasingly important role to textiles and raw silk in the Asian imports into Europe. It was only in the second half of the eighteenth century that the growing role of Chinese tea again deflected somewhat from the central importance of India in Euro-Asian trade.

21.8 SUMMARY

To conclude, India possessed an extensive network of inland and maritime trade during the medieval period of her history. This network was strong enough and efficient enough to successfully face the competition provided by the European corporate groups as well as private traders and retain its identity in all its essentials. Even the assumption of political power by the English East India Company in the latter half of the eighteenth century was unable to damage this network in more than a marginal way.

21.9 EXERCISES

- 1) Discuss the importance of Agra as an important entrepôt in the 17th century.
- 2) Critically examine India's trade during the 16-17th centuries vis-à-vis Asian trade.
- 3) Analyse the nature of coastal trade in the 16-17th centuries.
- 4) Analyse the trading activities of the Gujarati and Bengali merchants during the 16-17th centuries.
- 5) Give a historiographical assessment of the Oceanic trade. Evaluate Van Leur's hypothesis of 'peddling trade'.

21.10 SUGGESTED READINGS

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UNIT 22 BUSINESS PRACTICES AND MONETARY HISTORY

Structure

- 22.1 Introduction
- 22.2 Business Practices and Monetary Economy: Overview
 - 22.2.1 The Market and Monetary Exchange
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22.1 INTRODUCTION

About the origins of many business practices, very little is really known. Simple partnership may have been an old practice but references to it only surfaced in the sixteenth century. The same could be said about brokerage but the word *dallal* is of foreign origin and has no equivalent in Sanskrit or Hindi. It appeared for the first time in fourteenth century sources to designate commercial middlemen, although much of our information about their activities came from the seventeenth century.

Usury was practiced in India as early as the sixth century B.C. but the source and use of usurious capital remain unknown. In the *Lekhapaddhati* documents of the thirteenth century, merchant-moneylenders (*dhanik, vyavahara, sresthi*) are found advancing loans on interest and it seems that it was largely merchant capital which formed the usurer's capital. The Multanis and *sahs* of the thirteenth century who lent money to the ruling class of Delhi were merchants as well. We also learn about people, not described as merchants or by any caste-name, who discounted salary drafts (*qabz*) of the soldiers in the fourteenth century under the Delhi Sultanate, as these were negotiable bills. The *sarrafs* and *mahajans* are reported to have performed this function in the seventeenth century on a regular basis. The *sarrafs* first figure in our sources as money-changers in the thirteenth century (*Kumarapalacharita* of Hemchandra) and as money-lenders in the fourteenth century (*Tarikh-i Firozshahi*). There are epigraphic references to the Jain 'bankers' in the late twelfth and early thirteenth centuries, but nothing has been explained about their functions. Firm evidence for deposit banking and book credit once again came from the seventeenth century. The term *hundi* is derived from Sanskrit *hundika*, the earliest usage of which dates back to 914 AD. The *Lekhapaddhati* and Kalhan's *Rajatrangini* (12th century) refer to the use of *hundika* by kings and nobles to make payments but it may have been used by merchants as well.

The sixteenth and seventeenth centuries brought considerable progress in monetization and techniques of transferring capital and making payments. At the same time, inland commerce and long-distance maritime trade were now open to the massive participation

of big and small merchants including the European Companies. Since business organization and practices required a developed commercial and monetary infrastructure, these phenomena were interlinked. The configuration of these factors also explains the rise of mercantile groups and firms and a certain sophistication achieved in business practices which attracted the attention and admiration of contemporary writers, both Indian and foreigner.

22.2 BUSINESS PRACTICES AND MONETARY ECONOMY: OVERVIEW

Business practices can be defined as a series of activities oriented towards organizing and facilitating the process of production and exchange of goods and services at a minimum cost. The success of business ventures depends to a very large extent on the methods employed by individuals or firms to raise and allocate resources, overcome obstacles and lower the cost of transactions. No business can be conducted without the presence of money. Money is an important medium of exchange as well as a measure of the value of goods and services transacted in the market. The availability and use of money are critical to the organization of the economy in general and of business in particular.

22.2.1 The Market and Monetary Exchange

For any business to flourish, a certain level of economic development is essential to sustain the demand and supply of goods and services. The economy of medieval India was made up of two overlapping components. The first was the subsistence economy of village communities where the exchange of goods and services was based on a socially established network of barter exchange. Here the role of money was marginal and the possibilities of business, minimal. The other was the domain of commercialized economy, both in the countryside and urban centers, where market relations of exchange prevailed. It was here that money was used on a large scale and opportunities for business were realized with varying degrees of success.

Two broad streams of exchange operated within the commercialized sector of medieval India: one local and the other linked to long-distance trade and foreign markets. The demand for money in the local network of exchange stemmed from the consumption of goods and services and the tax obligations of the rural and urban population. At the lowest level, the village community obtained its weekly supplies of various types of goods (salt, spices, metals, etc.) from the nearest *qasba* (township), and made cash payments to the state in the form of revenue. The money supply of the village came from the sale of its agrarian products in different markets. It supplied grains to the *qasbas* and nearby towns through rural merchants (*bantias*; *mahajans*) and itinerant traders (*banjaras*), who brought the cash back to the countryside. Villages situated near trade routes developed their own markets for specific commodities and held big seasonal fairs which attracted buyers from near and afar.

The urban centres and entrepôts of India were immersed far more deeply in the circuit of market exchange. Here, the concentration of the bureaucracy, soldiery, mercantile classes and artisans created a permanent demand for food supplies, craft goods and services. Urban taxes were always collected in cash and spent on meeting the administrative costs and consumption expenses of the resident ruling elites.

The other stream of exchange extended from the countryside to the urban entrepôts for the seasonal supplies of export goods. All major commodities which generated trade surplus – textiles, indigo, saltpeter and sugar – were produced and processed in villages

before being fed into the market chain which led to export by sea and land. Indian products were sold in the markets of the Middle East, Africa and Europe in the west and Southeast Asia, China, Japan and the Philippines in the east. Returning ships and caravans usually brought foreign currencies or un-coined metal to start a fresh cycle of exchange.

The networks of commercialized exchange – spread across a hierarchy of markets (*bazar*; *hat*; *mandi*), shops (*dukan*) and office cum warehouses (*kothis*) – required the use of money at every stage. Prices, wages, salaries and taxes were expressed and paid in money. The total money supply came from internal stock as well as imports of gold, silver and copper through foreign trade. The institution responsible for supplying money to the market was the mint (Hindi *taksal*; Persian *dar-ul zarb*) owned by the state, run by administrative officials and serviced by skilled craftsmen. The most detailed description of the functioning of sixteenth century mints appears in the first chapter of Abul Fazl's *Ain-i Akbari* (c. 1595). Mints were situated in the major commercial and administrative cities of India and operated on the principle of open coinage i.e. any supplier could obtain coins from the monetary authorities on payment of minting costs (brassage) and a tax (seigniorage).

Overtime, many changes took place in the medieval Indian market structure. The volume of agricultural production, raw materials, manufactured goods, trade and money supply expanded and contracted with changes in the population, technology, professional skills and craft techniques, economic policies of the state, and the global marketplace. Business organization and practices also varied with these changes over time and across regions.

22.2.2 Administrative and Legal Structure

The medieval Indian state contributed to the creation of a viable environment for seeking employment and doing business. Although political interference was present (such as the exaction of forced labour or extortion of money), it did not materially affect the free-trade character of the state. There were no legal restrictions on practising a profession or undertaking a business venture (including usury or lending money on interest) and no limits were placed on earning or accumulating money. Alauddin Khalji (AD 1296-1316) was the only ruler who interfered with the market to fix prices according to the cost of production and merchant's profit, but his market regulations became obsolete soon after his death. The attempts made by the Mughal Emperor Shahjahan to meddle with the market and create monopolies had to be abandoned during his lifetime.

The obligation for the payment of debts and settlement of liabilities was governed by customary laws enforceable in local courts. For instance, the declaration of bankruptcy by a businessman freed him from all obligations until he was proven solvent in a court of law. Lighting candles in front of the house to announce bankruptcy was a customary practice, which could have been the origin of the term *diwaliya*. The caste *panchayat* and assembly of elders were the primary institutions which adjudicated and settled commercial disputes. Beyond these, the courts (*adalat*) of the local and provincial governments heard grievances, received petitions, and passed verdicts.

Medieval rulers allowed and encouraged artisans and workers to settle in newly founded cities, and the territorial unification and political stability achieved under successive regimes facilitated the short and long-distance migration of professionals and businessmen to areas of opportunity. The standardized currency system, the organization of the mint, the taxation system, and the maintenance of law and order worked together to provide stability to the economic structure.

22.2.3 Social and Professional Structure

The largest group of businessmen in medieval India belonged to a sub-division of the Vaishya caste known as *bania*. Although there were other social groups such as the Khatrijs of Punjab, the Bohras and Parsis of Gujarat, and the Chettiars of South India, the *banias* were arguably the most widespread and influential. There were large groups of *banias* in Isfahan and Bandar Abbas (major cities in Iran) as well as Mokha, the famous Red Sea port of Yemen. The *banias* specialized in various branches of business, such as commerce, brokerage, money-changing (*sarrafi*), banking and insurance. Specialization and the pursuit of commercial interests turned them into distinct and separate groups. Big *banias* who conducted their business from their offices (*kothi*) with the help of agents and correspondents were known as *seths*, *sahukars* and *kothiwals*. Members of the *bania* community who combined commodity trade with money-lending and banking were known as *mahajans*. The Persian writers used the generic term *baqqal* for all *banias* when they were not referring to a specific sub-group.

The dominance of the *banias* in the business world of medieval India was made possible by the many qualities they possessed. Even though the community was divided into distinct professional groups which often competed with one another, there was a larger sense of fraternity which enabled them to join together in social intercourses and business enterprises. They learnt and perfected their skills with vigour and intelligence and transmitted them from one generation to another. The *banias* were driven by a spirit of acquisition to attain success in a competitive environment, but they had the good sense to temper it with thrift, patience and perseverance. A seventeenth century French jeweller and a frequent traveller to India, Jean Baptiste Tavernier, gave a profile of the *bania* community which brings out some of its best features:

The third caste is that of the Banians [*banias*], who attach themselves to trade, some being shroffs [*sarrafs*], i.e. money-changers or bankers, and the other brokers, by whose agency merchants buy and sell. The members of this caste are so subtle and skilful in trade that, they could give lessons to the most cunning Jews. They accustom their children at an early age to shun slothfulness, and instead of letting them go into the streets to lose their time at play, as we generally allow ours, teach them arithmetic, which they learn perfectly, using for it neither pen nor counters, but the memory alone so that in a moment they will do a sum, however difficult it may be. They are always with their fathers, who instruct them in trade and do nothing without at the same time explaining it to them. [They use the same] figures in their books, both in the Empire of the Great Mogull [Mughal], as well in other parts of India, although the languages may vary. If anyone gets in a rage with them they listen with patience, without replying, and withdraw coldly, not returning to see him for four or five days, when they anticipate his rage will be over.

Another jeweller, an Indian named Banarasidas, offered at about the same time an intimate portrayal of the social and professional world of north Indian *banias*, as well as valuable information on the methods of doing business, in his autobiography. Banarasidas composed his autobiography in verse at the age of fifty five and called it *Ardha-kathanak* (Half a Tale) because, being a Jain of the Srimal sub-caste, he believed that the ideal life span of an individual was a hundred and ten years. He went to school at the age of eight in his native town of Jaunpur and later learnt double-entry book keeping at home and money-testing in the market (*lena dena bidhisaun likhay - baithe hat sarrafi sikhay*), and finally set out on his maiden business venture to sell jewellery, gems and other goods at Agra. We will refer to Banarasidas on and off in our reconstruction of the business methods and practices of his kinsmen and compatriots.

22.3 MONETARY ECONOMY AND CURRENCY CIRCULATION

If we take a long-term view of the history of pre-colonial India, three broad cycles of monetary movements can be discerned. Gold and silver were used in the Indus civilization (2600-1800 BC) as money-metals but there was no coinage and pieces of precious metals were circulated on the basis of assumed or assayed purity. The hoard of a thief found at Harappa included ingots of gold and silver among items of jewellery. The Rig Vedic Aryans generally counted their wealth in cows, camels, horses and slaves but there is also evidence of the use of unstamped silver pieces of different units (*pada*) and valuable objects (*nishka*) for exchange. On the eve of the rise of Buddhism (6th century BC), a second 'urban revolution' was accompanied by an expansion of trade, the use of gold dust in annual tribute payments and the circulation of silver punch-marked coins (5th to 3rd century BC). A high point of monetization was reached with the extensive use of gold and copper currencies in the Kushana and Gupta periods (1st century AD to 6th century AD). The cycle ended with a period of monetary contraction, following a decline in the exchange network and commerce under the phase of 'Indian feudalism' (c.500- c.1000 AD), in which gold coinage practically disappeared, silver money became rare and copper currency circulated on a moderate scale. (For details see Blocks 2&3 of the present Course).

Medieval Coins



1

Gold *Tanka*, Alauddin Khalji



2

Silver *Dirhem*, Mahmud Ghaznavi



3

Silver *Tanka* of Ghiyasuddin Balban



4

Silver *Tanka*, Bengal, Muhammad Shah



5

Silver *Tanka* of Mohammad Shah I (Gulbarga)



6

Husain Shahi *Tanka* (Billon), Jaunpur



7



8

Coins of Raziya, Two Billon *Jital*

Source for Nos. 1, 2, 4-8 : Collection of Mr. Jean-Michel Dumont, Brussels, Belgium (afterwards Jean-Michel Dumont); Source for No. 3: RBI Monetary Museum Gallery – Medieval India Coinage

A gradual reorganization of the monetary economy took place in early medieval India (AD 11th century), with the revival of urbanization and foreign trade, and the introduction of monetary and fiscal institutions from Central Asia. The establishment of the Delhi Sultanate in the thirteenth century, and its extension to Gujarat in 1299 and to Sind and southern India a few years later, brought about a perceptible change in the production and circulation of currency money. The Delhi Sultanate promulgated a standardized multi-metallic currency system of gold and silver *tankas*, billon *jital* or *damma* (base metal mixed with silver) and copper *paika*. The widespread circulation of gold, silver and billon currencies indicates large-scale transactions and fuelled the expansion of the Sultanate's exchange network. It was possible for the state to realize revenue in cash, for peasants to pay taxes by selling their products in the market, and for merchants, manufacturers and bankers to make money out of cash and credit transactions. We gather this from both numismatic and textual evidence, such as coin specimens preserved in museum and private collections, the *Drvyapariksha* of Thakkura Pheru, a Khalji mint official, and the *Tarikh-i Firozshahi* of Ziauddin Barani, a fourteenth century Delhi intellectual and companion (*muqarrab*) of Sultan Muhammad Tughlaq (AD 1325-51).

Monetary Observations in the *Drvyapariksha* of Thakkura Pheru

Classification of Coins (withdrawn from circulation or still being manufactured, c. AD 1318)

Obsolete Coins

Silver Coins	(<i>gathas</i> {verses} 51-5)
Gold Coins	(<i>gathas</i> 56-61)
Trimetallic Coins (Gold & Silver & Copper)	(<i>gathas</i> 62-72)
Bimetallic Coins (Silver & Copper):	
Khurasan Coins	(<i>gathas</i> 73-7)
Athanari Coins	(<i>gatha</i> 78)
Vikrama Coins	(<i>gathas</i> 79-81)
Gurjara Coins	(<i>gathas</i> 82-93)
Malava Coins	(<i>gathas</i> 94-100)
Nalapura Coins	(<i>gathas</i> 101-3)
Chanderi Coins	(<i>gathas</i> 104-8)
Jalandhara Coins	(<i>gathas</i> 109-10)
Delhi Coins:	
Tomara Rajputs	(<i>gatha</i> 111)
Delhi Sultanate	(<i>gathas</i> 112-13)

Current Coins

Emperor Alauddin's Coins:	(<i>gathas</i> 134-8)
King Qutbuddin's Coins:	
Gold Coins	(<i>gathas</i> 139-42)
Silver Coins	(<i>gatha</i> 143)
Billon Coins	(<i>gathas</i> 144-7)
Copper Coins	(<i>gatha</i> , 148)

Metrology

Thakkura Pheru used a system of mass measurement denominated in the following units:

1 <i>tola</i>	= 3 <i>tanka</i>	= 12 <i>masha</i>	= 192 <i>java</i>	= 3840 <i>visva</i>
	1 <i>tanka</i>	= 4 <i>masha</i>	= 64 <i>java</i>	= 1280 <i>visva</i>
		1 <i>masha</i>	= 16 <i>java</i>	= 320 <i>visva</i>
			1 <i>java</i>	= 20 <i>visva</i>

Occasionally, the *rati* or *gunja* was incorporated in this system:

1 <i>tola</i>	= 3 <i>tanka</i>	= 12 <i>masha</i>	= 72 <i>rati</i>
	1 <i>tanka</i>	= 4 <i>masha</i>	= 24 <i>rati</i>
		1 <i>masha</i>	= 6 <i>rati</i>

John S. Deyell, *Living Without Silver: The Monetary History of Early Medieval North India*, OUP, New Delhi, 1990, pp. 254, 256

The second cycle ended in the downturn of the fourteenth century (1350-1540 AD) with a transition from precious to base metal coinage and shift in the mode of payment from cash to kind. Once again, gold disappeared entirely from the circuit of exchange, silver gave way to billon, and currencies reserved for petty transactions, such as copper and cowries, began to compete for a larger share of the market. The monetary contraction coincided with a worldwide shortage of silver, designated 'bullion famine' in Europe. It was under these circumstances that the much derided policy of Muhammad Tughlaq to establish a fiduciary currency came into effect.

The third cycle began with the establishment of a new currency regime by Akbar on the foundation laid by Sher Shah Sur, the Afghan ruler. Sher Shah revived the classical tri-metallic currency of the Delhi Sultans to strengthen his political authority and organize the finances of the territories he had conquered from Humayun. A pure silver coin by the name of *rupiya* was introduced along with the gold *ashrafi* or *muhr* and a heavy copper coin called *paisa* or *dam*. Akbar's administration expanded this currency structure and displaced the previous billon and copper regime, reflecting a series of developments within and outside India.

Mughal & Sur Coins



Mughal *Muhr*, 1) Humayun, 2) Akbar, 3) Aurangzeb (Obverse & Reverse)
RBI Monetary Museum Gallery – Mughal Coinage



Silver *Sharuki*, Babur
(After Jean-Michel Dumont)

Silver *Rupiya*, Sher Shah
(After Jean-Michel Dumont)



Silver Coins of Akbar : 1) Square Silver *Rupiya*, 2) Square Silver 1/2 *Rupiya*
(After Jean-Michel Dumont)



Silver *Rupiya* : 1) Nur Jahan and Jahangir, 2) Aurangzeb
(After Jean-Michel Dumont)

THE WORKMEN OF THE MINT

1. The *Darogha*. He must be a circumspect and intelligent man, of broad principles, who takes the cumbrous burden of his colleagues upon the shoulder of despatch. He must keep every one to his work, and show zeal and integrity.
2. The *Sayrafi*. The success of this important department depends upon his experience, as he determines the degrees of purity of the coins. On account of the prosperity of the present age, there are now numbers of skilful *sarrafs*; and by the attention of his Majesty, gold and silver are refined to the highest degree of purity. The highest degree of purity is called in Persia *dahdahi*, but they do not know above 10 degrees of fineness; whilst in India it is called *barahbani*, as they have twelve degrees. Formerly the old *hun*, which is a gold coin current in the Deccan, was thought to be pure, and reckoned at ten degrees; but his Majesty has now fixed it at $8\frac{1}{2}$: and the round, small gold *dinar* of Alau 'd-Din, which was considered to be 12 degrees, now turns out to be $10\frac{1}{2}$

Those who are experienced in this business have related wonderful stories of the purity of gold at the present time, and referred it to witch-craft and alchemy; for they maintain, that gold ore does not come up to this fineness. But by the attention of his Majesty, it has come up to this degree; hence the astonishment of people acquainted with this branch. It is, however, certain, that gold cannot be made finer, and of a higher degree. Honest describers and truthful travellers have indeed never mentioned this degree; but, when gold is put into fusion, small particles separate from it, and mix with the ashes, which ignorant men look upon as useless dross, whilst the skilful recover the metal from it. Although malleable gold ore be calcined and reduced to ashes, yet by a certain operation, it is brought back to its original state; but a part of it is lost. Through the wisdom of his Majesty, the real circumstances connected with this loss, were brought to light, and the fraudulent practices of the workmen thus put to the test....

3. *The Amin*. He must possess impartiality and integrity, so that friends and enemies can be sure of him. Should there be any differences, he assists the *darogha* and the other workmen, maintains that which is right, and prevents quarrels.
4. *The Mushrif*. He writes down the daily expenditure in an upright and practical manner, and keeps a systematic day-book.
5. *The Merchant*. He buys up gold, silver, and copper, by which he gains a profit for himself, assists the department, and benefits the revenues of the State. Trade will flourish, when justice is everywhere to be had, and when rulers are not avaricious.
6. *The Treasurer*. He watches over the profits, and is upright in all his dealings.

The salaries of the first four and the sixth officers differ from each other, the lowest of them holding the rank of an *Ahadi* [gentleman trooper].

7. *The Weighman*. He weighs the coins. For weighing 100 *jalali* gold-muhrs he gets $1\frac{3}{4}$ *dams*; for weighing 1000 rupees, $6\frac{19}{25}$ *dams*; and for weighing 1000 copper *dams*, $\frac{11}{25}$ of a *dam*; and, after this rate, according to the quantity.
8. *The Melter of the Ore*. He makes small and large trenches in a tablet of clay, which he besmears with grease, and pours into them the melted gold and silver, to cast them into ingots. In the case of copper, instead of using grease, it is sufficient to sprinkle ashes. For the above-mentioned quantity of gold, he gets $2\frac{3}{5}$ *dams*; for the same quantity of silver, 5 *dams* and $13\frac{1}{4}$ *jetals*; for the same quantity of copper, 4 *dams* and $21\frac{1}{2}$ *jetals*.
9. *The Platemaker*. He makes the adulterated gold into plates of six or seven *mashas* each, six fingers in length and breadth; these he carries to the assay master, who measures them in a mould made of copper, and stamps such as are suitable, in order to prevent alterations and to show the work done. He receives as wages for the above-mentioned quantity of gold, $42\frac{1}{3}$ *dams*.

Abul Fazl Allami, *The Ain-i Akbari*, trs. H. Blochmann, New Delhi, 1977, Third ed., Vol. I, pp. 18-21.

The most important external development at this time was the eastward transmission of European silver obtained from the mines of Peru and Mexico (Spanish colonies in America) to finance the Indian Ocean trade. The Mughal Empire alone received an annual supply ranging from 85 to 131 metric tons of silver to become the biggest importer of foreign money outside Europe in the late sixteenth as well as the seventeenth centuries.

At the same time that Spanish-American silver was on its outward journey to India, the Mughal Empire expanded westwards to embrace the coastal regions of Gujarat and Sind, which were direct recipients of foreign bullion not only from Europe but also from Japan. In the second half of the seventeenth century, Bengal emerged as a major destination for the transmission of precious metals by the Dutch (VOC) and the English East India Companies. The territorial expansion of the Mughal Empire created conditions for the integration of coastal hinterlands into a single network of commodity exchange, fiscal remittances and currency circulation.

The absorption of external and internal stocks of monetary metals was facilitated by the state and the market. The Mughal state adopted fiscal and monetary policies which streamlined and expanded currency circulation in the empire. A policy of collecting taxes and disbursing salaries in cash triggered a cycle of monetary circulation aided by the open coinage system of the imperial mints. A series of measures were taken from 1582 to create a standardized currency system in the empire through the replacement of regional as well as old and sub-standard coins with freshly minted Mughal currency. Money-changers and merchants offered a certain uniformity and cohesion to the areas covered by the network of monetized exchange, by negotiating the movement of cash, goods and services across customs barriers and between different sectors of the economy.

The uniform and standardized currency system which emerged after three decades of intense administrative and market changes was sustained by a constant flow of silver through foreign trade and its absorption into the circuit of exchange. The domain of petty transactions was dominated by the use of fractional pieces of the silver rupee (*ana*) and copper currencies (*paisa/dam*). At the levels of exchange where prices needed to be expressed in units lower than the copper coin, metallic currency was supplemented by cowrie shells (Hindi *kauri*; Persian *khar muhra*) in Bengal, Bihar and Orissa and bitter almonds (*badam*) in Gujarat. Being imported respectively from the Maldives and Iran, cowries and almonds were more abundant at the coast but were in greater demand in the hinterland.

The Deccan and South India were different from the north insofar as their monetary systems were based pre-dominantly on gold with copper as the second metal. The principal gold coin of this region was known as *hun* locally and *pagoda* internationally. It was modelled on the Venetian gold coin, *ducat*, which was a major currency of international commerce on the Mediterranean-Indian Ocean axis, and has been rightly called the 'dollar of the Middle Ages'. The *ducat* came to India in large quantities in the fourteenth and fifteenth centuries and inspired a series of imitations, the *hun* being one of them. The *hun* was of the same weight, fineness and appearance as the *ducat*, the only difference being that the latter had portraits of the Venetian duke (*doge*) and Saint Mark (the patron saint of Venice), while the former had images of Indian deities, such as Uma-Maheshvara. For this reason, Persian writers often used the term *ashrafi do buti* for the two coins. From the second half of the seventeenth century, those areas of the Deccan which came under the influence of the Mughal administration had to pay tribute in silver rupees and began to turn tri-metallic.

Coins of the Regional Kingdoms



Coins of Vijayanager Empire
RBI Monetary Museum Gallery – Medieval India Coinage



Gold *Pagoda*, Bijapur
(After Jean-Michel Dumont)

Silver *Tanka*, Bahamani
(After Jean-Michel Dumont)



Nizam Shahi Copper *Falus*, Ahmadnagar
(After Jean-Michel Dumont)

Copper Coins, Golkonda
(After Jean-Michel Dumont)

22.4 BUSINESS PRACTICES

Partnership and brokerage were two major aspects of business practices. Both Usually operated within the extended family and the success depended largely on the co-operation of the members.

22.4.1 Partnership

The two principal components of any business venture are capital and labour. If an individual possesses both, he can operate on his own for as long as the scope of his business permits. In the absence of either, or due to their limitations, the option to seek co-operation from kinsmen, members of the same caste and sub-caste, and even outsiders becomes desirable. The formal arrangement in which two or more parties bring together their labour, skill and capital is known as partnership. Partnership is an important business practice which assumes complex forms depending upon the nature of the enterprise and obligations of the participants.

In medieval India, partnership (Hindi *sajha*; Persian *shirkat*) was a recognized form of financing and expanding a business venture and offered the best means to share risks

and profits. Banarasidas' father, Kharagsen, began his career by joining his maternal uncle, Sundardas, at Agra as a partner in the business of money-changing and sale and purchase of gold. They pooled their capital and commissioned it to a joint fund which they both operated. In those days, changing one currency into another was a task which required specialized knowledge of exchange rates and was done mostly by the *sarrafs* (money-testers) who charged commissions for their service. In four years, the profit earned by Kharagsen was so good that he got married and bought a separate house for his family. The partnership was dissolved automatically when Sundardas died without a male heir. Kharagsen handed over the share of his deceased partner to the latter's daughter in front of the elders of the business community (*panch*), and left for Jaunpur with his goods and cash.

Partnerships which involve the extended family appear to have been the most common form of doing business in medieval India. However, the search for suitable partners encouraged prospective entrepreneurs to seek wider co-operation beyond the kinship circuit. Banarasidas once became the partner of an Oswal Jain, and Kharagsen had a Shaivite as his long-standing business partner. In both cases, partnerships were formed among members of *bania* sub-castes who were unrelated to each other.

Partnerships could further involve merchants and businessmen of different social classes. It was not unusual for small traders to acquire cash and goods from big merchants or nobles to start trading under *commenda* (Persian *muzarbat*), a practice which allowed investing and travelling merchants to combine their resources for mutual benefit. Profits earned from *commenda* were common enough in the seventeenth century to be considered legal and taxable by the Mughal state.

Business firms and mercantile groups often contracted members of their own profession to trade on their behalf not as partners but factors or agents (*gumashta; bapari*). The factors closely followed the orders and serviced the requirements of their principals (*sah*) while conducting their own independent business. The factors usually received a commission or a share of the profit. Agreements could also be reached between two independent merchants or firms doing the same business in two different parts of the country to represent each other's interests in their respective areas as correspondents. The *sahukars* and *sarrafs* of the Mughal Empire had both factors and correspondents in major cities and courts who stayed in close touch with one another through a vigorous exchange of letters and commercial intelligence. In many cases, news of the latest political developments reached the merchants first and state officials later. The purpose of such practices was to widen the scope of business and keep a close tab on markets without incurring the cost of establishing a full branch.

22.4.2 Brokerage

As economy develops, the immediacy and transparency of doing business begin to diminish. The multiplicity of business transactions tends to separate the parties from each other and from their markets. To overcome such obstacles, businessmen require the services of a broker to close the space between transactions that remain distant in time and space. It is difficult to conceive of any successful business world without the institution of brokerage.

In medieval India, the practice of conducting business with the help of brokers (Arabic *dallal*; Persian *gumashta*) was fairly common. Present in all commercial centres, the brokers belonged mainly to the *bania* community, with a few Parsis and Muslims. It was customary for all big merchants to have a broker to obtain various types of commodities

and keep them ready for shipment or sale in the right season. We will discuss shortly how brokers and sub-brokers were employed to make cash advances to manufacturers of cloth and indigo. Mulla Abdul Ghafur, the merchant prince of Surat, had a broker called Gangadas, while his grandson, Muhammad Ali, had two. Foreign merchants (notably European and Armenian) always had brokers, who, according to Englishmen J. Ovington and John Fryer visiting Surat in the 1680s, were of the 'Banian caste, skilled in the Rates and value of all the commodities in India' and without whose assistance no one could 'do any Business' in India.

The brokers usually organized their business as family firms with joint investments and accounts run by a senior member chosen for his experience and expertise. At the end of each day, all working members of the family assembled to discuss the deals they struck and give account of the money they received and spent. Normally, the brokers charged one percent as commission from each party on every business deal, but the rate could go up if the transaction was complex or the amount of investment large. The brokers closely guarded the secrets of their trade and used codes and symbols to communicate with buyers and sellers as in modern stock markets. We know of two seventeenth century firms of Chhota Thakur and the Parakh family operating in western and northern India respectively, which counted European and other merchants among their clients.

22.5 CREDIT PRACTICES AND INSTRUMENTS

In developed market economies, currency alone does not constitute money. Specific exchanges can be made by employing a system of credit or deferred payment. Cash and credit co-exist in complementary modes to facilitate the movement of goods and money between markets and individuals. In medieval India, an important practice was to use other people's money to finance and reduce the cost as well as the risk of business transactions. The group of people who specialized in extending credit facilities to their customers was the *sarrafs*, who combined currency exchange with banking. The term 'banker' was first used for Italian money-changers who sat on benches (*banco*) and offered credit to merchants in the fairs of Champagne (France) and money market of Bruges (modern Belgium). Indian *sarrafs* too used diverse commercial strategies to raise and deploy capital more efficiently.

22.5.1 Money-lending and *Dadani*

Demand for money and the freedom to charge interest on loans underpinned the business of money-lending in medieval India. Money-loans were the most popular form of financing commerce, while trading on borrowed capital was the norm among small and big merchants. Half of the capital for Banarasidas' first business venture came from his family and half of it was borrowed (*kachhu ghar ke kachhu par ke dam - rok udhar chhalayo kam*). The *sarrafs* took a leading position in financing business by advancing short and long-term loans depending on the seasons and circumstances of the borrowing. The rate of interest charged on loans was determined by the supply and demand of money and creditworthiness (*sakh*) of the borrower.

In big cities like Surat and Agra, the dominance of the *sarrafs* can be explained by the presence of the mint and bullion market, which were cornerstones to their business activities. In townships (*qasbas*) and villages, or even in big towns where the line separating commerce and money-lending was thin, it was the *mahajans* who provided commercial and consumption loans to peasants to raise crops and pay taxes and to the *mansabdars* (Mughal bureaucrats) against their *jagirs* (revenue assignments).

Vyavahara-Patra (Debt Deed) from Lekhapaddhati

In the Samvat year 1332 Asvina Sudi 10 Sunday today here at Anahillapatana, during the victorious and auspicious reign of Shri Sarangadeva, who is adorned with the line of kings... While his obedient and loyal servant Mahamatya Shri Dharnidhara holds the office of Shri Karana etc. and conducts the entire business of the royal seal; in these circumstances, while Maharajakula Shri Dharavarsha, is immensely prosperous in Chandravati Karana, which is being enjoyed by him as a consequence of the king's grant of benefice (*prasad*), and while *Mahantaka* Vijayasimha of Pathaka so-and-so acts as an officer incharge of Dravya Mudra(?) This deed of debt is written in the presence of the *Panchakula*, including Chandisimha who was appointed (by Dharavarsha), in the following manner. Ganapati son of Sahu Jayacandra of Oswal caste and resident of Prahladanapura borrowed: for legitimate purposes, from Vyasalakshmidhara 5,000 *drammas*, in words fifty thousand *drammas* (in) old *drammas* issued by *Visvamalla*(?) which were uttered at the mint of Shrimala, thrice tested, and which are still current in the gold market as merchant's money (*Shresthartha*) in one instalment. The monthly interest on these *drammas* is two *drammas* percent per month and interest percent will be accumulated. These *drammas* without the layer of mud; without dispute, quarrel and anxiety, within 24 hours (of the demand) renouncing all claims to it, should be returned all at once with accumulated interest of *drammas* to the satisfaction of Vyasalakshmidhara. For giving (assuring the payment) these *drammas* with interest, for preventing all controversy and harassment Padamsimha, son of Sahu Jagasimha of the Oswal caste (*jati*) and the merchant (*vani*) Vikramasimha, son of merchant Dharna of Shrimala caste, both residing at the same place are made surities for mental and inner satisfaction of Vyasalakshmidhara. When one is approached the other is supposed to be approached. If one is available and the second is not responding to the summons then the person who is available should take the responsibility of the deed of debt or promissory note, just like the debtor to the money-lender. In this sense the agreement of the debtor and of the sureties is recorded by their signatures/given by their own hands and to the best of their knowledge and judgement. Mahantaka Shri Pala wrote this deed at the request of both the parties. Omission or addition of letters should always be treated as legal/should be condoned.

IIB

In the Samvat Year 1288 Vaishakha Sudi 15 Monday today, here at Anahillapataka, during the auspicious and victorious reign of Shri Bhimdeva, who was adorned with the line of kings... while his loyal servant Mahamataya so-and-so holds the office of Shri Karana and conducts the entire business of the (royal) seal (*Samsta Mudra Vayapren paripanthayti*); while here in the pathaka such and such *mahantaka* Vijayasimha acts as the officer incharge of *dua Mudra* (?), in these circumstances in Balua village situated in the Dandahiyapathaka, which is being enjoyed by *rajaputra* Chaturbhuj, having received it from the king as a benefice (*prasad*), this debt deed is being written in the knowledge of the *Panchakula*, consisting of the *Vahaka* (an official), *rajaputra* Ajayasimha who was appointed by him (*rajaputra* Chaturbhuj), *Mahantaka* Jajala son of *Mahantaka* Yashacandra, and others thus.

The creditor known by the name, 'Shresthi son-and-so, son of Shresthi so-and-so, resident of this place employed his money for profit. This (is) his signature, creditor by name. The resident of this very place the cultivator so-and-so, son of cultivator so-and-so, out of genuine need or for legitimate purpose, received 210 *paraupatha drammas* in cash, in words two hundred ten *dr.*, which were uttered at the mint of Shrimala, thrice tested and meant for commercial transactions, and the money, to be paid as interest on these *drammas*, is 2 *drammas* percent per month. These *drammas* should be paid annually in the month of Kartika along with interest, without layers of mud (*Matta-skandha*) renouncing all claim to it (*Niryogakshema*), all at once (*Yekmushtya*) within eight *pahars* (*Asta praharika*) (a day-and night). In order to execute the above mentioned conditions, in order to ensure the payment of the *drammas* and in accordance with the common practice of borrowers, the cultivator so-and-so has been appointed surety and cultivator so-and-so the second surety. Here signature, here witnesses.

Pushpa Prasad, 'Credit and Mortgage Documents in the *Lekhapaddhati*', *Puratattva*, No. 18, 1987-88, pp.94-95.

Some idea of the size of capital advanced by the money-lenders can be formed by the transactions of the European merchants. Throughout the course of their trade, English and Dutch factors had to grapple with the problem of arranging finances for their purchases. It appears from their correspondence that they always remained short of capital and took recourse to the credit market to meet their investment needs. Table 1 suggests that in three months of the year 1670, around 3.4 *lakh* rupees were borrowed by the English from the *sarrafs* of Surat. By the end of the year, their loans reached 6 lakhs or 75 per cent of the total investment the East India Company made in that year. This was not the case with the English alone. The Dutch merchants at one time were reported to have run up a debt of 80 *lakh* rupees.

Table 1

Money borrowed by the English merchants at Surat: 1670 AD

<i>Dates</i>	<i>Amount (Rs.)</i>	<i>Money-lenders</i>
March 1670	5000	Vallabhdas Gokuldas
March 1670	25000	Banwalidas Surdas
March 1670	25000	Jagjivandas Kishandas
April 1670	26000	Samdas Gopaldas
April 1670	22000	Banwalidas 'Ckaundas'
April 1670	8000	Vallabhdas Banwalidas
April 1670	100001	Kalyanchand 'Jeswang'
June 1670	30000	Name not mentioned
July 1670	25000	Velji Anand
July 1670	25000	'Rounsee'
July 1670	30000	Shankar Bhagwan
July 1670	18000	Surdas Kapurchand
July 1670	22500	Biharidas Surdas

Credit was also supplied by merchant-borrowers themselves to peasants and artisans to ensure the supply of goods at bargain prices. This practice was known by the technical name of *dadani* (giving out). Although manufacturers of textiles or indigo (*nil*) were free to sell their products in the local market, they often had to rely on brokers and merchants to buy raw materials and maintain the desired level of production for a regular market. In areas where merchants had to face competition for supplies, loans were extensively used to establish precedence over other buyers. Where the manufacturers happened to be peasants and were required to pay land revenue, the dependence on merchant capital was often dictated by the need to keep production going if taxes had to be paid before the harvest.

This network of credit and production was sustained by a succession of intermediaries acting as links between artisans and merchants. In order to obtain Bengal textiles, for instance, brokers were engaged to give money to the *paikars*. The latter delivered it to the weavers. The brokers received 1 to 2 per cent from the *paikars* who, in turn, charged commission from the weavers. Since the finished products were mostly obtained by merchants at pre-fixed prices, which took into account interest charged on *dadani*, the cost of credit was eventually passed on to the weavers.

22.5.2 Banking and Bills of Exchange (*Hundis*)

The expansion of the exchange economy and business opportunities created greater demand for money and exerted pressure on available credit resources. While money-lenders and bankers attempted to enlarge their loanable capital by reinvesting profits earned from interest, in due time, they also tapped resources outside the money market to run their business operations. Deposit banking emerged to provide another important source of money supply. Medieval bankers – *sarrafs*, *mahajans* and *sahukars* – accepted deposits from individuals, merchant-groups and state officials who had cash to put out on interest. Deposits accepted from investors were then employed as interest-bearing loans.



Sarraf (money-changer): Photo Bibliotheque Nationale, c. 1760; After Fernand Braudel, *Civilisation and Capitalism 15th-18th Century*, Volume II, *The Wheels of Commerce*, trs. from French by Sian Reynolds, London, 1982, p. 126.

The banker accepted short-term time deposits against bills of exchange (*hundi*). The *hundi* was a piece of paper, usually written in Hindi or any other Indian language, promising the payment of a sum of money to the bearer at a particular place either immediately or afterwards. The *darshani hundi* was paid at sight whereas the *miyadi hundi* was redeemed after a stipulated period of time. It was called bill of exchange because the device was originally associated in Europe with the exchange of foreign currencies given at one place and taken at another. Two types of *hundis* were popular in medieval India: one which was an instrument of money transfer, and the other which was an instrument of credit. It was the first type which was used by the bankers to accumulate capital. If a businessman decided to send money from one place to another, he could deposit the cash with a *sarraf* in exchange for a *hundi* and avoid risks of transportation. When a merchant-caravan from Surat to Agra was intercepted by a band of highway robbers, the bag carrying the *hundi* was opened by them and eventually returned. The *hundi* was delivered to the shop (*dukan*) of the *sarraf's* agent or partner where it was honoured and the amount specified in it was paid to the bearer. The *sarrafs* charged a small fee for providing the service which, among other things, determined the exchange rate of the *hundi*.

Raja - *Hundika* (Royal Drafts/Bills)

Hail i *Mahamandalesvara ranaka* so-and-so instructs officer so-and-so of his *mandala* in the following manner. The order is like this: You should pay 3000 *dr.* in words three thousand *drammas*, out of these *dr.*, first collected and to be sent to the royal treasury, to *rajaputra* so-and-so. Likewise you should pay to eight foot soldiers belonging to him (i.e. *rajaputra*) who have come here, 8 *dr.*, per day towards undressed provisions until the account is clear. Samvat year (802) Jyestha Sudi 15, Thursday, signature of Sri. Instructions (have been given to) the messenger.

II B

Hail! *Mahamandalesvar Ranaka* so-and-so instructs certain officer as follows. The order is like this. You should pay 3000 *dr.* in words three thousand *drammas*, out of these *dr.*, first collected and due to be sent to the royal treasury, to Paramara *rajaputra*. Like-wise you should pay to the eight foot-soldiers belonging to him, who have come here, 8 *drammas* per day towards undressed provisions until the account is clear. Samvat year 1288 Vaisakh/Sudi 15, Monday. The instructions have been given personally to the messenger.

III B

By the order of king, on the word of so-and-so of such-and, such territory, a bill of exchange is issued to so-and-so in the name of so-and-so as follows. You should pay to *rajaputra* so-and-so son of so-and-so *dr.* 124 in words, one hundred and twenty four *drammas* when the bill (*hundika*) becomes due (*phalit-pade*) according to the usage of the bill. The period (of payment) is 15 days. For each day beyond the limit, you should pay 1 *dramma* 2 *ka* (=Kala, i.e. 1-3/16 *dr.*) Samvat year 1533. Jyestha Sudi 8, Tuesday. Signed.

Pushpa Prasad, 'Credit and Mortgage Documents in the *Lekhapaddhati*', *Puratattva*, No. 18, 1987-88, p.94

The English and the Dutch were two of the several merchant groups trading in India who remitted money through *hundis* to supply capital to their areas of investment. Individual merchants travelled with little cash and kept their main capital in circulation by transferring it from one place to another through *hundis*. The remittance of money from the state's treasury to its officials in different parts of the Mughal Empire was also affected through *hundis* drawn by the *sarrafs*. In the sixteenth century, Akbar sent 3 lakhs of rupees to the Mughal army in the Deccan. Later, a similar amount was remitted by the governor of Patna to Agra.

Drawn against a deposit with a banker, the *hundi* had a cash value. As a result, it was saleable in the market at a small discount (a hundred rupees *hundi* sold for 98 rupees), which accounted for the gain of the buyer, whose cash was locked up till the bill's maturity. The buyer could receive cash from the drawee (the *sarraf's* agent) or use the bill to make payments. This form of credit, emerging out of the negotiability of the bill, endowed it with a purely monetary function and contributed directly to increasing the volume of money in circulation. While the money deposited for the bill was lent out by the banker, claims against it were used simultaneously to settle other transactions.

The bankers also accepted deposits from their customers which were payable on demand at any time of the month. A classic description of this practice at Agra could be found in the letter of an English Factor dated 1645 AD:

Those that are great monied men in the towne, and live only upon interest receive from the sheroffs [*sarrafs*] no more than 5/8 percent per month. The sheroffs dispose it of to others from 1 to 2.5 percent... Now when the sheroff (for lucre) hath disposed of great sommes to persons of qualities at great rates, not suddenly to be called in to serve his occasions, then beginn his creditours (as in other parts of the world) like sheepe one to runn over the neck of another, and quite stifle his reputacion. Thus ... hath two famous sheroffs bynn served within a month, one of which failing for above three lack of rupees, diverse men have lost great somes and others totally undone thereby; which hath caused men of late to bee very timerous of putting their monies into sheroffs hands.

This is an interesting example of deposits payable on demand which the Agra *sarrafs* accepted from wealthy people of the city. The amounts were lent out at higher rates of interest to creditworthy clients. The difference between rates paid on deposits (0.625 per cent per month) and loans (1 to 2.5 per cent) constituted the profit of the banker. As borrowers were not expected to return the money at once, when depositors demanded their money back, the *sarrafs* had no choice but to declare bankruptcy. The depositors lost their money and the *sarrafs* their reputation.

The passage quoted above shows that opportunities for converting idle wealth into capital were acknowledged and used. This serves to correct the notion that surplus money in India was either locked up in chests or buried in courtyards. It also appears that the practice of investing funds in deposits or loans was so common that but for a series of bankruptcies, it may not even have attracted the attention of contemporary observers. Another English merchant noted with care that cases of bankruptcy in India were 'farre lesse than in England' because it was considered socially disgraceful, and there were 'stricter lawes to binde men to honest performance' of their business.

In order to avoid a shortfall in their cash holdings and preempt the failure to meet obligations, the bankers adopted two practices. The first was to discourage the conversion of bills into cash through book credit. In this, the bankers made payments for the incoming *hundis* not in cash but by opening a credit account in the name of the bearer for that amount or by making an entry in the ledger against his name if he already had an account with them. This practice was known as *anth*. On the strength of his account, the creditor made payments to others by drawing a *hundi* on his banker. The facility was also available to those who had cash deposits with the bankers. The banker employed the same technique while honouring his client's *hundi* and thus created a system of book credit which dispensed with the requirement of cash payment. If any one decided to break the network of floating credit by demanding cash, he was paid in coins of inferior value, called *kachcha anth*, even though his account was kept in newly minted coins of higher value called *pakka anth*. The difference in the exchange values of old and new coins

determined the rate of *anth* (Hindi *Ankara*; Persian *sigha i anth*) and fluctuated with the availability of money in the market. The bankers often raised the rate of discount while en-cashing *hundis* when there was a shortage of money (*kami i zar i naqd*). According to the local history of Ahmadabad, *Mirat i Ahmadi*, the *sarrafs* once increased the rate of *anth* deduction to 20 per cent (or 8 per cent, as *bist* and *hasht* in written Persian can be confounded) which drew huge protests from the merchants and brought the market to a standstill.

The second practice of the bankers was to use *hundis* to transfer money from a place where it was in plenty to another where there was a shortage. This was achieved by encouraging people to deposit cash where it was required and borrow where it was in abundance. The merchants often borrowed money to finance their business by issuing their own *hundis*. One month after his father's death, when Banarasidas decided to commence a fresh cycle of business, he wrote a *hundi* for 500 rupees, collected cash and bought cloth (*mas ek bityo jab aur - tab phiri kari banaj ki daur - hundi likhi rajat sai panch - liye karan lage pat sanch*). Such *hundis* were discounted by the bankers at a price which included interest for the duration of payment and determined the exchange rate of the *hundi*. By altering exchange rates of the two types of *hundi* – bill of remittance and bill of credit – the bankers induced merchants to give or take money and improve their cash balance position. If this did not work, for a variety of reasons, they transported money physically to their agencies through couriers if the money happened to be in gold or by carts if large quantities of silver were required.

22.6 RISK-SHARING PRACTICES:INSURANCE AND RESPONDENTIA

Bankers and businessmen living in medieval times knew only too well the dangers of long-distance trade and travel and the risks to which their capital and goods were exposed. In its most elementary form, risk-sharing was witnessed in the partnership arrangement we saw above (*commenda*) where two or more persons shared profits and risks in an agreed proportion. However, in such cases, the management of risk was internal to the process of trading and did not provide full cover against losses and uncertainties. Insurance was an important business practice which brought in a third party to underwrite risks on payment of a small sum known as premium. The first firm evidence of inland and marine insurance (*bima*) in India came from the seventeenth century.

In India, two types of insurance arrangements were provided by the *sarrafs*. In the first and more elaborate system, described by a late 17th century writer, Sujan Rai Bhandari, the author of *Khulasat-ut Tawarikh*, insurance proper was joined to carriage and the insurers undertook the conveyance of the merchant's consignment as well. Here, insurance covered not only risks of loss but also tax payments and transport costs. The rates for such arrangements were therefore higher than ordinary insurance for the same merchandise and destination. In running the business of carriage and insurance, the *sarrafs* made use of a class of people, called *adhvaya*, who specialized in cartage and the payment of transit dues (*rahdari*) for a fixed sum of money. The *adhvayas* (meaning carters) were essentially carriers (probably *banjaras*) who made profit out of savings from tax payments while accepting a lump sum from merchants or insurers.

Besides this specifically Indian form, there existed the more usual form of insurance which was devoid of any obligation on the part of the *sarrafs* to convey goods. This included insurance of goods and money in transit over land and sea at a cost. The rates for inland and marine insurance were based on the conditions of security on roads and

seas. Any breakdown in law and order, rise in the incidents of robbery and piracy, political instability or a natural calamity enhanced the premium. It is noteworthy that the rates of insurance in the Mughal Empire were considered moderate by contemporaries and were not higher than those prevailing in Central India in the nineteenth century. Sujan Rai mentioned that travellers could undertake their journey without fear of thieves and robbers, and we know from other sources that the Mughal state had an outstanding policy of holding officials responsible for the crimes committed in their jurisdiction and making them pay for the losses suffered by the victims.

The availability of finance and protection against loss were the two major concerns of medieval businessmen and they were together taken care of in a single practice. In many cities of the Mughal Empire, merchants had the facility of borrowing money by drawing *hundis* payable at Surat on condition of the safe arrival of their goods. The rates of such *hundis* were higher than ordinary credit bills because they included insurance premium. The maritime version of this practice was known as *avak* in India and *respondentia* in Europe. At Surat, *respondentia* loans advanced to maritime merchants to ship their goods to the various port cities of the Indian Ocean have been described by Jean-Baptiste Tavernier:

On arrival for embarkation at Surat, you find there plenty of money. For it is the principal trade of the nobles of India to place their money on vessels in speculations for Hurmuz, Basra and Mokha, and even for Bantam, Achin and Philippines. For Mokha and Basra the exchange ranges from 22 to 24 percent; and for Hurmuz from 16 to 20; and for the other places which I have named the exchange varies in proportion to the distance. But if the goods happened to be lost by tempest, or to fall into the hands of the Malabaris, who are the pirates of the Indian seas, money is lost to those who have risked lending it.

Much like marine insurance, *respondentia* rates were calculated after an assessment of the nature and size of the risks such as the quality of the ship, route of the voyage and threats from pirates. *Respondentia* rates were also determined by the duration of the loan which combined both the length of sailing and the time taken for repayment after arrival at the destination. The returns were so high on such loans that even smaller merchants were enticed to speculate on borrowed capital. *Respondentia* loans provided merchants and businessmen with the initial capital without making them liable for anything until the venture was successfully concluded. We know from our sources that merchants and investors showed little sign of distress regarding their losses because of *respondentia* arrangements, while their attitudes were different in such situations where no security was extended to capital and goods.

Insurance and *respondentia* complemented each other because they were both risk-sharing devices. Just as the insurers accepted the risk of loss of goods, they also underwrote the risk of loss in financial transactions. This meant that all those who advanced risk-sharing loans, either on land or sea, could themselves go to a *sarraf* to insure their losses for a premium which was lower than what they charged the borrowers. The practice of credit insurance was known as *avak vyaju*. The development of credit insurance is usually considered to be a nineteenth century phenomenon, but in 1648, the English merchants sent money from Gujarat to Sind through *hundis* and insured them against the risk of non-payment.

The function of credit practices and instruments was to make existing money circulate more efficiently and take its place when it was not physically present. To that extent, the scope and size of credit were defined by the volume of metallic money. The continued influx and absorption of precious metals, particularly silver, provided the monetary basis upon which the credit structure rested. With the growth in money economy aiding

specialization in commodity exchange and multilateral payment, credit also grew in proportion. Interest rates signified this reciprocal relationship. In the second half of the seventeenth century, when the circulation of money reached a point where it exceeded the demand for commercial capital, interest rates fell. The lowering of the cost of credit helped investment and further broadened the parameters of monetized exchange and business operations.

22.7 SUMMARY

Medieval period represents the sharp contrast between the rural and the urban economies; the former was largely subsisted on 'barter exchange' while the brisk market and monetary exchanges prevailed at urban centres. In the exchange network coinage occupied the foremost place. Mughal coinage was basically an 'open coinage' so was the market. It largely operated on free trade principle. *Banias*, *Bohras*, and *Chettiars* were the prominent social groups involved in trade and commercial activities during this period. The beginning of our period saw the introduction of 'standardized multi-metallic currency system' resulting in the expansion of trade and exchange network. However, there was a down-trend during 14-15th centuries leading once again to a shift from precious to base metal. This coincided with the 'world wide shortage of silver'. Sher Shah and later the Mughals revived the Sultanate tri-metallic currency. This combined with the flow of European silver influx to Indian markets during the late 16th and early 17th centuries. In south India gold currency was supplemented with copper so it was largely a bi-metallic coinage.

Partnership was a known and common business practice during this period. *Sarrafs* enjoyed an important position as money lenders. Even the Europeans banked heavily for credit on them. Bills of exchange (*hundi*) used largely as 'money transfer' than as 'credit'. To cover the risk in trade from 17th century onwards we get definite evidence of '*bima*' (insurance). In all these transactions *sarrafs*, played the pivotal role.

22.8 EXERCISES

- 1) Critically analyse the growth of coinage during the Mughal period.
- 2) In what ways Mughal coinage was different from contemporary south Indian currency system?
- 3) Critically analyse the interdependence of market and monetary exchange. What role did the state play in controlling the market forces during the medieval period?
- 4) Discuss the social background of various groups involved in trade and exchange activities. What role did they play in organising and facilitating the trade during the medieval period?
- 5) Analyse the growth of business practices in medieval period.
- 6) Discuss the working of the joint-venture enterprises during the 16-17th centuries.
- 7) Examine the position of *sarrafs* during the medieval period.
- 8) Analyse the growth of banking in medieval India.
- 9) Critically examine the working of the *hundis* (bills of exchange) during the medieval period.
- 10) To what extent *commenda*, insurance, and *respondentia* facilitated the trading activities during the medieval period?

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UNIT 23 TECHNOLOGY AND ECONOMY*

Structure

- 23.1 Introduction
- 23.2 Agriculture
- 23.3 Irrigation Technology
- 23.4 Textile Technology
- 23.5 Land Transportation
- 23.6 Navigation
- 23.7 Artillery
- 23.8 Sources of Power and Fuel
- 23.9 Metallurgy and Chemistry
- 23.10 Basic Tools and Precision Instruments
- 23.11 Paper and Printing
- 23.12 Nature of Technological Change in India
- 23.13 Summary
- 23.14 Glossary
- 23.15 Exercises
- 23.16 Suggested Readings

23.1 INTRODUCTION

In the present Unit our concern will largely be with technology as had more or less direct economic effects or implications, that is, with the technology of the process of production, of transport and of war. On the purely theoretical aspects of technological design (for example, the technological devices described on paper by theorists or experimenters) and sciences such as medicine and astronomy we will have little here.

Now, it would be foolish, even if detailed evidence has not been studied, to deny that India during the seventeenth century had been definitely surpassed by Western Europe, which had fully entered what Joseph Needham felicitously calls the palaeotechnic age. Yet the moment one seeks to go beyond this bald statement, detailed evidence becomes a clear requisite. If Europe was advancing at a tempestuous pace, it does not follow that other countries were not advancing at all in relation to their own past attainments, if not in relation to Europe. If one asks why there was no urge to follow Europe on the part of India, the question calls for even closer scrutiny, for we must separately define the areas where imitation did not occur, or, if it did occur, was only partially successful. Furthermore, there would be the possibility that in a few areas Indian technology might still have had something to give to the West. Clearly, then, before climate, caste, despotism, anarchy, inertia, etc., are called upon individually or severally to explain India's lag in technological progress, these essential details must be worked out.

23.2 AGRICULTURE

It is difficult to understand today that Indian agriculture, with the extensive introduction of modern technology was in quite a different position in the earlier period. In the main

* Present Unit is an adapted version of Prof. Irfan Habib's articles on technology in Medieval India. We are grateful to Prof. Irfan Habib for allowing us to use his article in the form of the present Unit. All the footnotes are intentionally removed (unless otherwise essential).

the agricultural technology of Mughal India was determined to by the prevalence of peasant farming. The peasant undertook production with an extraordinary combination of superstition with knowledge, rude equipment with ingenious devices. The result was quite creditable to him. Henry M. Elliot, the great historian, who in 1844, had this to say on the Indian technique of agriculture:

Of the operations of this simple (Indian) plough, Dr. Tennant...observes, ('Indian Recreations', Vol. II, p. 78): 'Only a few scratches are susceptible here and there, more resembling the digging of a mole than the work of a plough;' yet this prejudiced and superficial observer remarks in another place that the average produce of the Province of Allahabad is fifty-six bushels of wheat to the English acre: as if these 'scratches and diggings of a mole' could by any possibility produce double the average of the scientific cultivators of England. He had also forgotten to remark that the drill, which has only within the last century been introduced into English field husbandry, and has even yet in the northern countries to combat many native prejudices, has been in use in India from time immemorial. If he had only reflected on this single fact (leaving out of consideration the universal practice of rotation and complete expulsion of cornweeds), he would have saved the poor Hindus from much of the reproach which has been so lavishly heaped upon them by (James) Mill and his other blind followers.

To this short and effective catalogue of Indian agricultural practices one may add dibbling, that is the dropping of seeds into holes driven into the ground by sticks, a method mentioned in connection with cotton cultivation by Amanullah Husaini in his *Ganj-i Bad-awurd*, an early seventeenth century tract on agriculture. In the peasant's equipment, the use of iron was minimal and wood predominated. There is little doubt that the efficiency of the wooden implements was greatly affected by the minimal use, or even virtual absence of iron. All of them would have functioned better with the use of iron screws, hinges, clasps, etc. The lack of use of iron was, however, only because of costs. Although India produced good iron, its price at about 1595 is estimated, in terms of wheat, to have been three times what it was in 1914. This was sufficient to inhibit its use by a peasantry hard-pressed for resources, and, perhaps, often unable to maintain a blacksmith, in addition to the village carpenter.

Introduction of New Crops

The Indian peasant cultivated a very large number of crops for both the harvesting seasons. Few countries (excluding, perhaps China) could have compared with Mughal India in the great multiplicity of and variety of products of the soil. A significant point to note is the capacity of Indian agriculture to accept new crops, which it displayed strikingly during the seventeenth century. The extension of the cultivation of tobacco, received from the New World, was rapid; its cultivation began on the western coast soon after 1600, and the crop was being cultivated in almost every part of the Mughal Empire by about 1650. The other crop to be acclimatized was maize. It was long believed that maize was introduced in India mainly during the nineteenth century. But P.K. Gode has established the existence of maize cultivation in seventeenth century Maharashtra, and under its usual name *makka* it was listed among the crops assessed for revenue as early as 1664 in Eastern Rajasthan.

Horticulture

The seventeenth century was also a period of considerable innovation in horticultural practices. It was not only that certain fruits, among which the pineapple was pre-eminent, were introduced from the Western Hemisphere. There was an extensive application of

grafting with important results for the yield and quality of certain fruits. Grafting is an old practice, known in classical antiquity and in ancient India. It was mentioned as the method of propagation of various fruits in medieval Persian tracts on horticulture and agriculture. Yet one should recognize that grafting is not a single practice but comprehends a number of different methods, namely, tongue grafting, side, crown, deft, saddle and root grafting, and veneering, inarching and inlaying. It is therefore, not ruled out that what was diffused in the seventeenth century was not simply the principle of grafting, but specifically new methods of giving effect to that principle.

For the coming of these new methods there were two distinct channels: the Mughal court and nobility, influenced by the Persian and Central Asian horticultural traditions, and the Portuguese, with their roots in European horticulture. Jahangir tells us that the sweet cherry was not found in Kashmir before its conquest by Akbar; his official Ali Quli Afshar brought it from Kabul and propagated it by means of grafting. By the same means he increased the cultivation of apricots; and, while the Kashmir mulberry did not yield an edible fruit, this had been obtained from grafted mulberries. Sadiq Khan, after referring to this earlier experiment, adds that during the reign of Shahjahan the practice of grafting became very widespread; and as a result of its application, the quality of the three oranges, namely, the *sangtara*, *kaunla*, and *narangi*, which were previously mere varieties of lemons, was now greatly improved.

It is singular that the grafting of mango is not mentioned in Mughal-period texts. It is true that Amanullah Husaini, writing presumably in Jahangir's time, says that the same practices that are prescribed for the peach, etc., are also possible, though not necessary, in the case of the mango; and grafting is elsewhere prescribed for the peach. But the very words used show that grafted mangoes were not then much prized. A further passage in some manuscripts describing the method of mango-grafting in and around Murshidabad is quite obviously an eighteenth-century interpolation. In the chronicler's account of Muqarrab Khan's great mango orchard at Kairana (district Muzaffarnagar, Uttar Pradesh), boasting of varieties from all parts of the country, and visited by Jahangir in 1619, only simple propagation by seeds is mentioned. It is probable that it was only when inarching was applied that grafting proved successful. The famous grafted variety, Alfonso, developed by the Portuguese on the western coast, is mentioned by Niccolao Manucci, about 1700; and it is certain that this is not the earliest reference. It would thus appear that at least one grafted variety of the mango began to be cultivated during the seventeenth century, the impulse for this coming from the Portuguese.

Sericulture

India has not been deficient in silk-producing insects: The tasar and eri silks still flourish. But the true silk, produced by the worm feeding on the mulberry worm, was not cultivated in ancient India. The earliest reference to sericulture proper in India is found in Ma Huan's account of Bengal (1432). The famous Moroccan traveller Ibn Battuta, writing of Bengal in some detail a hundred years earlier, has no reference to silk, so that the introduction of mulberry silk in Bengal can be assigned with some certainty to the intervening period. It is not certain whether Bengal received true silk directly from China, the home of that fibre or from Iran, where sericulture particularly flourished during the 13th and 14th centuries under Mongol patronage. After Ma Huan the production of true silk in Bengal is continuously attested by subsequent authorities, down to the 17th century when Bengal emerged as one of the great silk exporting regions of the world. Since sericulture was a peasant-industry, its development in Bengal brought the peasant increasingly under the influence of long distance and even international market.

23.3 IRRIGATION TECHNOLOGY

Large scale irrigation in sixteenth and seventeenth century India was of two kinds: (1) tanks created by embankments, from which canals of relatively short lengths would run to carry overflow for agricultural purposes; and 2) long canals taking off from undammed rivers and traversing fairly long course. Those of the first kind were mainly found in the Deccan and Central India, and followed the lines of traditional Indian construction, being largely the work of Hindu rulers and chiefs; the latter were largely found in northern India, and exhibit Central Asian and Iranian influences; they were entirely laid out by kings and nobles. The description of the Madkal Lake in Dharwar district created by the Vijaynagar emperors in the fifteenth or sixteenth century shows the massiveness of construction that could be attempted in building irrigation works of the first kind. On the other hand, some of the canals excavated by the Mughal rulers were very long and impressive works. Shahjahan's Nahr-i Faiz, rejoining the Yamuna at Delhi, was over 150 miles long; his Shah nahr similarly serving Lahore, a little less than 100 miles. Both these canals took off from the parent rivers close to the hills where the river-channel was firmly fixed; none of the canals drew its water with the aid of a dam at its head, so that those which took off in the plains could not have been sure of continuous supply of water. Further, the Mughal canals in the plains tended to flow like rivers and drains, below the level of the surrounding country. Any water drawn from them or their distributaries had therefore to be lifted out, and not obtained by simply opening the sluices. Part of the objective of the Mughal emperors and their nobles in building canals was to bring water to their orchards and gardens.

Persian Wheel

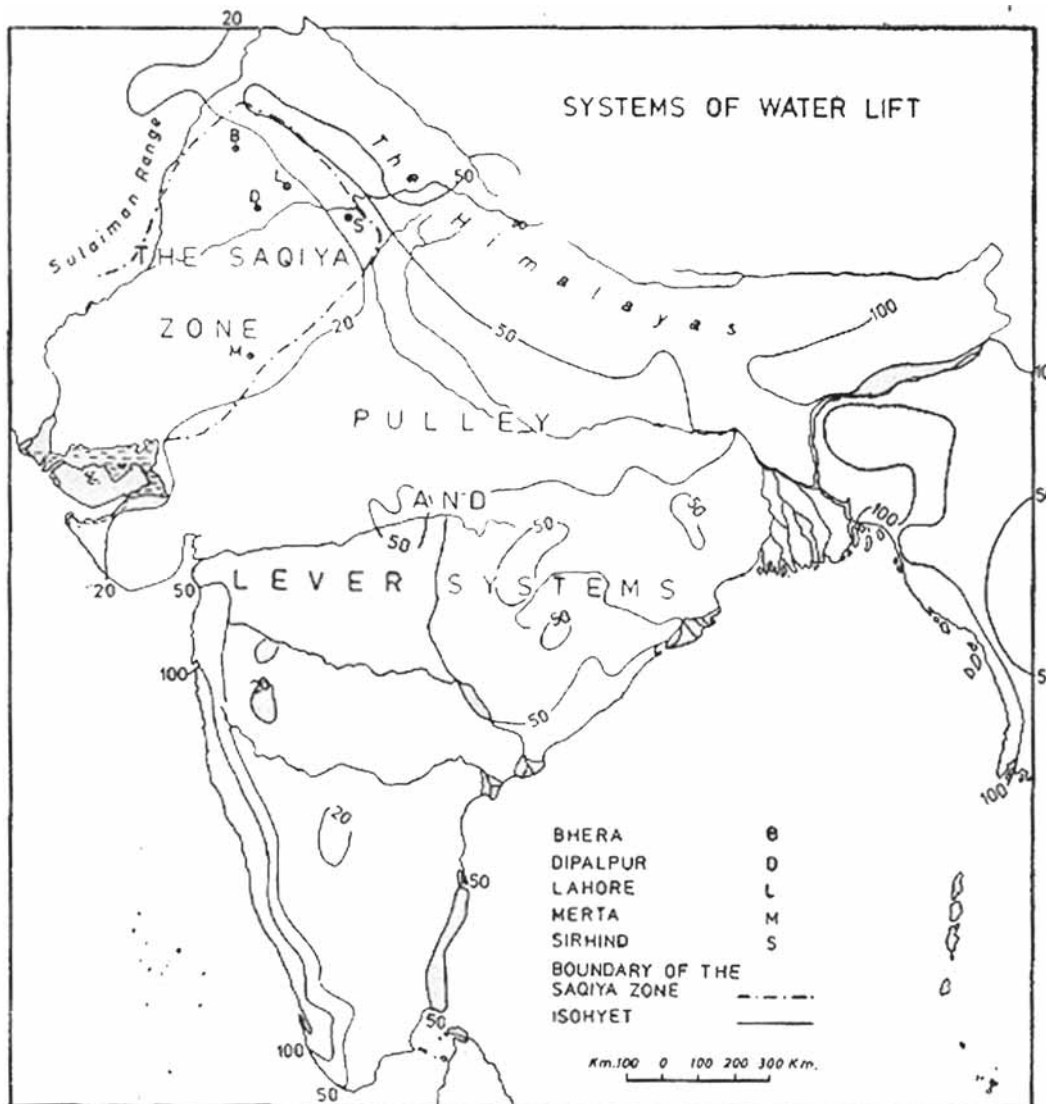
Another and far more important addition was the Persian wheel. This device, which in the form of a wooden machine, represented a notable example of pin-drum gearing, was probably an importation of the thirteenth or fourteenth century. By the sixteenth century, when it was enthusiastically described by Babur, it had become the peasant's principal means of water-lift in the Indus and trans-Jamuna regions. To these limits it was to remain confined until the latter part of the nineteenth century, when with the coming of the metallic Persian wheel, the device spread to many other parts of the country. In the Persian wheel, while the chain makes it possible to raise water from some depth, the gearing mechanism enables animal power to be employed and the speed of the movement of the chain properly controlled. The bucket chain was of double rope to which were tied wooden strips carrying earthen pots to contain and discharge water. The gearing mechanism was entirely of wood, the animals turning a horizontal pin-drum, or lantern wheel carrying the chain at the top of the well. Its first detailed description is given by Babur (d. 1526) in his Memoirs.

In modern works on ancient India the use of the 'the Persian wheel' is often assumed to be of very early date, though A.L. Basham does express some reservation about it. The references in the literary sources are, however, vague that although they establish that a water-raising device known as *araghatt* or *ghati-yantra* was in use at least since the time of Christ, and that this involved successive discharge of water from earthen pots upon the motion of the wheel. The chain of pots arrived by the sixth century, when it is mentioned in an inscription and, in the next, by Bana. But there is no evidence of gearing: its absence may be seen in the Mandaur freezes (12th century).

In view of all this, the case for assigning the introduction of the geared Persian wheel in India to the period of the Turkish conquests and the centuries immediately following

(13th and 14th centuries) would seem unassailable. We are, therefore, well entitled to speculate on the economic consequences that flowed from its introduction and generalization in the Indus region.

Abul Fazl, writing c. 1595, says that the Punjab was unrivalled in the prosperity of its agriculture most of which was based upon irrigation from wells. A hundred years later Sujan Rai Bhandari says of the Punjab that most of its cultivation depended on the rains. Inundations or canals were, therefore, not significant factors in its agriculture, contrary to what one would think of as natural today. This would mean that any improvement in the mechanism of raising water from wells, like the Persian wheel, was bound to have considerable effect on the extension or development of cultivation in the Punjab. The presumption that the Persian wheel did have such an effect also makes intelligible a tradition preserved by Sujan Rai. According to this, Punjab had been a desolate region, with settlements in a few pockets, and these were also harried by Mongol raiders (13th and 14th centuries). But during the 15th century a large-scale reclamation took place, its progress in the Upper Bari Doab being especially described, possibly because the author himself belonged to the area. Sujan Rai did not, of course, attribute this development to the Persian wheel, but we can now perhaps quite plausibly see it as a major factor behind this phenomenon.



Cf. Irfan Habib, 'Technology and Barriers to Social Change in Mughal India', *Indian Historical review*, Vol. V, Nos.1-2, 1978-79, p.155.

23.4 TEXTILE TECHNOLOGY

There is evidence that the two important instruments for ginning and cleaning cotton, namely, the wooden worm-worked roller or gin (*charkhi*) and the bow-scutch (*kaman*) had come into use much before the Mughal period. At Ajanta Cave I (6th century AD) there is a panel of frescoes showing women at work, one of whom is working on the *charkhi*, though the first textual reference to it is only in an eighteenth century lexicon, *Bahar-i Ajam* (the cotton-cleaner's wheel/roller). There is a description of its use (where it is called *charkhi*) in a Persian report from Bengal of a later date but within the same century (1788-96). For the bow-string device the references are more definite and continuous, going back to the Persian poet Akhsikati (eleventh century, d. c. 1183), and there are possible references to it in two Sanskrit dictionaries, *Vaijayanti* and *Abhidhanachintamani* of about the same time. Yet even by the seventeenth century, the bow-string was not the sole device for carding cotton in India; the older method of beating it (with sticks) was mentioned side by side with it in an English commercial report from Gujarat, of 1666. No mechanical change in these devices can be traced except for the fact that at some unknown period, in a small locality (Pakhli, in Hazara District, between the Indus and the Jhelum), the *charkhi*, locally called *belna*, came to be driven by water-power. The innovation being purely local had no particular economic significance, but the use of water-power in the same locality for driving two other important mechanical devices will call for notice later on.



Women ginning with processing of cotton. Detail from Ajanta Fresco, Cave I, c. 600 AD. Cf. S.P. Verma, *India at Work in Sculpture and Painting*, Aligarh, 1994

Spinning Wheel

The first textual reference to the spinning wheel is found in the metrical history of the Delhi Sultanate by Isami, who wrote his work in 1350. It was an ancient Chinese invention, which seems to have made its way slowly to India. The first illustration of the spinning wheel occurs in a Persian dictionary written in 1469 in Malwa. India, however, never came to know either the multi-spindle wheels, illustrated in China from 1313 onwards,

or the U shaped flyer rotating around the spindle attached to it in Europe by c. 1480 or, again, the connecting rod and treadle, developed in Europe by 1524. But, to go by the evidence of Mughal miniatures, during the seventeenth century the Indian spinning wheel appears to have been furnished with the crank handle, which in Europe too definitely appears only by 1524. It can easily be seen that the handle immensely increases the efficiency of the spinning wheel.

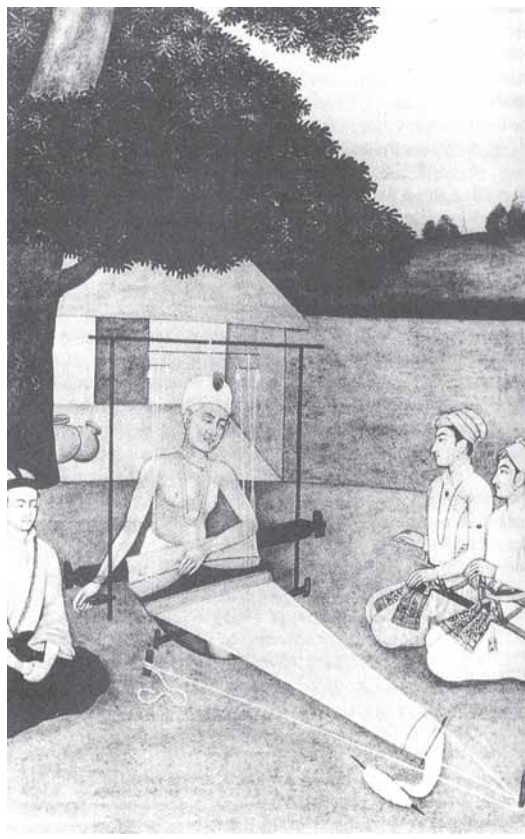


Spinning Wheel (see crank-handle), Cf. S.P. Verma, *India at Work in Sculpture and Painting*, Aligarh, 1994

Looms

The Indian weaver's loom, with its horizontal frame, and foot-treadles (levers operated by foot) to control the shedding mechanism, is illustrated in seventeenth century paintings of the saint Kabir at work. It is nearly identical with the ordinary loom developed in Europe by the thirteenth century. Its first use in India is attested by the Malwa dictionary of 1469 just mentioned. Such a loom was practically incapable of further development, in so far as simple or tabby weave was concerned, until the coming of Kay's flying shuttle in the first half of the eighteenth century. This at least revolutionized the entire mechanism and opened the way for the automatic power-loom.

Where varied developments could occur were the looms used for fancy or complex weaves, involving threads of various colours both in the warp and the weft. Draw-loom had been invented in antiquity in China and the Middle East in two possibly divergent



forms. While we know that figured silks, cottons, and brocades of the highest quality were woven in India during the seventeenth century, there is no evidence of the use of draw-loom. Even in 1800 the Dacca weavers wove flowered cloth on the ordinary horizontal loom; they laboriously counted and lifted together appropriate numbers of the warp threads, through a bamboo stick, for each operation of the shuttle. The loom used to weave patterned shawls in Kashmir carefully described by William Moorcraft and George Trebeck in 1822, again lacked any features of the draw-loom, the driving of the woof through the warp to create patterns being done in a manner akin to embroidery.

Kabir with Loom, Mughal school, mid-17th Century, miniature in the Leningrad Branch of the People of Asia, Cf. Irfan Habib, *The Agrarian System of Mughal India*, OUP, Delhi 1999, p.382.

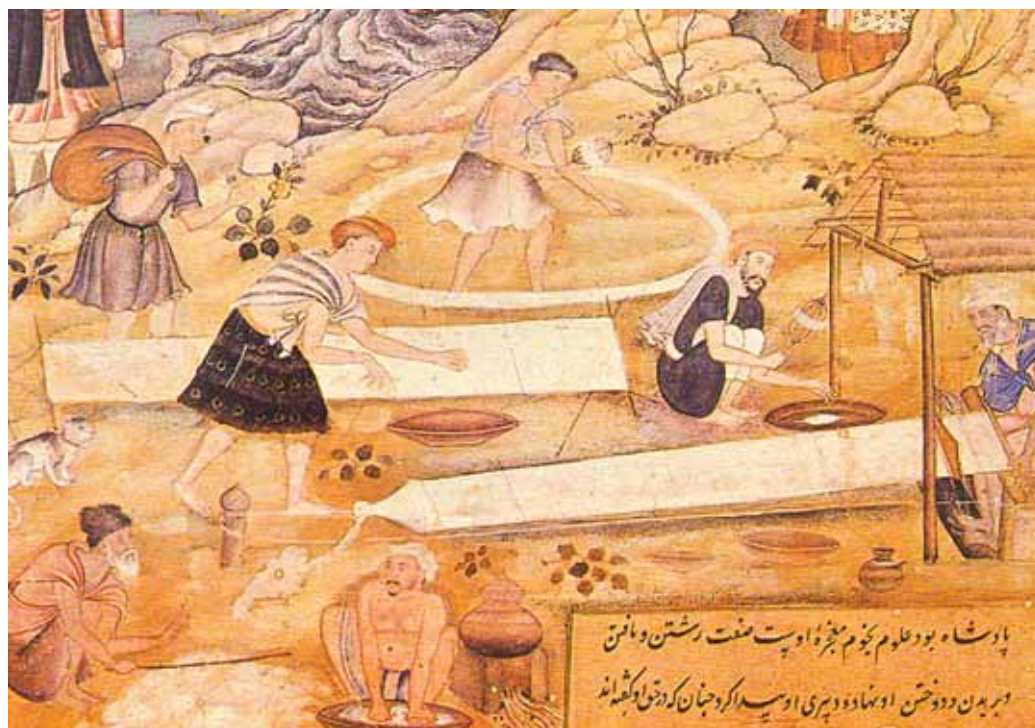
There is a view that the manufacture of Indian figured silks (and therefore, very possibly the draw-loom proper) is a relatively recent importation from Persia, but no direct documentary evidence is available in support of the view. However, in 1679 Master Streynsham (1675-80) observed at Ellur (Andhra) the manufacture of carpets on upright looms with coloured woollen weft-threads woven in accordance with patterns set on paper; and he was told that the industry had been established there a century earlier by Persian immigrants. Importation of Persian weaving devices and techniques during the Mughal period is, therefore, quite likely. In any case, it is beyond doubt that the Indian looms and the craftsmen were by now sufficiently equipped to “exactly imitate the nicest and most beautiful patterns that are brought from Europe.”

Dyeing and Cloth Printing

The two basic methods of the multi-colour or pattern dyeing in India, namely, the application of resists to confine colours to patterns and of mordants to take colours, are described in seventeenth century accounts. Printing blocks might have been used to apply the resists and mordants since early times; there is evidence for this from Egypt and Iran of third-fourth century A.D. Whether the mordants and resists were applied by painting or by printing, they gave far better results than the simple colour-printing from wooden blocks which became popular in Europe in the seventeenth century. The latter had, however, an obvious advantage in that it saved time and cost, especially if the cloth receiving the pattern was not fine or of high value.

It is singular that there should be practically no evidence for cloth-printing in ancient Indian literature. Moti Chandra finds the word *chhimpaka* for a female calico-printer and *chhipa* for a calico-printer in a 14th and 15th century source respectively. The term *chhapa* for calico-printing occurs in Malik Mohammad Jaisi (16th Century). In the *Bahar-i Ajam* (18th century), *chhapa* is said to be a Hindi word for the printing-block accepted only recently in Persian as *chapa*. That the printing-block was being used for direct colour impressions on cloth is established by what Jean de Thevenot (1666) says in his

account of Agra. While noticing the same process in Isfahan (Iran), he says significantly that such cloth used to come there from India. The primacy of India in cloth-printing at this time is suggested also by the use of the word *chit* (Persian form of the Hindi *chhint*) for calico printed in Isfahan itself. Tavernier (1667) makes it clear that in his time calico-printing was a small localized industry, while it was the printed calico which was produced in large quantities for the internal as well as foreign (including Persian) markets. Irwin might be right in his suggestion that calico-printing was a comparatively late arrival, coming possibly from Persia, but the arrival was not as late as he suggests, since it seems to have been practised in India in the 14th century at any rate. By the seventeenth century the practice had become so extensive that India now appeared to be the home par excellence of all printed cloth, even that when viewed from Iran, from where India might have originally borrowed the technique.



Weavers at Work, beating cotton, dyeing thread, stretching yarn and working with treadles on loom (see pit-loom) (c. 1590). Johnson Album, India Office Library, London, Vol.8, No. 5. Cf. S.P. Verma, *India at Work in Sculpture and Painting*, Aligarh, 1994.

The change in the quantity of clothing which seems to have occurred some time between c. 1000 and 1500, must surely be attributed at least partly to the spinning wheel and the bowstring, just as the other change, since 1850, has been due to the modern mechanization of the spinning and weaving industry.

This is important in itself; but there are other aspects of the matter to consider as well: the expansion of cotton cultivation would mean an expansion in the area of a non-food, essentially market crop, and, therefore, in the volume of commodity production within the village. Such a process fits in with the view ventured on other grounds, that an extension in commodity production appears to have taken place during the 13th and 14th centuries.

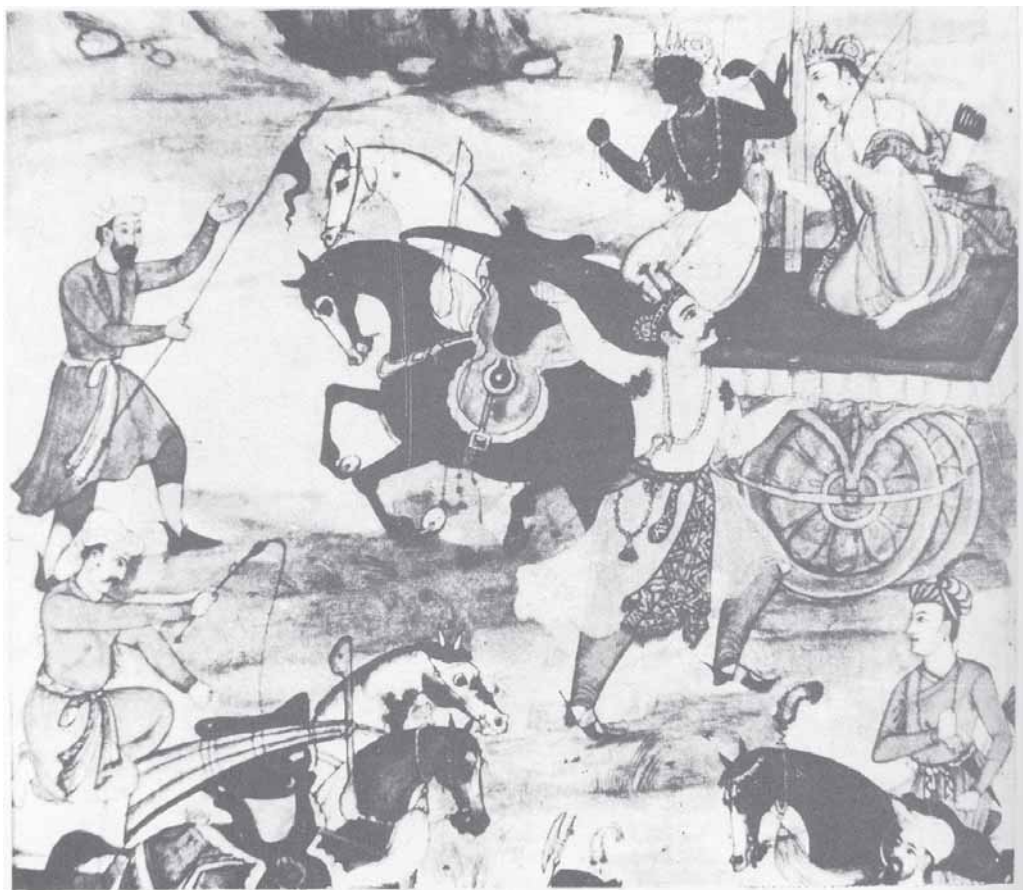
23.5 LAND TRANSPORTATION

The Indian transport system showed two surprising lags, which it did almost nothing to make up during our period. For carrying heavy loads over short distances, no use was made of wheel-barrows; and for conveyance over longer distances, horse-power was not employed to drive carts or carriages.

The wheel-barrow, which substitutes a wheel for the front man carrying a hod or stretcher, appeared in Europe only in the late 12th or in the 13th Century, while in China it has been traced back to the 3rd Century. Its efficacy for hauling small loads, particularly in building construction, should have popularized it in the Mughal period, which has such large edifices to its credit. Yet depictions of construction sites in Mughal miniatures show only hods, but never wheel-barrow.

Horse Drawn Vehicles

Equally surprising is the absence of horse-hauled carriages. The collar-harness, which appeared in Europe about the beginning of the 10th century, after a much longer history in China, immediately made the horse an efficient draught-animal. However, whereas in earlier times horse-driven chariots were an important element in Indian armies, they appear to have gone out of use well before the appearance of the horse-collar in Europe; and they did not return. Carts and carriages in Mughal India were pulled almost exclusively by bullocks; and European travellers expressly mark the fact that horses in India were not used for draught purposes. Chariots, even for princely conveyance, were pulled by bullocks, the horse-drawn chariots of Akbar being an obvious exception. That the Mughal artists had never seen a horse-carriage is shown by the way in which, when called upon to depict the chariots used by the heroes of the *Mahabharata*, they faithfully reproduce the yoke of the bullock cart, thus revealing their total ignorance of the collar-harness.



Mughal Artist's Painting of Horse Drawn Vehicle of *Mahabharata*: See Yoke on the Neck of Horses, *Razmnama*, British Library, Or. 12076, f. 35b Cf. A. Jan Qaisar, *The Indian Response to European Technology and Culture*, OUP, 1982.

The only attempt to have the European horse-driven coach built in India appears to have been made by Jahangir who, for his own use, had an exact replica made of a coach obtained from England. Jahangir describes the coach as *rath-i tarji Farang-i Angrezi*, "the English-European style chariot". It was pulled by four horses. But the novelty seems

soon to have worn off, though horses were used later to pull a few gun-carriages of the imperial artillery.

It is therefore, certain that the *ekka* and *tonga* are both post-seventeenth century innovations; and Mughal India completely lacked the cheap and quick means of passenger conveyance that these could have furnished.

Bullock carts thus constituted practically the sole form of wheeled traffic over the larger part of India. It is noteworthy that while spokes were put on the lighter chariots, the bullock-carts had wheels of "solid timber," it being apparently believed that this made the wheel stronger though heavier.

Mughal Roads

In studying Mughal roads, one must always keep in mind the fact that there were some essential differences in the Indian and European conceptions of what a good road should be like. But, speaking generally, as Tavernier tells us, "the manner of travelling in India" was "not less convenient than all the arrangements for marching in comfort either in France or in Italy." The ideal Indian highway was a broad avenue (40 ordinary paces are stated to be the width of the road heading east from Agra), with close ranks of trees planted on either side, wells to furnish water to travellers at convenient distances, the distances marked by towers (one at each *kuroh*, equal to a little over two miles), and *sarais* or inns at the end of each day's journey. The great imperial highways approximated in varying degrees to this ideal.

What the Indian roads most lacked was attention to their surface. "In these countries here," English Factors reported in 1666, "are no beaten roads or mending of highways." Carts could not be used in most parts in the rainy season, for the roads were reduced to mud; and the first cart to be used after the season had to cut the tracks anew with their wheels. But there were still some exceptions to this neglect. In certain stretches roads were cut through solid rock to make cart transport possible. This was done, for example, in the Khyber pass; on the imperial road crossing the Sindh Sagar Doab where the road was paved with "great masses of a hard bluestone well fitted in;" and on the Daulatabad-Elora road, where a 4-foot high wall ran along the edge of the road for protecting wheeled traffic. There were of course, no metalled roads at that time.

Bridges

A prominent feature of the Mughal road system, again designed mainly to facilitate cart-transportation, was the construction of stone and masonry bridges on the main roads. It will not be possible to enumerate here even the more important bridges whose existence was recorded in contemporary accounts or which have been preserved till our own time. These bridges spanned, besides the smaller streams, such rivers as the Degh, the Gomati and the (Central Indian) Sindh. On the larger rivers, like the Jamuna, the best that could be done was to build bridges of boats, the architectural technology of the time being apparently unable to attempt masonry construction on the requisite scale. A notable fault in the Mughal masonry bridges, which were otherwise very strongly built, was a consistent failure to allow for a sufficiently wide passageway for water. It had long been held in Europe that a width of the pier equal to 1/4 or 1/6 of the arch-span was quite adequate from the point of view of the strength of the bridge. In fact even this ratio was found to give too large a margin of safety, and was in the 18th century reduced by Jean Rodolphe Perronet (1708-94), the French engineer, to 1/10. In India, on the other hand, the view prevailed that the Pier-width must not be less than the arch-span.

Bridge	Date/Period of construction	Pier-Width	Arch-span
Jaunpur	1564-67	17' 0"	18' 3"
Nadaf, near Rajmahal (!)	c. 1650	17' 0"	11' 0"
Nurabad, between Gwalior and Agra	Latter half, 17 th c.	16' 9"	18' 10"
Patti Ghati, near Narwar	-do-	20' 0"	19' 7"
Narwar	-do-	20' 0"	19' 5"

As Cunningham repeatedly points out in his descriptions of the Mughal bridges, the massive piers and narrow arches always tended to subvert the bridge by driving the channel to new course, out-flanking the bridge, and, therefore, often compelling a subsequent extension of the bridge, which, again, merely met the fate of the original construction. It is possible that the real reason for this faulty design lay in the fear that an arch with a relatively longer span would either have to be given a very large rise or would be unsafe. The latter fear was probably groundless, but the fact remains that it was not overcome, in spite of experience; and massive piers continued to thwart the longevity and utility of the bridges.

23.6 NAVIGATION

Quite in contrast to the largely static conditions of land transport, the seventeenth century saw considerable changes in the Indian shipping industry. At the beginning of the century, the principle type of sea-going Indian ship was called 'junk' by the Europeans. The junks, which counted among them some of the biggest ships in the world at the time, had immense main sails and were designed to take the best advantage of favourable winds. This fitted them for voyages across the Arabian Sea and the Bay of Bengal, where navigation was governed by the monsoons; but it also rendered them difficult to manouvre.

Among the instruments used on Indian ships was the astrolabe, the famous instrument for determining time and latitude by sighting the position of the sun and stars. It is not clear if it was a variant of the mariner's astrolabe, which was invented in Europe about 1535, or the astrolabe proper. It is probably the latter. An instrument held in the hands of a seaman in a painting by one of Akbar's court-artists may possibly be a magnetic compass, but it is very difficult to be sure of its nature. Also in use were mariner's cards, "lined and graduated orderly", to plot the ship's course. These instruments were not by any means obsolete by 1600 in European navigation, but they became so very soon afterwards. During the course of the seventeenth century European ships came to be equipped with an almost totally new set of navigational instruments, namely, the telescope, perfected about 1608; gimbals for mounting compasses; Davis's quadrants and nocturnals; Mercator's projection-charts; and lanterns.

Shipbuilding

When we read the English commercial records we gain the impression that for most of the first half of the seventeenth century, the Indian ship-building industry continued on the old lines, while the Portuguese on the western coast organized a lucrative industry, building ships of European design for Indian customers. In 1636 it was thought that even small

pinnaces of 100 or 200 tons would cost in England only a third of what they would cost in India to build.

But then took place what is practically an unchronicled revolution in the Indian ship-building industry. In 1668, the English factors, urging that the English East India company build its ships at Surat, declared that “if any shall object they may not have that shape, or be so profitable for storage and goods, as our English ships are, we answer that these carpenters are grown so expert and masters of their art that here are many Indian vessails that in shape exceed those that come out of England or Holland.” Three years later, John Fryer (1672-81) observing at Surat more than a hundred sail of “good ships,” including some “three or four Men of War as big as Third Rate ships,” ascribed this to some indigent English shipwrights having taught the natives the new art, a kind of legend which is usual in cases of such technological imitation. J. Ovington writing on his visit in 1690-93, says enthusiastically that “the very ship-carpenters at Surat will take the Model of any English Vessel, in all the Curiosity of its Building and the most artificial Instances of Workmanship about it, whether they are proper for the convenience of Burthen, or of quick sailing, as exactly as if they had been the first contrivers.”

What is interesting in this instance of copying is that certain methods of Indian carpenters proved to be equal or superior to those of the European shipwrights. It was found that the Indian method of riveting/ribbeting planks one to the other gave much greater strength than simple caulking which, together with oakum, pitch and tar, was no longer needed; that water tanks made of wood-planks by Indian carpenters were as good as casks, which constantly required the presence of a cooper, whose art remained a purely European possession; and that a lime compound or *chunam* dabbed on planks of Indian ships provided an extraordinarily firm protection against sea-worms. For the haulage of ships from water to land for the purpose of carrying out repairs, the crab (a form of capstan) and tackle were used in a way that won an English traveller Thomas Bowrey’s admiration (1669-1679).



Planks Joined Using the Rabetting Method and Use of Iron Nails: *Darabnama*, British Library, Or. 461, f. 76b; Cf. A. Jan Qaisar, *The Indian Response to European Technology and Culture*, OUP, 1982.

This advance in Indian ship-building industry, remarkable as it was, did not however do away with the lag between European and Indian shipping. Essentially, while they succeeded in having the same kinds of ships, the Indian navigators could not acquire the skill and instruments (both of which are, of course, inseparable) of their European counterparts. An Indian lexicographer, writing in 1740, recognizes that the telescope was a pilot's observational instrument; but no attempt was ever made to manufacture telescopes in India. The general deficiency in navigational instruments is well shown in a plea made by the English authorities at Bombay in 1677 for shipping stores to be sent from England, it being stated that these "are not only absolutely necessary, but not there to be procured, as compasses, lanterns, pilots instruments, log lines, saile, needles, and the like, the overplus of which we can at any time sell to advantage". There was a deficiency too in regard to the quality of iron materials, whether nails or anchors; the latter were a constant item of import from Europe. It was, therefore, inevitable that Indian ship-owners should often turn to Europeans, particularly Englishmen, and employ them to command and pilot their vessels.

23.7 ARTILLERY

In several ways artillery represented the highest achievements of industrial technology during the sixteenth and seventeenth centuries. While the manufacture of cannon was then the real "heavy industry," on the handgun were lavished all the fruits of the increasing mechanical sophistication attained during the period. Modern artillery was mainly brought to India, on the one hand, by Babur, who had received it from Persia, and, on the other, by the Portuguese early in the sixteenth century. Evidence has, however, now been adduced of the presence of cannon during the latter half of the fifteenth century.

Handguns

In spite of the great interest of the subject, the methods of manufacture of firearms in India have yet to be studied with due attention paid to the genuine surviving specimens from the Mughal period. To take the handgun first, its crucial part may be said to be its propelling mechanism. In the earliest guns the charge was fired by applying a "match" or burning rope or cord to the priming pan which communicated through the touch-hole with the barrel into which gun-powder had been previously rammed. During the 15th and 16th centuries the match-lock developed in Europe by first providing for a pivoted lever for holding the "match" and then converting it into an arm of a lever controlled by a spring.

So poor has been the study of our Indian evidence that we are not able so far to trace the development of the match-lock in India. It is not even certain whether the "arquebuses" found in wide use in India in 1640 and condemned by Fray Sebastian Manrique (1630's) as "poorly made" and "awkward arms" were true match-locks or mere forms of hand-cannon without locks. However, miniatures in the copy of the *Akbarnama* prepared for Akbar's own library show the muskets pretty distinctly as true match-locks.

In any case, Abul Fazl, writing in 1595 makes a statement which shows not only that match-locks were being manufactured by Akbar's arsenal, but that it was also turning out a lock in which the match was done away with: "Owing to the practical knowledge of the World-Emperor, they have so fashioned a gun that, without the use of the 'match' (*fatila-i atish*), but with just a slight movement of the *masha* (trigger), the gun is fired and the pellet (*tir*) discharged." Such a gun could either have been a wheel-lock or flint-lock. Since the latter had not yet appeared in Europe, it was probably the wheel-lock, which was an Italian invention of about 1520; in this the spring released by trigger caused

a wheel with serrated edge to revolve against a piece of pyrite and so send sparks into the priming pan. In spite of its early date, it was too delicate a mechanism to obtain wide use. The apparent success of Akbar's arsenal in producing a wheel-lock must then be noted as a significant achievement.

Handguns

The early decades of the seventeenth century saw the appearance of the flint-lock in Europe, where it gradually, but not completely supplanted the match-lock during the latter half of the century. Its first appearance in India is difficult to date, but in 1623 it excited the great curiosity of the Zamorin of Calicut, for "their guns have only matches." The subsequent progress of the flint-lock in India, again, is not easy to trace, there being no direct statements on the matter in our sources. It would appear that Indian guns began to be equipped with flint-lock during the latter half of the seventeenth century. But the basis for this view is an inference from rather indirect evidence. Bernier says that Indians sometimes imitated perfectly articles of European manufacture, and then adds that "among other things, the Indians make excellent muskets, and fowling pieces." This statement made in 1663 at Delhi, is quite at variance with that of Manrique, who, as we have seen, had some twenty-three years earlier found Indian 'arquebuses' to be 'poorly made.' One is tempted to think that within this period about twenty years, Indian smiths had been successful in imitating the flint-Lock, and thus attaining respect for their products. It is, however, quite possible that the principal weapon in use in Indian armies still remained the match-lock.

The barrel of the gun posed another problem for the gunsmith, since while the barrel had to be very strong to stand up to the explosion within it, great accuracy had also to be provided with regard to its bore and alignment. It is interesting to find that Akbar's arsenal adopted the same technique of making the barrel, as was adopted in Europe. That is, it too abandoned the method of making the barrel merely by bending and joining the edges of a sheet of iron flattened by hammering, which was found to be defective, even when the bent sheet was twisted to one side. Instead of this, the barrel was now made by getting rolls of flat iron, twisted around with one edge running over the other, welded by heating and then bored from inside. This also remained the accepted technique in Europe until the eighteenth century.

The longer barrels, which were developed about the middle of the seventeenth century in Europe necessitating the use of rests for muskets, began to be made in India about the same time, since musketeers are now said always to have carried rests with them. Early eighteenth century miniatures frequently show an aristocratic sportsman resting the long barrel of his gun upon the shoulder of one of his retainers, and taking aim with it in this position. Of this human substitution for the wooden tripod, there were no precedents in European technology.

Cannons

In the manufacture of cannon, two trends were noticeable in the Mughal period. The first was to make very large pieces. This was possible as long as they were cast of bronze. The method of casting such cannon pieces was apparently similar to the one employed by the Ottoman Turks during the middle of fifteenth century, a method which lasted in Europe until about 1750. Babur's gun-founders cast cannon by precisely the same means. Whether the process of bronze-casting was further improved in India or the alloy used was better, it would appear that by the end of the sixteenth century, the heaviest guns in the world were being cast in India, the climax being reached with the famous *Malik*

Maidan cast in bronze at Ahmadnagar, with a length of 13' 4", diameter at the muzzle, 5' 5", and diameter of the bore, 2' 4 1/2". Jahangir says it threw stone balls weighing ten Indian maunds (550 lbs).

But such heavy guns were already obsolete by 1600. Not only did they lack mobility, but with their large bore and difficulty in positioning them, they lacked accuracy as well. Moreover, bronze was expensive and wore off more quickly than iron. As a result lighter cannon made of iron began to gain much greater currency in Europe during the seventeenth century. That even in India such realization had dawned is shown by claims made on Akbar's behalf that he paid great attention to light cannon.

But the difficulties of casting large pieces of iron were never overcome in India. Even with bronze the mould had to be fed from a number of furnaces, a process which was criticized by Jean de Thevenot in 1666. Indian iron cannon thus generally consisted of wrought (not cast) iron bars or cylinders held together by rings.

In this respect, no advance seems to have been made in the seventeenth century. That the Mughal authorities were conscious of this weakness is shown by their employment of large numbers of European gunners, and import of European cannon-pieces. In 1666, on orders from the Imperial Court the English and Dutch were asked to recruit "five gunfounders and two engineers or pioneers" for imperial service, it being stipulated that they were to be "very experienced practical men," while the pay was to be "inviting". However, there is no evidence that any gun-foundry worked on European lines was ever actually established in the Mughal empire.

In another branch of the artillery, grenade shells were not in use in India, in spite of the fact that both in China and Europe they had a much older history. In 1640 they could excite great popular curiosity. In 1648, mortars similarly attracted Shah Jahan's curiosity, although it was recognized that there were not likely to be of much service to him. The reason for the Indian lack of interest probably lay in the fact that in the *ban*, or rocket the Indian armies had an alternative weapon of very great effect. These rockets were made simply of bamboos, with iron cylinders containing combustible materials; they could also carry light grenades. In retrospect, the *ban* would seem to be of great technological interest particularly since the use of rockets in modern European armies dates from the Congreve rockets of early nineteenth century, which had been directly inspired by the Indian rockets.

23.8 SOURCES OF POWER AND FUEL

The pre-industrial evolution of modern Europe has often been seen as typified by the increasing utilization of non-human sources of power, particularly of water and wind, to be followed ultimately by steam.

Closer scrutiny has long established that the utilization of water and wind has not been confined to Europe. Both the watermill and windmill for grinding corn appeared in early medieval Persia and have continued in use until recent times. Both of these are mounted horizontally, and, therefore, involve no gearing.

Watermills

Whether watermills were introduced into India from Persia as early as the fourth or even the eleventh century depends solely on whether there is any substance at all in a statement of a late Byzantine historian, Kedernos. But by the seventeenth century, watermills were

in use in the Dakhin, one of the best-known examples being Malik Ambar's watermill at Aurangabad. These were also used in Kashmir. If they did not come into use in the north Indian plains, it was only owing to the difficulty of getting water to flow with sufficient force; moreover, as Sir Thomas Roe pointed out, the rivers with their great seasonal fluctuations were most unsuitable to the setting up of the mills.

And yet the fact that technical ingenuity in using water-power was not lacking is shown by the use of water-power in one small locality, the Hazara district, which lay astride a route to Kashmir often used by the Mughal emperors. Here, apart from the conventional corn-grinding watermill, a water-driven wooden trip-hammer, called *pekoh*, has been in use for milling rice. Since the wheel in this case is vertical, it is an important departure from the horizontal mill. The device was probably introduced through contacts with the border regions of China, where it has had an ancient history. But the water-driven worm-worked cottongin (*belna*) of Pakhli could not have come from the same source, as China did not know of such gins, and it could only be a local attachment of the vertical wheel of the *pekoh* to the mechanism of the worm-gin.

Windmills

Since Seistan, the homeland of the eastern windmill, lay so close to the borders of the Mughal empire, it is to be assumed that the windmill was known in India at that time. Yet the Seistan windmill was only suited to a country where strong winds blew constantly in one direction, and water as an alternative source of power was not available. It, therefore, did not spread northeastwards into Afghanistan proper. But someone made an abortive attempt to install such a mill at Ahmadabad. This wind mill (*asya-i bad*), known locally as *pawan-chakki*, worked upon "the movement of the wind and the rotation of the curtains." It was, accordingly, a horizontal windmill of Seistan type. By 1761 only the millstone had remained, and it was no longer remembered when it had been originally installed.

The windmill could have hardly ever succeeded in India, but it is possible to argue that the watermill should have had better success. The horizontal mill could not undoubtedly have competed with the ordinary handmill; but the vertical mill with overshot waterwheel developed in Europe would have greatly economized on waterflow. No attempt to introduce such a watermill during the seventeenth century is recorded; but even here the absence of sophisticated gearing in Indian technological practice would have presented considerable difficulty. Wooden pin-drum gearing was incapable of transmitting greater power than was needed to rotate the Persian wheel. So unless metal gearing could be produced – and this, as we shall see, was not possible, in view of the exceptionally backward state of the Indian iron industry – vertical watermill's or any other mechanism seeking to tap water for substantial power could hardly have been thought of.

Fuels

Of no less importance than sources of power, and somewhat similar in effect, are the fuels available to any technology. A notable disadvantage of Indian technology in the sixteenth and seventeenth centuries would seem to have been that, unlike China and Europe, it did not have coal. In 1611, "sea coale" was taken from the English ships at Surat and sent to the Mughal court "for a wonder". But the curiosity was one which could hardly be imported in large quantities. Why coal was not discovered and mined in India, when surface deposits could have been found at least in the Bir Bhum and Jharia belts, and why, when it had been in wide use in China for centuries previously, no one in India had started looking for it, are questions that are difficult to answer. It is perhaps

possible that the surface coal was of an exceptionally inferior quality and the localities not those where it could have been put to much industrial use. Moreover, deep mining was not practiced in India, so that coal mining to any depth would have been quite forbidding, initially at any rate. Diamond mines were not carried below the water table, and were no deeper than 12 or 14 “spans” at Kollur, and 10 and 12 feet near Gollapallu, in Golkunda. The salt mines of the Salt Range had excavations 200 or 300 yards “deep”, but the depth was horizontal, the mines being in the nature of caves dug at the sides of the hills. But the lack of availability of coal was only a grave potential disadvantage; it could not have had much relevance to contemporary technological progress, because even in England coal did not begin to replace charcoal in the major industrial processes until after the end of the seventeenth century.

23.9 METALLURGY AND CHEMISTRY

Zinc

If one wishes to begin with the credit side of Indian metallurgical practices, there is something that one can offer. Zinc was being produced and isolated in India, as in China; though the process could be undertaken in Europe only during the 18th century. Abul Fazl actually mentions the Jawar or Zavar zinc mines in Rajasthan, now so well-known. It is possible that Manucci was thinking of zinc alloys (brass), when he wrote that in India some musical instruments were made of “refined metals not employed in Europe.” The Indian capacity for handling zinc alloys is well illustrated by the well-known Bidri ware. There is some doubt as to when exactly the ware began to be manufactured in India; no specific reference to it has been traced in sources of the Mughal period, but Heyne gave a description of it in 1817.

Indian methods of soldering were also found to be very effective; and Thevenot noted that the Indians had “a way” of working gold upon agates, crystals and other brittle materials “which our Goldsmiths and Lapidaries have not.”

Iron

In regard to iron, India has been fortunate in the quality of its surface ores. It had what was reputedly the best ore in the world, from which the ‘Damascus’ steel was obtained. This was mined near Indur in Andhra. Steel was in fact exported to Persia and other countries. The Indian steel was crucible-cast, the process being described by two seventeenth century English writers. Even after the middle of the nineteenth century the locally smelted Gwalior and Narwar iron was deemed soft and malleable and regret was expressed over its impending disappearance, owing to the growing shortage of wood for charcoal and competition from “the cheaper and more brittle English iron.”

By the end of the Mughal period, the essentials of the production of cast iron had also begun to be understood, for Alexander Hamilton (1688-1723), visiting Orissa in 1708, found that “iron is so plentiful that they cast Anchors for ships in Moulds, but they are not so good as those made in Europe.” It is not clear how the iron came to be cast in Orissa, and whether ‘blast furnaces’ had been built there. Probably they were not and their absence may explain the unsatisfactory character of the metal obtained. There is no other evidence, either in record or surviving specimens of their products, to suggest the existence of blast furnaces in India during the seventeenth century. Such furnaces, for one thing, required water powered forges to produce sufficient blast; and these would certainly have attracted notice, if they had been introduced during our period.

The failure to produce proper cast iron had a generally retarding effect on the entire progress of industrial technology. As we have seen, iron guns could not be cast. There was nothing to match European anchors. In general the quantity of iron available as material for fashioning tools and mechanical parts remained extremely restricted. The English at Bombay could truthfully say in 1668 that “the greatest scarcity in these parts we find to be iron worke.”

Chemicals

The position in metallurgy found a very close parallel in that of chemical industries. Here some advanced techniques represented by lacquerware, distillation and refrigeration were balanced by failure in a very important sector, that of glass.

Lacquerware was a positive achievement; and it inspired varnish techniques in Europe. More detailed remarks are called for in respect of distillation and refrigeration.

Distillation

The Arabs (or rather Persians) of early Islam are credited with discovering the process of extracting rose-water through distillation. They transmitted their discovery to India, presumably with the foundation of the Sultanate and the accompanying thirteenth century immigrations. In Mughal India one celebrated discovery was that of the *Itr-i Jahangiri*, ascribed to Nur Jahan's mother (early seventeenth century); to judge from Jahangir's description, it was the essence obtained from distilled rose-water.

Needless to say, distillation also enables one to raise considerably the alcoholic content of wines. Liquor distillation was a widespread industry in Mughal India. Abu'l Fazl describes three ways of distilling *arq* from sugarcane juice. Liquor was also double-distilled, such being known as *do-atisha*. Bernier gives a description too of the 'arac' distilled from unrefined sugar; and the French traveller Abbe Carre (1672-74) tells us of 'arack' distilled from toddy, as we do brandy. The present scholarly view is that distilled liquor is a European invention of the twelfth-thirteenth century, and that the Islamic world until then, and much afterwards, lacked all knowledge of it. Indeed, Abu'l Fazl's description of liquor distillation is treated by Forbes as the first Arabic [sic] reference to the process. One may then well think that the process came here with the Portuguese and spread all over India in the sixteenth century. But the words of the historian Ziauddin Barani, writing in 1357 show that liquor distillation was being practiced in India much before the Portuguese had been heard of. When Sultan Alauddin (1296-1316) forbade the sale of wine, the people of Delhi, says Barani, “set up *bhattis* (Hindi word for furnaces, boilers, kilns, and stills) in their houses, made wine out of sugar-cane and then distilled it (lit., made it fall drop by drop)”. Speaking of an earlier reign (of Kaiqubad, 1286-90), he enthusiastically describes the manufacture of “sweet-scented '*arq*' distilled (lit., made to fall drop by drop) through the wine-maker's pipe.” This would mean that even if alcohol began to be distilled no earlier than the twelfth century and then also in Italy, the discovery had rapidly travelled through the Islamic world and reached India by the end of the next century. By the Mughal period, as we have seen, the technique was honourably and well established.*

* Excavations at Sirkap (Taxila) and Shaikhan Dheri, now in Pakistan, confirm the presence of distillation apparatus like condensers and parts of stills far back to 2nd century BC - 2nd century AD. However, Turks are credited for its eastwards diffusion.

Refrigeration

Coming to refrigeration, the first known Indian reference to any chemical process of water-cooling is in Abu'l Fazl. He praises Akbar for adopting and popularizing the device of using saltpetre to cool water, before the transfer of his capital to Labore in 1586 enabled him to obtain snow for the purpose. European travellers found this method of refrigeration widely in use in India in the seventeenth century, and significantly enough it struck them as a novelty or curiosity. *Bahar-i Ajam* considered it a specifically Indian practice. Here then India might well be assigned precedence over Europe, where freezing mixtures came to be known at about the same time (c. 1600), but snow was still their major component, being mixed with nitre or salt.

Glass

In contrast stood, as we have said, the Indian backwardness in the manufacture of glass. The entire development of the European glass industry with its fine transparent glass and cast or plate glass, on the one hand, and fine lenses, on the other, does not seem to have provoked any attempt at imitation in India, in spite of the fact that European glassware fetched the highest value at the Mughal court. Jahangir records his admiration of European boxes of transparent 'crystal' received in gift, and over fifty years later Prince Shah Alam could not believe that the glass vessels brought from Bombay for him were not of rock crystal. The mirrors used in India were of steel, not glass.

23.10 BASIC TOOLS AND PRECISION INSTRUMENTS

Screw

We may begin by considering the screw. The use of the screw as a slow-motion (and, therefore, slow-pressure) device and as a water-raising mechanism, has been traced to Hellenistic texts. But its appearance as a means of fixing metal parts together belongs to the beginning or middle of the sixteenth century, when it was used in European armour. It could now replace soldering, rivets and wedge fittings, all of which had obvious disadvantages. One of the important factors for the development of the lathe in Europe was the need to cut proper grooves in the screw.

The screw, in its new role, could only have reached India during the fifteenth or sixteenth century. But either the screw adopted in India was derived from a primitive European ancestor or had been subjected to much modification in its travels. In 1666 Thevenot described it as follows:

The Indians of Dehly cannot make a Screw as our Locksmiths do; all they do is to fasten to each of the two pieces that are to enter into one another, some Iron, Copper or Silver wire, turned Screw wise, without any other art than of soldering the Wire to the pieces; and in opening them, they turn the Screws from the left hand to the right, contrariwise to ours, which are turned from the right to the left.

Thus the Indian smiths avoided the use of the lathe to cut screw grooves, by the use of soldering of wire, at which, as we have seen, they were expert. With this limitation, the screw could not be used as effectively as in Europe. Yet the coming of this new device did represent a considerable technical advance, and it would be of much interest to find out, from surviving specimens of metal-ware of the period, as to where it was applied.

The attempt to make screws by soldering well illustrates the Indians' weakness at cutting and drilling tools during our period. There is no reference to the treadle lathe being used

in India. Records and pictorial evidence both attest to the bow drill, which might go back in history to Hellenistic times. It was used for cutting sapphires and other precious stones. An improved drill for cutting diamonds at Surat is, however, described by Fryer (1674). This was driven by men turning a wheel, which rotated, through a driving belt ('String'), a 'lesser' horizontal wheel, to which the drill was fixed. The first appearance of the belt-drive in both Europe and India was in the spinning wheel, its use in other devices seems to be no older than the fifteenth century in Europe. There is therefore, strong reason to suppose that the drill described by Fryer was a comparatively recent addition to the Indian artisan's tools. But even this drill was by the late seventeenth century far out-distanced by the water-powered lathes and drills of Europe so that diamonds from India were now sent to Europe to be cut and returned.



Diamond Cutter (c. 1600), Gulshan Album, Imperial Library, Teheran, Cf. S.P. Verma, *India at Work in Sculpture and Painting*, Aligarh, 1994

Gearing

The only forms of gearing known to have been employed in India were the right-angled pin-drum gearing, found in the Persian wheel, and the worm, used in the cotton gin.

Since gears not only transmit, but control the direction, and increase or retard the speed of rotary motion, these have always constituted an essential element in working machines. There was a renewed interest in the use of gearing at Akbar's court: Akbar was said to have invented a travelling cart-mill and a machine designed to clean simultaneously a number of gun barrels. These inventions, in spite of their intrinsic interest, did not necessarily involve the use of any form of gearing other than the pin-drum, and did not therefore represent much advance in actual technique.

Crank

The development of the crank from the crank-handle to simple crank and connecting rod (already achieved in China and Europe by the fifteenth century), and then to compound crank, does not seem to have occurred in Indian technology, which therefore continued to lack any means of converting continuous rotary motion into reciprocatory motion. This prevented even the use of animal power for stamping coins, because the stamping mill would be inconceivable without crank and connecting rod. Since the Indian mints were called upon to turn out very large amounts of coins – an output of as many as 30,000 rupee-coins a day is recorded for the Surat mint in 1647 – the use of man-power for stamping them must be regarded as so much waste.

Piston

The principle of the piston is seen at work in its simplest form in the syringe. It is possible that the use of the syringe in India is of a very early date; it is certainly depicted in holi scenes in Indian miniatures of the Mughal period. But there is no evidence of any further development of the device or of its application in productive processes. Chain pumps, in which the balls on the chain acted as pistons for pushing up the water, could be seen in use on English ships visiting Indian ports at the beginning of the seventeenth century. In 1611 Muqarrab Khan "desired out (English) workmen and smith to make him a model of the chain pumps." But nothing apparently came of this.

Astrolabe

The greatest precision instrument in use in the Islamic countries and India had been the multi-purpose astrolabe, which represented an achievement of both the metal and wood-worker and the mathematical arts. Seventeenth century Indian astrolabes bear ample testimony to the great accuracy attained in graduation, which is notably more difficult when it is circular. Since the astrolabes were not only instruments for astronomical observation, but also for fixing time and determining latitudes, their accuracy can be checked by comparing the latitudes. The following table may serve for an illustration:

	<i>Ain-i Akbari</i> 1595	Petit Astrolabe 1661	True
Agra	26° 43'	27° 13'	27° 10'
Delhi	28° 25'	28° 13'	28° 38'
Ajmer	26° 06'	26° 06'	26° 27'
Lahore	31° 15'	31° 56'	31° 37'

The deviations from the true latitudes are not very significant and in other cases where there appear to be large deviations, it is possible that the texts are corrupt. When in 1670 and 1671, Marshall worked out the latitudes of Patna and Hughly, with a wooden quadrant (apparently European), his latitude was higher than the true one, in one case by 22 minutes, and in the other by 15.

Time Reckoning Devices

Astronomers appearing in Indian miniatures of about the beginning of the 16th century are shown with two other instruments besides the astrolabe, namely, the altitude dial of the ring type and the sand-glass. While the first indicated unequal hours, the latter was a convenient substitute for various kinds of water-clocks, which gave equal units of time. Sand-glass was also in use in Aurangzeb's army to determine time; but apparently the less efficient sinking-cup measure also continued in use.

What particularly strikes one today is the failure to get excited by the European mechanical clock. Five clocks were included among the Persian ambassador's presents to Jahangir in 1616; and clocks were later deemed fit articles for presentation to Indian potentates on behalf of European Companies. But, as Ovington observed in 1690-93:

The Indians have not yet attempted an imitation of our Clock-work in Watches; and may be it is, because they seldom continue their just Motions for any long time, by reason of the Dust that flies continually in the air, which is apt to clog and stop the Wheels. But the Chinese have undertaken to take our Clocks and Watches in pieces, to form new ones themselves and may be in some time to produce some fresh improvements in those Mechanical Operations.

The mechanical clock, with its refined gearing springs, screws, balances and escapement, represents the concentrated application of a large number of mechanical principles and devices. The diffusion of its manufacture could have led to the wider application of these principles. No less important would have been the immediate effect of its use, for the clock makes possible a far greater control over proper division of labour time, by enabling accurate time to be known 'at a glance' whenever required. So long as the mechanical clock remained an imported rarity, the Indian economy could have hardly derived any advantage of this kind from it.

23.11 PAPER AND PRINTING

Paper

Compared to the momentous consequences of the introduction of paper, little space can be devoted to it here. The history of its travels to various parts of the world from the time of its invention in China in the 1st Century A.D., has been the subject of considerable research. The Islamic world received it in the 8th century. The history of its journey to India has been studied by P.K. Gode in an almost definitive paper. His evidence supports Alberuni's statement that Indians used writing materials other than paper in his time (11th century), and the first appearances of paper recorded by him are practically all confined to the 13th century. Clearly, India failed to obtain paper directly from China; and it was only the Ghorian conquests which forced its acceptance. By the end of the 13th century Amir Khusrau would refer to paper manufacture as one of the contemporary crafts; and by the middle of the 14th century, the material would become so cheap that the Delhi sweetmeat sellers were giving their products packed in paper to their customers.

Printing

Before concluding this survey of the technology employed in the previous sectors of Indian economy during the Mughal period, I should like to refer to book-printing. Once paper had become available to any civilization, and the use of the ink-stamp generalized, it would be tempting to think that book-printing from blocks was bound to follow sooner or later, even if direct inspiration for this was not forthcoming from any other area. We have seen that block-printing of textiles was widespread in India during the seventeenth century. If with all these favourable circumstances, India failed to accept printing, the reasons for this rejection are not easy to find. Perhaps we will have to take a wider perspective than of India alone, since the rejection is a common phenomenon all over the Islamic world. But it may be said that Ovington's suggestion that printing was not undertaken for fear of throwing large numbers of scribes out of employment assumes too high standards of regard for the general welfare among the ruling classes of the time. The difficulties of the script, a particular obstacle to movable type, were also not insuperable, as was to be proved later.

23.12 NATURE OF TECHNOLOGICAL CHANGE IN INDIA

In interpreting the results of our survey of the technology of the various sectors of the economy outlined so far, the limitations of our description must of course be kept in mind. It has not by any means been comprehensive. However, on a very tentative basis the following two conclusions would appear to be justified:

First of all, there was no inbuilt resistance in the economic system to technological changes. In certain spheres, such as horticulture and artillery, such changes were encouraged by the Mughal court and ruling class. In other spheres, like ship-building, a strong competitive challenge led to considerable adaptation, probably induced directly by demands from merchants. Elsewhere again – and possibly in the largest range – technical innovation was adopted by the actual producers and craftsmen because of immediate economic advantage. Such was probably the case with new crops in agriculture, with the new tools and devices in the textile industry, and with the introduction of the screw in metal work and belt drive in the drill. Elsewhere, as in liquor distillation or water-cooling devices, human appetite or comfort was the direct driving factor. In most cases the changes required no large investment of resources (large, that is to say, in relative terms), though in ship-building this was possibly not true.

But at the same time, static conditions appear to have prevailed in a number of important sectors, where either the immediate advantage compared to investment was not considerable or there was no external challenge. These factors probably lay behind the failure to develop metallurgy and certain basic tools on lines already charted by Europe and also, quite possibly, behind the failure to accept book-printing.

It does then seem clear that while the Indian economy was not closed to innovation and invention, there was no overwhelming enthusiasm for technological change, which, in retrospect, appears so strikingly to mark sixteenth and seventeenth century Europe. This statement is one over which, except for the first clause, there would be little dispute. But the moment one seeks the sources of this limited technological inertia, one runs into considerable difficulty.

There would be a temptation to see it purely in ideological terms, and ascribe much to the lack of printing as a medium of diffusion of knowledge. Printing, however, would

naturally only diffuse such knowledge as was available; and conceivably printing in the seventeenth century might only have caused a still easier dissemination of the minutiae of religious beliefs and superstitions. In spite of much greater attention to technological matters in the Chinese civilization and the prevalence of printing, the new industrial techniques from Europe could not after all be implanted there during our period. Moreover, there is the further question as to the effectiveness of the links between theoretical and practical technology.

Another factor which may merit consideration is the existence of a very numerous class of artisans and craftsmen able to live at very low wages. Bernier notes that while the Indian artisans were destitute of tools, they yet produced articles of the highest quality, even when these were imitations of European products. The highly specialized skill of the artisan thus seemed to serve as a substitute for his tools. Pelsaert speaks of a hundred crafts in Agra – “for a job which one man would do in Holland passes through four men’s hands before it is finished.” Thus the very numbers of the population of skilled craftsmen inherited from an earlier period would militate against labour-saving techniques, in that the immediate gain from these might be very slight or even illusory. A less favourable situation with regard to skilled labour, on the other hand, might have held out much greater incentive for technological innovation.

When we see this incomplete catalogue of the success of the Indian craftsmen alongside their failure to adopt important mechanical devices, we observe a contradiction that had also struck contemporary European observers. They too saw the crudeness of the Indian worker’s equipment and, on the other, the excellence of his product. They naturally tended to see here a triumph of human skill over material equipment. “Numerous are the instances”, says Bernier (1663), “of handsome pieces of workmanship made by persons destitute of tools... Sometimes they imitate so perfectly articles of European manufacture that the difference between the original and copy can hardly be discerned”. In other words, there was an enormous supply of skilled labour available in India. A “good thing in Hindustan”, Babur (1526-30) had said, “is that it has unnumbered and endless workmen of every kind”. The large scale of skilled artisans had its natural corollary in low wages: the two phenomena necessarily existed together. The workmen hard-pressed with a barely subsistence-level income could not afford tools or materials calling for any expense. They, therefore, tended to compensate for the lack of these by putting in additional labour and application of skill.

An outstanding illustration of this “compensation” is offered by the Indian weavers’ persistence in weaving patterns on their ordinary horizontal looms and so ignoring the drawloom, a device long used in Iran.

The substitution of the operation of tools and machines by human labour and dexterity called for an extreme degree of specialisation in skills. This implied the division of craftsmen into numerous categories, each concerned with some particular part or stage of manufacture. The division into the specialised skills was greatly facilitated by the caste system, which occasioned so much surprise to Babur who observes, “There is a fixed caste (*jati*) for every sort of work and for everything, which has done that work or that thing from father to son till now”. The role that the guilds played in preserving and transmitting skills in Europe was thus here played by the caste system. At the same time owing to the barrier so raised between one craft and another, diffusion of techniques across the crafts must have been correspondingly difficult. An artisan, while laboriously following what his father had done before him, might not use a device, which, though useful to him, had not been sanctified by acceptance by his caste-peers. This negative aspect of skill, specialization through caste, that is, a segregation of skills – was emphasized

by Max Weber in explaining the low level of Indian craft technology. Morris D. Morris has however challenged this view.

Morris is right, in stressing that the caste has not interposed any effective barrier to mobility of labour in the long run at any rate. In the Mughal period, the complaint is never heard of, in the voluminous commercial literature of the European Companies that workers in any skill were scarce because of caste restrictions. The restraint upon craftsmen crossing the sea, mentioned in a report of 1662 from Madras, loses much of its force when it is considered that the artisans were being asked to migrate from one region to another, that were as much apart as England and Spain. Moreover, castes could change their established professions. Fukazawa cites the case of the caste of tailors in Maharashtra, which during the earlier part of the eighteenth century took to dyeing, while a section of it separated to undertake indigo dyeing. Instances like this are rather exceptional; but this is probably only because the history of castes is so ill-documented, and not because such changes did not occur. Whenever the demand for the service of any profession was fairly powerful over a long enough period to make it advantageous for a caste, or a segment of it, to change its profession, the change would probably have always occurred. It would have mainly involved, perhaps, the assumption of a different traditional origin and the cessation of further marriage-ties with those who continued with the old craft.

It was not, therefore, any scarcity of skilled labour brought on by the caste system, but its very opposite namely, its plenitude, that, as we have seen, constantly inhibited attention to labour and skill saving devices.

This inhibition would have been present whether the artisan was himself a commodity producer, as most often he was, or he was subjected in varying degrees to the merchant, so long as the conditions of domestic industry prevailed, that is so long as the artisan worked with his own tools in his hut or household.

Taking textiles, the major craft industry as an illustration, we can see that domestic conditions were practically universal. Even when the weaver produced for a long-distance market, he bought his own materials, worked at home, and then took his cloth, made according to commonly accepted specifications, to the market for merchants to buy. This was probably the most general practice, being reported from Lakhwar in Bihar to Thatta in Sind. A modification would be introduced, when a merchant, in order to ensure regular supply, gave advances either in money, or, rarely, in material. This, too, while subjecting the weaver to the merchant, had no effect on how the artisan worked; though if the merchant gave orders for unaccustomed specifications, the weavers might have had to alter their looms, and ask for money to meet the cost.

Finally, if the material to be worked was very expensive, or close supervision was needed to ensure manufacture to specifications, the artisan could be called up from his home and made to work in the *karkhana*, the employer's own workshop. The English factor Hughes established in 1620 a "Cor Conna" at Patna, for winding silk; he employed a hundred workmen and expected to keep two to three hundred silkwinders employed all the year round. Obviously, the practice was a common one; and subsequently the Dutch and the English followed it in their "silk factories" in Bengal.

The greatest separation from the domestic conditions seems to have been reached in the *karkhanas* of the court and the nobles where the costliness of material and variety of specifications for the needs of aristocratic consumption demanded close supervision.

Here then the artisan did not work at home, and so the labour of his family was not available. Since his employer was possessed of considerable resources, we may expect that labour-saving devices and improvements in technique might have been achieved.

Yet our knowledge of Akbar's imperial *karkhanas*, of which we obtain inestimable details from Abul Fazl's *A'in-i Akbari*, and of the Deccan diamond mines, where domestic conditions led necessarily to possibilities of technological improvement.

There is no evidence that a mere change from the artisan's "petty production" to employment by the aristocracy or mercantile capitalists had any significance for craft technology in Mughal India. In fact one could argue that the availability of cheap skilled labour prevented a true "capitalistic" organization, even when there were single men employing large numbers of persons on wages in productive undertakings. The conception that it was the obligation of the employer to furnish tools remained largely unborn; and this meant that there could be no investment by superior classes in potential machines.

It may first be suggested that if intellectual interests in technology had been greater than they were in Mughal India, mechanical improvements could have come from outside the range of purely economic impulses. After all, Cipolla has argued that modern industrial progress "accelerated dramatically (only) when the resources of craftsmanship were strengthened by the systematic application of scientific principles developed by more or less professional scientists". Whether this statement adequately explains the acceleration of technological change in the first but crucial phase of the English Industrial Revolution may be doubted. However it can be seen that in India the interest shown in technological matters by the educated strata of the population was very limited.

It is to be considered whether possibilities of development of technology were restricted, too, by the dependence of craft production on the vast system of agrarian exploitation in the Mughal empire. The towns and urban crafts subsisted on the large part of the agrarian surplus that was appropriated by the Mughal ruling class. There was no real exchange between town and country. The fortunes of commodity and therefore, *ipso facto*, craft production, were determined largely by the extent to which the Mughal system continued to function in a stable fashion. Once this system broke down amidst a severe agrarian crisis, during the latter half of the seventeenth century, the scale on which urban crafts had so far been pursued in the empire could no longer be sustained. Thus a technological backwardness was further compounded by an urban decline and a possible fall in the volume of craft production. This could not but set the seal on the future progress of technology in India.

23.13 SUMMARY

From the point of technology medieval period was significantly productive. The new technological devices brought by the Turks provided important impetus to Indian economy. The geared Persian wheel, on the one hand, made it possible to lift the water from much lower depths that eventually facilitated the expansion of agriculture in those areas as well where water table was comparatively low. On the other hand, new techniques in the field of textile production accelerated the production of coarse yarn. Considerable growth is also visible in the production of new crops. With new techniques of grafting quality of various varieties of fruits improved greatly. There was considerable development in sericulture.

However, there appears to have been comparatively less expansion in the areas of power and fuel technology. Indian backwardness in the field of glass manufacture is astonishing. Similarly, in the field of precision instruments screws were still crudely made. While India achieved greater accuracy in the field of astrolabes, there was little attempt to improve time reckoning devices. Paper began to be manufactured, but printing was not adopted.

23.14 GLOSSARY

Abul Fazl	Court chronicler and close associate of Akbar. He has number of works to his credit. The most important ones are: <i>Akbarnama</i> , <i>Insha-i Abul Fazl</i> , <i>Maktubat-i Allami</i> .
<i>Bahar-i Ajam</i>	A Persian dictionary written by Munshi Tek Chand 'Bahar' around 1739-40.
Barani, Ziauddin	A historian and theorist. He wrote <i>Fatawa-i Jahandari</i> , a work on state craft and <i>Tarikh-i Firuz Shahi</i> . Though <i>Tarikh</i> lacks in chronological details, it provides the most critical account of the Khalji and Tughuq periods.
Bushels	A bushel of wheat is = 60 lbs./27.21 kg.
Caulking and Riveting	Caulking is a technique of making joints leakproof by forcing oakum between parts that are not tightly fitted. In riveting planks are joined by making grooves or cut.
Congreve Rockets	Rocket developed in Britain under Colonel Congreve, 1805.
Drawloom	A developed variety of handloom with multiple sheds for weaving complex patterns.
Factory Records	Records of the East India Company's factories in India. These records mainly consist of consultations, Letters received, and copies of letters sent and collections of papers on particular subjects.
Flintlock	Handgun, with flint-lever to ignite gunpowder in the priming pan.
Kay, John	John Kay, an Englishman from Lancashire, invented flying shuttle in 1730 and got that patented in 1733. Kay's shuttle increased the speed of weaving yarn and now with Kay's shuttle it became possible to produce much wider cloth at a faster speed.
Khyber Pass	A 53 kilometers pass through the Sulaiman Range, connecting Pakistan and Afghanistan.
Ma Huan	Muslim interpreter of the famous Zheng He, admiral of the Chinese fleet. He belonged to Hui/Huihe group who were the Arab and Persian migrants settled in China (at Anxi in the present day Xinjiang).

Palaeotechnic Age

Age of Old Technology, based on wood as main component of tools and manual power as main driving force.

Technology and Economy

Pelsaert, Francisco

A factor of the Dutch East India Company at Agra, 1620-27. He wrote his *Remonstrantie* in 1626.

Pin Drum Gearing

Gearing based on wooden pegs on a wheel circumference enmeshing at right angles with vertical bars on a drum.

Roe, Sir Thomas

English ambassador to Jahangir 1615-19.

23.15 EXERCISES

- 1) Examine the development of agricultural technology during the medieval period.
- 2) In what respect Persian wheel and spinning wheel provided a big boost to the medieval economy? Analyse.
- 3) Discuss the growth of artillery under the Mughals.
- 4) Critically analyse the technology used in handling the basic tools and precision instruments during the medieval period.
- 5) Discuss the nature of technological change during the medieval period.

23.16 SUGGESTED READINGS

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UNIT 24 TRANSPORT AND COMMUNICATION

Structure

- 24.1 Introduction
- 24.2 Communication Routes
 - 24.2.1 Towards North and North-West
 - 24.2.2 Eastwards and Westwards
 - 24.2.3 Southwards
- 24.3 Communication Support
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 - 24.3.3 *Sarais* and Other Resting Facilities
- 24.4 Postal Communication
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- 24.6 Summary
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24.1 INTRODUCTION

Transport and communication are considered key factor in the expansion and growth of medieval economy. The state of development of transport and communication in a society is a good indicator of the robustness of its economic activity. A good communication system helps inter-regional and local exchange of commodities and goods. It also promotes contact among cultures of different regions and in the longer run promotes exchange of thoughts and ideas, the two vital ingredients for the health and well being of a society. A developed communication system also supports the growth of transport; the two in turn promote travel. The level of interdependence between communication and transport is always high. The medieval economy in India as also the society benefited from a good communication and transport system.

Our focus in this Unit is on the development of land transport and communication system in India during the medieval period. It is a notable feature that the factors promoting medieval economy also gave a fillip to the transport and communication system. Thus the growth profile of medieval Indian economy seems to match the growth profile of the communication system. We know that the first major change in medieval economy came with the establishment of Turkish rule in Delhi. The new state and their methods of the extraction of agricultural surplus, gave rise to money economy from a predominantly rural setup. The growth of money economy was fast and its geographical spread was also unprecedented. A major impact of this process was an increase in the commercial activity both among different regions and among different localities within the regions. With this the communication network also got a spurt and a system of transportation, even if in a rudimentary form, developed to support the communication network. Gradually, as the contours of money economy became more pronounced, additional features in the communication and transport system too became visible.

The communication system in medieval India was essentially land based except along the coastline where port-to-port communication was also prevalent. The communication routes passing through different places and regions provided the basic network along which the commercial activity and the non-commercial communication operated. These routes were provided with features like roads (demarcated but only occasionally metalled),

bridges on rivers and streams that crossed the routes, and halting and resting places. The transport of goods as also of men was based on wheeled carts and animal portage, though human portage was also in vogue. The travel for commercial purpose had begun to be organised so as to enlarge the size of the travel party and to provide it some basic support. The following sections contain details on the above subjects as they also provide you necessary references from important travelogues. You will enjoy reading the descriptions and may even find it a rewarding exercise to occasionally read the travelogues in original.

24.2 COMMUNICATION ROUTES

Communication routes in India have been in existence from very early in ancient times. It is often said that the geographical situation of Indian sub-continent has been such that overland route to regions across north-west have not been easy to develop. But it is also a historical fact that religious and trade contacts between India and the regions across north-west did not cease ever in history. Braving the hazards of an inhospitable and difficult terrain travellers have kept alive communication between India and these regions since remote past. A few passes in the Himalayas have always allowed traffic across them. The Indian mainland has likewise kept intact communication routes all across the sub-continent though the volume of traffic and popular preferences for some have naturally outweighed others.

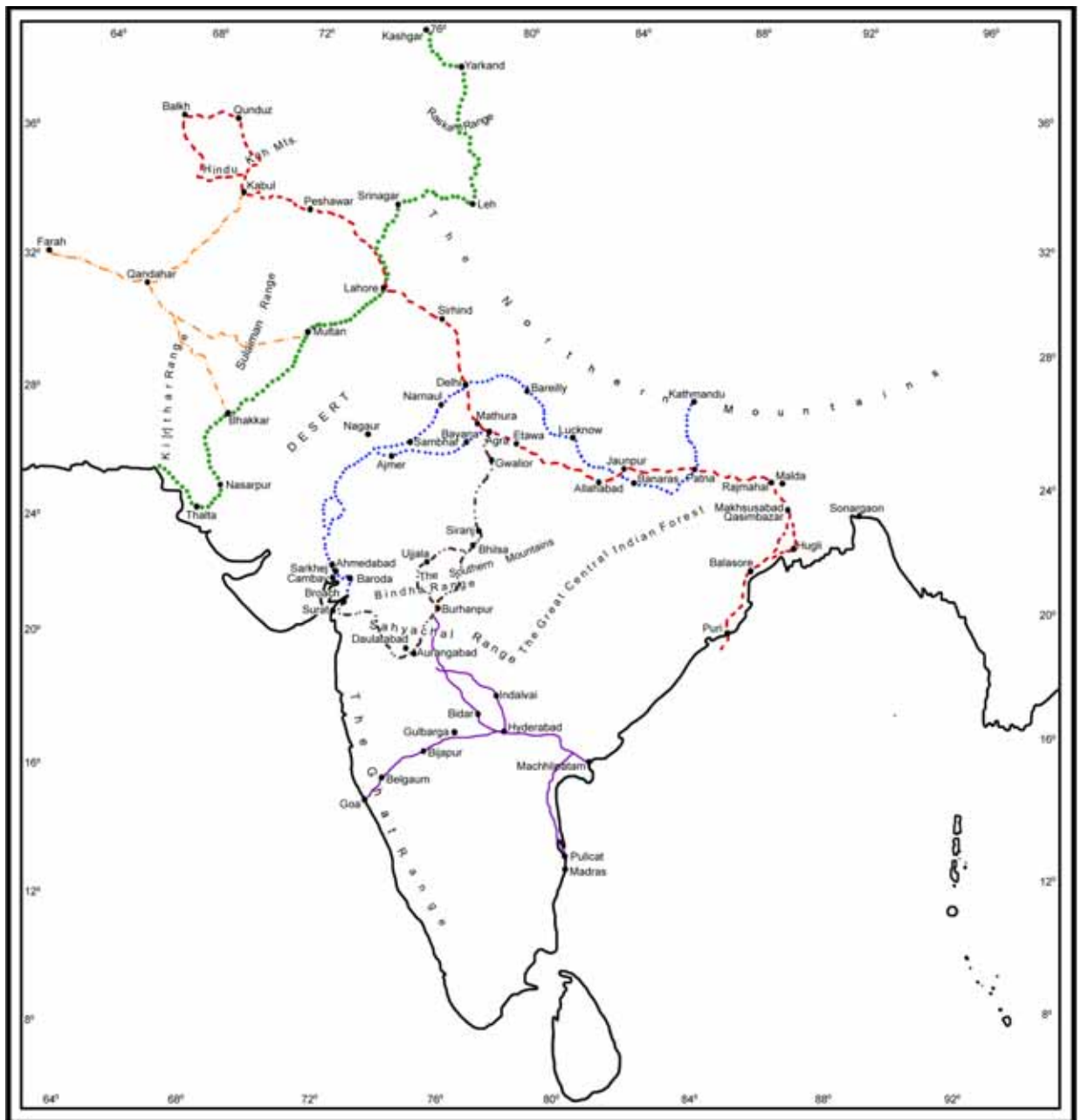
As we come to the medieval period in Indian history we notice a few significant economic developments as a result of which the communication system receives a boost. The old routes now get a large volume of traffic and new communication routes also develop. In this Section we will give you the details of the route network as it obtained during the medieval period and will also discuss the importance of stations lying on these routes wherever adequate information is available about them.

24.2.1 Towards North and North-West

Delhi and Agra were the main administrative centres during the medieval period from where the state control was exercised by the ruling powers stationed in North India. For establishing an efficient communication network, it was therefore important that Delhi and Agra remained connected with other regions. Most of the routes therefore radiated from Delhi as also from Agra, the other important administrative centre, and extended in all the different directions in the Indian sub-continent.

The route from Delhi to the north-west passed through Sirhind, Lahore, Peshawar, Kabul and Balkh. Its course has been delineated in Irfan Habib's *Atlas of the Mughal Empire*. At Lahore this route branched off in the south-westerly direction to connect such important centres as Multan, Bhakkar and Thatta in Sind. From Lahore, as the route crossed Sialkot in the north, one branch led-off to Srinagar in Kashmir and from there to Leh and Yarkand and Kashgar. As noted by Irfan Habib, Leh onwards was a very difficult route to traverse as the conditions were mountainous and extremely inhospitable to the travellers.

On this route between Delhi and Balkh, Kabul was an important junction from where south-south-west ran the route to Qandahar and Farah in the Herat region of Southern Afghanistan which was controlled by the Safavid Empire. Qandahar was also connected with Multan in Sind. (See Map 3, Unit 8, Block 2 for its Central Asian connection.) The details of Qandahar's link with Sind and Panjab have been probed in detail by Jean



**Map 1: Communication Network (After Irfan Habib,
An Atlas of the Mughal Empire, OUP, New Delhi, 1982, Sheet OB**

Deloche in his *Transport and Communications in India*, Vol.1. We quote from this text:

Under the Mughals, Qandahar maintained contact with Sindh and the Panjab by way of two principal routes which diverged in the region of Pisin, south-east of the Khojak Pass. But little is known concerning the first, which passed through Sal (Kvatta), the Bolan Pass, Sikapur and met with the Indus at Saakkar-Bakkar. Humayun, while fugitive, followed this course in 1543; and, during the eighteenth century it was by this way that the caravan from Bakkar to Persi proceeded each year.

The second route is somewhat better known, as several European travelers who followed it in 1614 and 1641 have left accounts thereof. It led to Dera Ghazi Khan and, from there, on to Multan via Duki, Cutiyali and Sakhi-Sarvar. A difficult trail traversing to the south the Zhob and Loralai valleys, having a relief confounded by escarpments and plateaux, it was nevertheless a significant commercial route between Northern India and Persia, as well as having been a strategic passage along an extent of which Babur journeyed, anno 1505, and which Aurangzeb's army followed in 1552 en route to besiege Qandahar for the second time.

The other trails were used as passageways by armed expeditions from Ghazni and Kabul. The famous Mahmud and his cavalry would appear to have often passed through the defiles of the Toci; Cangiz Khn (Gengis Khan) in 1219 advanced through the Gomal Valley with his soldiers; and Timur Lang (Tamerian) led his forces by way of the Kurram corridor in 1398. (pp. 27-28)

The northern and north-western route was amply provided with resting facilities for travellers. As testified by European travellers taking this route there were plentiful *sarais* (described in Sub-section 24.2.3) spaced at regular intervals so that at the end of a day or twos journey the travel parties could securely lodge their belongings and hire for stay accommodation in a *sarai*. Another noteworthy feature of this tract has been the incidence of several major rivers in the way. We do not find mention of any one of these major rivers having a permanent masonry bridge. In most cases the river-crossings were done through ferry.

JOURNEY TO KABUL

Our march now continued along the valley of the Kabul river, over a tolerably level and extensive plain on which several villages were situated, all of them protected by mud walls and bastions from sudden incursions. On the left the plain was bounded by the Safed Koh range, at a distance of about nine miles; with a glass, forests, apparently of pines, clothing its summits, were descried. The mountain, especially termed the Safed Koh, lies at the head of the Mamand Dhara, a valley belonging to the Shenwaris, celebrated for its vineyards: more to the west is another fertile valley, called Mangastura. These also rear most of pomegranates imported into Hindustan. Across the river ran a chain of barren hills, called, from their sterility, Kohi Bedaulet. In some of them we could distinguish lines of cavern mouths; but whether these excavations were ancient or modern, we were not near enough to determine. Many of the Afghan tribes form domiciles in the rocks, and we have noticed several cave-dwellings in the Khyber country. Beyond the mountains, skirting the river on the north, part of the snowy peaks of the heights bounding Kaferistan were visible.

William Moorcroft And George Trebeck, *Travels in the Himalayan Provinces of Hindustan and Punjab*, Asiatic Society of Calcutta, 1837, p.478.

24.2.2 Eastwards and Westwards

The northern plains of India that included the Ganga-Yamuna *doab* and the Ganga basin in the east were provided with a decent network of routes. This network connected Delhi as also Agra, with the entire stretch of the *doab* region extending upto the deltaic expanse in the east. Long before Sher Shah refurbished the communication network connecting Sonargaon, (near Dhaka) with Delhi and Attock, (near Peshawar), the eastern parts of the country had already set up communication routes with the north-west near Hindukush mountains. The Mauryan rulers had established a connecting route between their capital at Pataliputra (modern Patna) and Purushpur (near modern Peshawar) in the north-west during second century B.C. (See Map 1, Unit 7, Block 2)

In the medieval period there emanated two different routes from Delhi that connected Rajmahal and Qasimbazar in the east. These routes mainly traversed through the *doab* region along the course of river Ganga on the northern and southern sides of the river respectively. The one charting its course on the southern side connected such important places as Mathura, Agra, Etawa, Allahabad, Varanasi and Patna. The other one, along the northern side of the river passed through Bareilly, Lucknow, and Jaunpur to Patna. Beyond Patna it connected Rajmahal and Qasim Bazar and turned southwards to traverse

its course along the sea-coast and connect such places as Hugli, Balasore, Cuttack and Puri. Almost all the above places were important manufacturing centres. Several of these were also significant administrative centres under the control of important nobles of the period. Jean Deloche describes the route from Patna eastwards in the following words:

...During the Mughal period, the imperial highway from Patna, administrative centre which regained to an extent the former glory of Pataliputra, to Rajmahal, short-lived Bengal capital at the close of the sixteenth century, followed the narrow but convenient passage suggested by nature, via Munger on the right bank of the Ganga. It divided into two branches at the head of the delta following the two main riverbeds: the Padma to the east, and the Bhagirathi-Hugali to the west. (p. 41)

The eastward route was provided with good travel support. The travellers mention regular incidence of *sarais* on this route where such facilities as the supply of provisions and cooked food were generally available. In towns of substance there were several *sarais* with provision of warehouses in some of them for storing the good carried by traders and even ordinary travellers. The major rivers were mostly crossed by ferry service as only the small sized rivers were sometimes provided with permanent bridges. For crossing Yamuna at Delhi a bridge of boats was constructed providing incoming traffic from the east access to the capital town. This bridge finds an incidental notice in Bernier. Describing the city of Delhi he writes that it is situated on the “banks of the *Gemina*... and built on one bank only in such a manner that it terminates in this place very much in the form of a crescent, having but one bridge of boats to cross the country.”

AGRA TO BENGAL

I started from Agra for Bengal on the 25th of November 1665 and halted the same day at a poor caravansarai distant 3 coss from Agra. The 26th [November] I reached Beruzabad, 9 coss. It is a small town, where, on my return, I received 8,000 rupees of the balance of the money which Ja'far Khan owed me for the goods which he had brought from me at Jahanabad. The 27th [November] to Serail Morlides, 9 coss; 28th [November] to Estanja, 14 coss; 29th [November] to Haii-Mal, 12 coss; 30th [November] to Sekandera, 13 coss; 1st of December to Sanqual, 14 coss.

Jean-Baptiste Tavernier, *Travels in India*, Eng. tr. V. Ball, ed. William Crooke, Reprinted by Atlantic Publishers & Distributors, New Delhi, 1989. Vol. I, p. 92-93.

The western part of the country, that is the region denoted by Rajasthan and Gujarat and also Khandesh, was linked with the cities of Delhi and Agra through communication routes that mainly carried traffic disembarking at Surat and other ports in Gujarat and was mainly composed of the traders and merchants of all the different kinds. The route connecting Delhi with Surat, the important sea-side entrepot of Gujarat followed two separate courses, one through Rajasthan and the other through Malwa and Khandesh. The Rajasthan route connected Delhi with Narnaul, Sambhar, Ajmer, Ahmedabad, Baroda, Broach and Surat. There was another equally important arm that connected Delhi with Agra via Faridabad, Hodal, and Mathura. From Agra this arm bent westwards and passed through such places as Fathpur-Sikri, Bayana, Lalsot and Bandar Sindri before connecting with the route coming from Delhi a little distance east of Bhamunda (as shown by Irfan Habib in *An Atlas of the Mughal Empire*; See Map 1). The Rajasthan route was shorter than the route passing through Malwa and Khandesh, but travel-wise was a little difficult as it passed through the arid and water-scarce region of Rajasthan.

FROM SURAT TO AGRA

The second of January [1610] I departed from Comvariaw [Khumbaria] (a small village three couse from Surat) to Mutta [Mota], a great aldea, seven c[os]. [January] 21, eight c. to Carode [Karod], a great countrey towne, by which on the north runneth Surat river; it hath a castle with two hundred horse, Patans, good souldiers. [January] twentie two, to Curka 12 c.; it is a great village, with a river on the south side. In the way (7c.) is Beca [Viara], a castle with a great tanke and a pleasant grove. [January] 23, ten c. to Nacampore [Narayanpur], a great towne under the Pectopshaw. In this way on the right hand beginneth a great ridge of mountaines which come from Amadavar-wards, neare which Badur keepeth, holding divers strong holds thereon, that the King with all his force cannot hurt him. These mountaines runne to Bramport; on them are bred many wilde elephants. [January] 24, to Dayta [Dhaita], 8c., a great towne; in the mid-way you passe a stony troublesome river. This towne hath a castle, and is almost encompassed with a river, seated in a fertile soyle. [January] 25, to Badur [Bhadwar], 10c., a filthy towne and full of theeves; here is made much wine of sweete fruit called mewa, but I found it not wholesome except it be burnt.

The sixteenth, 7c. to Cuckra, a great countrey towne abounding with all sorts of graine, victuall, and Mewa wine; at 4c. Lyeth Berroul [Bora], a great aldea. The seventeenth, 12c. to Delout, a great aldea; the way for the five last couses theevish, hilly, stony; the other pleasant plaines. The eighteenth, 7c. to Burrow [Barrai], a small towne, but plentifull of victuall, except flesh, which is scarce all this way; the way dangerous. The nineteenth, 7c. to Sukesera, a small ragged towne. The twentieth, to Syrange [Sironj] 9c., a very great towne, where are many betele gardens. The one and twentieth and two and twentieth, wee make mukom. The three and twentieth, a Cuchenary Saray [Kachner Sarai] 8c. The foure and twentieth, to Sadura [Shahdaura] 5c. The five and twentieth, to Collebage [Kalabag] 7c. The sixe and twentieth, 12c. to Qualeres [Kulharas], a pretty small towne encompassed with tamarind and manga trees. The seven and twentieth, to Cipry [Sipri], seven of Surat couses (a mile and an halfe); way theevish, stony, full of trees, a desert passage; a walled towne, faire houses covered with slate.

From Alabasse to Menepore [Manihpur] is 20c. amongst the river Ganges. At 2c. on this wya is a sumptuous tombe for this kings first wife, mother to Sultan Cusseroon and sister to Raja Manisengo, who upon the newes of her sonnes revolt poisoned her selfe. From hence passing Ganges is a more direct way to Jounpore. To Chappergat is 12c. Here is one of the fairest saraies in India, liker a goodly castle then a inne to lodge strangers; the lodgines very faire of stone, with lockes and keyes, able to lodge a thousand men. a man can scarce shoote from side to side with an arrow; neere to it is a faire bridge; both built by one man; the way perillous for theeves. Itay [Etawa] is thence 12c.; anciently the seate of a Potan king, but now ruined. On the height of the hill, cut steepe downe, is seated a strong castle double walled, having at the entrance the figure of a mans face, which the Indians much worship, powring abundance of oyle upon it. To Amedipore [Itimadpur] is 43c.; a plentifull countrey, full of good saraies for caravans. Much indico called *cole*, of a grosse sort, is made in this way, which is spent in India or transported for Samercand [Samarkand], Cascat [Kashgar], and those parts; none passing into Christendome, except mixed with that of Biana. Hence to Agra is 7c., passing Gemini close to the citie.

William Finch's (1608-11) travel account in William Foster (ed.), *Early Travels in India*, Reprint, New Delhi, 1985, pp. 136,143-44,178-79.

The route traversing Malwa and Khandesh took a southward direction from Agra from where it went to Gwalior, Sironj, Bhilsa (modern Vidisha, near Bhopal), and Burhanpur which was an important junction for westward and southward peninsular travel. Burhanpur and Surat were connected via two different branches, one passing through Nandurbar and the other passing through Aurangabad. Since Burhanpur was an important centre on

this route from where travel in south India generally originated, the Malwa-Khandesh route was the choice of travellers deciding to go towards south. A large part of India's cotton and calico trade passed through this route although in the rainy season it would become muddy and would require extra-care protecting cloth bundled on the wheeled carts from getting soiled by the mud splashed from the wheels.

It has been noted above that the Delhi-Surat route via Rajasthan was shorter than the Malwa-Khandesh track. It was mostly used by traders desirous of returning to their ships anchored at Surat-Swally port before the onset of monsoon. This route was only sparsely provided with *sarais* mostly located in major towns. Since two major production centres, for copper and indigo were clustered around Kotputli and Bayana respectively, traders for these commodities generally selected the Rajasthan route. The absence of rivers, except Mahi, Narmada, and Tapti on this route was a distinct advantage. This route was also sometimes preferred for travel during the monsoon season as it did not suffer from the problem of muddy tracts either.

AHMEDABAD TO THATTA

About the 12th of October, 1613, Mr. Alodworth (our Agente), myselfe, and Mr. Aldworth's man, and a Germaine began our journey for Amadavar; and travellinge alonge the cuntrye, the 18th daye wee came to a prittie village called Sarron, and lodged in the Governor's yarde, where wee were safe from theeves. In the morninge wee beeinge redde to departe, the Governor sente his men to us to begge somethinge of us; whoe were contente with 8 pites [pice], which is aboute 3d. Englishe. And travellinge yet further on our journey, wee came to a cittye called Brothra [Baroda], which is but a little cittye, yet of fyne buyldings; where wee bought some commodities for our trading...

...Wee departed from thence the nexte day. [The sixteenth, 8c. to Carrya [Khawad?], where is a well-manned fortresse; and the eighteenth (till which, for feare of theeves, wee stayed for another caravan) to Deccanaura [Dekawara]; our camell stolne and a man slaine.] And the 19th day wee came [10c.] to Bollodo, a forte kepte by Newlocke Abram (a brave souldier) for the Mogull; whoe was that day returned from battell, bringinge home with him 169 heads of the Coolies [Kolis], a theevish caste of moutteners [mountaineers?] that live by robbing and spoylinge poore passengers on the heighwaye. [The twentieth, 13c. to Sariandgo, a fort.] Wee still kepte on our journey, and the 21st days wee came [10c.] to Raddinpoore [Radhanpur], a bige towne, havinge a forte kepte in yt and a companye of brave souldiers. Wee stayed here twoe dayes to provide ourselves of provision for the sesarte journey, there beeinge nothinge to bee had on he way, not soe much as freshe water for our cammells, nor anye other victualls for them or ourselves. The 23d day wee travelled [7c.], and at night laye in the feilds. [Met a caravan robbed of all, from Tutta. The foure and twentieth 12c. Dispeded one of my pions to Lowribander with a letter; which promised to doe it in ten dayes, but I thinke was slaine. The five and twentieth 14c.] Lodged in the feilds, by a well of water, but yt was soe salte that wee could not use yt. [The six and twentieth 10c. to such another well.] This daye wee gave our cammells water which wee brought from Raddinpoore, they not havinge dranke of three dayes, which is usuall with them there in their travell. Soe wee travelled the 27th day [14c.] and laye in the feilds as before, havinge nothinge but what wee brought with us. And the 28th day [10c.] wee came to Negar Parker [Nagar Parkar], a poore towne, yet with good store of provision for travellers.

Nicholas Withington's (1612-16) travel account in William Foster (ed.), *Early Travels in India*, Reprint, New Delhi, 1985, pp. 204-205, 209.

24.2.3 Southwards

It has been explained in Sub-section 24.2.2 that Burhanpur was the junction for routes leading into south India. Running southwards crossing Godavari and passing through

Bidar the main route to south India connected with Hyderabad which was an important production and administrative centre. From Hyderabad it branched off in the west and in the east. The western branch passed through Gulbarga, Bijapur, Belgaum and terminated at Goa. The eastern branch connected Narsapur and Machhlipatam and from there traversed along the coast upto Pulicat-Madras in the south. The western branch was mostly used for spice trade, especially trade in pepper. The eastern branch passed through the region of diamond mines and also the calico centres of south India.

The communication routes located in the region between Krishna and Kaveri river do not find detailed mention in the sources. In fact most of the details for this region have to be worked out on the basis of the information contained in James Rennell's *Memoir of a Map of Hindoostan or the Mogul Empire* and Robert Orme's *Historical Fragments of the Mogul Empire*. Jean Deloche has used these sources carefully to describe the communication network of south India. The following details have been taken from his work:

Subsequent to the fall of the Hindu empire, the South of the peninsula experienced a protracted period of instability, aggravated by the funding of independent principalities and the Maratha and Mughal incursions, before a new centre of political gravity in the heart of the Maisura plateau was established at Srirangapattana on the Kaveri at the time of Haidar 'Ali and Tipu Sultan in the second half of the eighteenth century. We have no information regarding the roadways of the South during that interval, excepting as pertains to those routes leading from Haidarabad to the deltas in Andhra located to the north of the Coromandel.

Between the Krsna and Tamil country land communication seems to have vacillated between the coastal track and the inland roads. The passageway which served the numerous coastal ports was cut by lagoons and wide, deep rivers necessitating the utilization of ferries. Inland, the route crossed Gunturu, Vangolu (Ongole) and Nelluru, but its course, except in the region of Lak PaLaveRkatu, ran always to the east of the present-day road and, especially mid-way, neared the coast.

For the remaining parts of South India he provides the following details:

As to the remainder of the peninsula, the greater part of our knowledge is drawn from the maps by Orme and Rennell, who in the main have noted the movements undertaken by the armies during the Franco-English war and the Maisuru campaign, as well as from information provided in the engineers' reports pertaining to the regions annexed by the *East India Company*.

Rennell's map of 1792 indicate in summary fashion the major routes which diverged from Srirangapattana towards the Ghats rising to the west; then, northwards to the Raycuru *doab*, ancient march disputed by the Deccan sultans and the Vijayanagara kings; and finally, the route which led to the Tamil plain in the south-east. The tracks on the eastern border of the plateau, dissected by the PalaRu, PennaiyaRu and Kaveri rivers, are better known, for they played a significant role in the military operations relating to the Maisuru wars.

There was then, between Lake PalaveRkatu and Kanniyakumari or Ramesvaram, a network of longitudinal routes which met at recognized points, as for example, Srirankam-Tiruccirapalli and Maturai. From west to east and extending to the eastern coast from the Palakkatu Gap, another network developed, comprising two principal axes: one leading to Celm and the lower valley of the PennaiyaRu; the other which followed the Kaveri by way of Tancavur as far as the delta ports.

These main routes, along with the ramifications connecting them, formed the meshes of a network corresponding to the ancient road links, and which only differs from the present road system along short segments. This fact implies a certain degree of urban equilibrium.

24.3 COMMUNICATION SUPPORT

The communication network, described above needed support in the form of facilities that helped travellers overcome the difficulties of travel. In the circumstances prevailing during the medieval period the travellers' main concerns were unhindered travel and sufficient provision of resting/halting places for secure night stay. The nature of support also depended on the volume of traffic and the frequency of travel on different routes. There was thus an uneven spread of the support as the routes more traversed and by the larger number of travellers were provided adequately while on the routes attracting lesser traffic the facilities were sparse. We will give you details relating to the communication support in the following sections:

24.3.1 Roads

The information on the condition of roads and their travel worthiness is available in the descriptions given by the travellers using those roads. A major part of this information comes from the accounts given by European travellers visiting India during the medieval period. It is generally agreed to by most of these travellers that a major part of Indian roads was in the form of beaten tracks without any permanent treatment being given to their top surfaces. The common method used for making these roads has been described by Deloche:

After having cleared a passage in the jungle some 30 to 50 feet in width, the area to be traversed by the road was delineated by digging a small ditch on either side, the bumps were leveled and the depressions filled with, depending upon the terrain, clay, silt, sand, gravel or pebbles, in such a manner that the surface layer was slightly convex towards its centre, permitting thus of the drainage of water.

These natural beaten tracks were well adapted to an organized rural society which had the wherewithal to maintain them, and in which seasonal traffic corresponded to the harvest periods. There was thus a considerable area of India over which communications and transport could be effectuated simply by leveling the terrain and undertaking minor improvements. Local and regional roads were most frequently of this type, as were even the main routes over the major part of their distance. This is again evidence that natural viability was a significant factor in communications.

The paved roads, that is those having been given a more permanent top surface treatment with stone pebbles or rubble beaten on it, were few in number and were mostly confined to the larger towns such as Delhi, Agra etc. In such places again the paved tracks generally did not extend far beyond the confines of the towns. A special instance where a mountainous tract was cut through and paved with stones making the surface strong and lasting has been noted by Irfan Habib for the region of Panjab, near Margala pass between Rawalpindi and Hasan Abdal (Sheet 4B Notes, p.12 of *An Atlas of the Mughal Empire*). This paved section was nearly three quarters of a mile in length i.e. approximately 600 meters long. (for further details see Section 22.4)

24.3.2 Bridges

A bridge may be defined as a structure spanning rivers, marshes, declivities etc., and providing a passageway for pedestrian and wheeled traffic. The first man-made bridge was probably a tree trunk or flat stone laid across a stream, but we can only speculate on such beginning. What we know for certain is that from the earliest times three prominent types of bridges familiar to us have been beam-bridges, suspension bridges and arch bridges. These three types have been varied or combined to assist each other in the same structure. Thus in their simplest form beam bridges are called simple spans, but

quite often two or more of these spans are joined together over the piers to make them continuous. Two important variations of beam bridges are cantilever and boat bridges. In a cantilever bridge successive layers of beams are piled upon one another in such manner that each upper layer juts out slightly over the layer immediately below it. At the top, therefore, only a small space remains to be covered with a beam. The boat bridges are basically beam type sustaining on floating supports. The idea may have originated through the lashing together of few boats to maintain a river crossing, either to meet a special need or when the stream had dwindled in the dry season to become narrow. Suspension bridges were usually built to span narrow gorges by stretching a rope or such material across the gorge and tying it to tree trunks on either side. Arch bridges used the technique of making curved formation in bricks or stones with the help of a reliable binding material such as gypsum or lime mortar. This peculiar formation was obtained with the help of voussoirs which were tapered or wedge-shaped stones; quite a sizeable portion of the weight of this super-structure resting on piers was transferred to the end points known as abutments.

The beam bridges in their various forms as well as suspension bridges were known in India from ancient times, but the arch bridges were introduced here only after the Turkish conquest, the earliest surviving specimen being a bridge on the river Gambhir below Chittor built during the reign of Alauddin Khalji. It is interesting to note that with the passage of time bridges in India came to acquire a categorization which was dictated by the material of construction rather than being based on the principles of engineering involved. Depending upon the availability of the different types of materials used in the construction of bridges, each one of these categories became specific to particular regions and topographical settings. Thus the cantilever bridges needing mostly wood for their construction flourished in Kashmir and other hilly areas where suitable timber for their construction was abundantly available. At the same time boat bridges built on the same principle, which were used as an immediate device for crossing large rivers in the plains, came to represent a distinct category. Similarly masonry bridges were accepted as another category notwithstanding the fact that besides a large number of arch constructions these also included a few that were built exclusively on the trabeate technique. But one must note here that an arched bridge would only be a masonry bridge and that from the thirteenth century onwards a majority of masonry bridge built in India were arched bridges. This circumstance would justify the treatment of masonry bridges as a distinct category from the point of view of the material used in their construction.

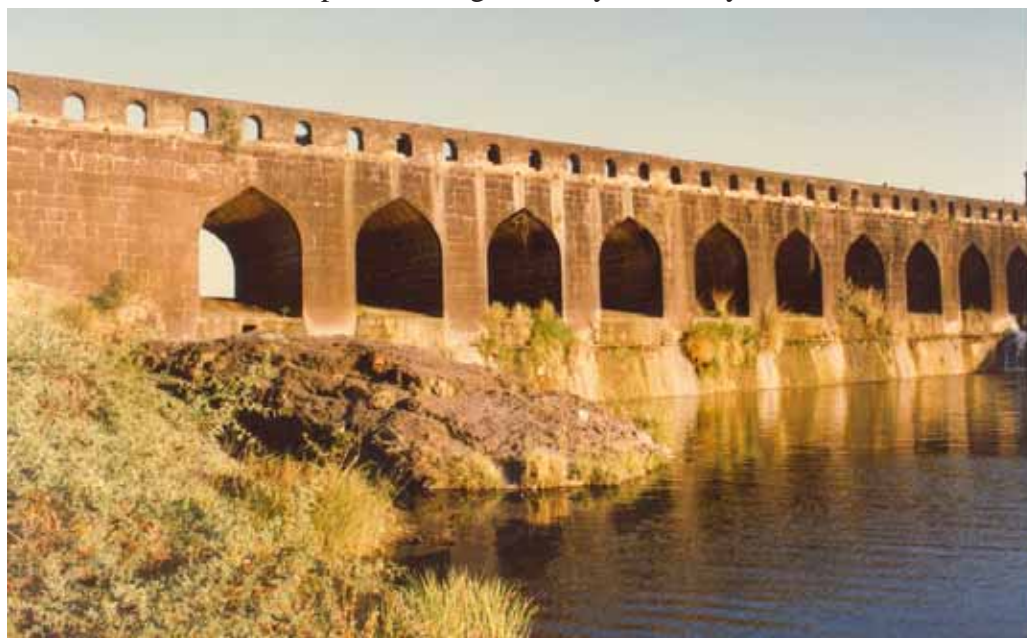
There does not survive much evidence on masonry bridges prior to Turkish invasion. It was in the thirteenth century only that the use of arches in the bridges gave a greater flexibility to the architects in the use of building material and in the location of sites. Still the number of bridges built during the Sultanate period is very small. Perhaps the necessary impetus for a wider application of the new technique of bridge-building was not forthcoming during this period. Apparently as yet there did not exist any appreciable economic motivation for bridge building.

The beginning of the sixteenth century then seems to mark the beginning of a new trend in this respect. There was a sizeable increase in the movement of men and goods, especially on land, and the roads had now begun to cater to a larger volume of traffic comprising pack-animals and wheeled carts besides the foot-traveller. As the major arteries of land communication in Mughal India radiated from the capital cities of Agra and Delhi and connected with the farthestmost points in the empire, a large number of new masonry bridges sprang up on these trunk-routes. Some of the masonry structures surviving from the earlier period were at the same time restored for traffic. (also see Section 22.4 for techniques used)



A Bridge of Aurangzeb's Reign in Aurangabad City

It is significant to note that in spite of this activity rivers of large spans were without masonry bridges. The most common device used for crossing these rivers by common travellers were boats, sometimes played as ferry service on important rivers. Often the travelers resorted to a crossing of these rivers at the points where they were easily fordable. But during an army expedition these rivers were spanned with pontoon bridges which were usually temporary structures raised for the immediate use of the troops and dismantled soon after. There are, also, a few references suggesting the existence of bridges of boats at points of access to important towns situated on the banks of large rivers (see Sub-section 24.2.2). Similarly we also have evidence suggesting the existence and use of wooden and suspension bridges, mainly in the hilly tracts.



A 17th Century Bridge with an embankment on River Vagor near Ajanta

24.3.3 Sarais and Other Resting Facilities

Sarais were structures that served the shelter needs of the travellers in medieval India. In the harsh conditions and inhospitable countryside in most regions of the country during the medieval period the travelers belonging to all classes but especially the merchants and the pilgrims needed more frequent places of rest and shelter than the widely spaced

towns and cities could provide. The *sarais* located along the main routes could provide places where men and their animals would be safe for the night and where they could be sure of food and water. Typified by large rectangular enclosures entered through wide portals with a series of cells ranged along the walls in the interior, the *sarais* are known to have been introduced in India by the Turks in the thirteenth century.

It may, however, be noted that the tradition of providing safe road with protected stations along its length dates back in India to a period earlier than even the advent of Christianity. During the reign of Chandra Gupta Maurya rest-houses for the comfort of the travelers are known to have been built in the towns as an act of charity by the state. For the reign of Asoka there is positive evidence for the existence of rest-houses on the main routes in the empire. The seventh pillar edict of Asoka engraved on the Delhi-Topra Pillar, presently standing in the Kotla Firuz Shah gives this information.

The institution of *sarais*, as stated above, is a Turkish institution. However the institutional form and the physical expression of the *sarais* might have altered considerably in accordance with the requirements of the contemporary society in India. By the middle of the thirteenth century *sarais* had begun to be built in the larger cities of Delhi Sultanate. Whether similar *sarais* were established in the countryside along the trunk routes is not certain, the possibility though cannot be ruled out. In the construction of the *sarais* the most significant contribution, however, seems to have been made by Sher Shah. The chronicles almost unanimously hail his efforts at establishing *sarais* for the convenience of the travelers on every important road in the empire, at regular intervals.

**THE BEGAM'S CARAVANSARAI AND ROUTE
FROM SURAT TO AGRA**

There are but two roads from Surat to Agra, one by Burhanpur and Sironj, and the other by Ahmadabad, and the first will form the subject of this chapter.

From Surat to Barnoly, 14 coss. Barnoly is a large town where you cross a river by a ford, and traverse, in this first march, a country of mixed characters, sometimes meeting woods, and sometimes fields of wheat and rice.

From Barnoly to Balor, 10 coss. Balor is also a large village, situated close to a tank which is about a league in circuit, and upon the margin of it there is a good fort, which, however, is not kept in repair. Three-quarters of a league on the near side of the village you pass a rivulet by a ford, but with much difficulty, because there are many rocks and stones under the water which may overturn a carriage. The route this second day lies nearly altogether through forests.

From Balor to Kerko, or, as they now call it, the Begam's caravansarai, 5 coss. This caravansarai is large and spacious, and it was built by the order of Begam Sahib, the daughter of Shahjahan, as a work of charity. For formerly the stage from Balor to Navapoura was too long, and this place being on the frontier of the country of those Rajas who are generally unwilling to recognize the Great Mogul, whose vassals they are, scarcely a caravan passed which was not ill treated; moreover, it is a forest country. Between the caravansarai and Navapoura you pass a river by a ford, and another close to Navapoura.

SIDHPUR

Continuing our route from Surat to Agra. From Amadabat to Panser, 13 coss; from Panser to Masana, 14 coss; from Masana to Chitpour, 14 coss.

Sidhpur is a fairly good town, so named on account of the great trade which it does in those coloured cottons which are called chites, and at four or five hundred paces on the south side there flows a small river. When I arrived at Sidhpur, on one of my journeys, I was encamped under two or three trees at one of the ends of a great open space near the town.

Jean-Baptiste Tavernier, *Travels in India*, Eng. tr. V. Ball, ed. William Crooke, Reprinted by Atlantic Publishers & Distributors, New Delhi, 1989. Vol. I, pp. 40-41, 65-66.



Begum's Caravansarai

The European travellers as well as the Persian chronicles testify to the existence of widespread net-work of *sarais* in Mughal India, well placed along the trunk-routes and also in towns and cities. For the city of Agra, Abul Fazl's *Akbar Nama* (c. 1595) refers to an order 'given to the workmen' towards the end of 1578 'that they should erect *sarais* in the various quarters of the capital, and make them over to benevolent and generous persons so that the poor and needy of the world might have a home without having to look for it, or to endure the pain of waiting'. The effects of this order were evident for in 1611 an English traveller John Jourdain wrote: 'There are many faire sarrayes in this cittie, where travail ours may lodge for a little or nothing'. Similar evidence for other cities can likewise be cited from the travellers.



A 17th Century Caravansarai on the Outskirts of Burhanpur

The notice should, however, be taken of a few analogous institutions, perhaps native in origin, which existed in Mughal India. One such institution is *dharamsals* or *posals* of the Jains. It appears that the *dharamsals* or *posals* were run by Jain merchants as rest-house-cum-worship places for the stay of the members of their own community in towns.

Evidently, the *dharamsals* or *posals* represented an institution of the same kind as the *sarais*, but with the following differences: (a) that they were mostly located in the towns (b) that unlike the *sarais* their use was restricted almost exclusively within the Jain community, and (c) that they tended to form a part of the religious establishment of this community.

Another institution of a similar kind has been reported from south India. It is called 'Choultry' and has been described as a building intended for the reception of travellers, covered and enclosed on three sides with walls, but open in front, where instead of a wall, the roof is supported by pillars. The choultry would provide shelter and facilities for cooking food. It was not covered in the form of rooms in view of the temperate climate of south India.

24.4 POSTAL COMMUNICATION

An organised system of communication of news and official and private papers and letters was also a necessity that resulted in the setting up of a system of postal communication. As suggested by Irfan Habib, "information on postal communication is sketchy for the early part of medieval period. Some details for the Mughal period, however, allow us to reconstruct the nature of postal establishment and its working." (Irfan Habib, "Postal Communication in Mughal India", paper presented at the *Indian History Congress*, 1985 session.). This reconstruction by Irfan Habib is by far the most comprehensive work on Postal communication. We reproduce here these details as given by Irfan Habib:

At the head of the Imperial organisation was an officer who in the seventeenth century bore the designation of *Darogha-i Dak-i Kul Mumalik-i Mahrusa*, the Superintendent of the Posts (Dak) of the Entire Empire. At his recommendation there were appointed in the provinces officials called *Darogh-i Dak*, who in later days were also encumbered with the post of *Sawanih-nigar* (intelligencer). The jurisdiction of the *Darogh-i Dak* did not necessarily coincide with the boundaries of the *suba*.

The official postal organisation was known by the name *dak-chauki*, *dak* being the word for post, and *chauki* signifying relay-stations for runners and horses. Besides the runner two horses were also kept at each of them. His contemporary Hamilton says the stations were spaced 10 miles from each other at caravanserais on the high-roads.

The foot-runners (*piyada*) employed to convey government posts were known as *meorahs*.

The sources of Akbar's reign do not specifically say that the *meorahs* as foot-runners ran in relays. Several times it has happened that a foot-*meorah* has travelled a distance of 700 *kurohs* in ten days to reach his destination. But a speed of 70 *kurohs* (about 158 miles a day-and-night) could not possibly have been attained by a single messenger: it must imply a relay-system.

Guards were also to be so kept in readiness at each *chauki* by the *faujdar*s (commandants), *thanaders* (police officials) and *zamindars* that "there should be not a moment's delay upon the arrival of the *nalwa* (official mail), presumably as it was handed over to the fresh runner. This means that at least two *meorahs* were placed at each *chauki*, apparently because they had to be available round-the-clock.

In order to achieve the speed in running that was expected of them, the *meorahs* had to train specially for their profession.

The *meorahs* also had the duty of escorting imperial *gurzbardars* (officers who carried peremptory orders) and *ahadis* (imperial cavalrymen) carrying imperial

orders or gifts, and to arrange guards (supplied by the *faujdar*s, *zamindar*s or *thanadar*s) for the within their jurisdictions.

The *A'in-i Akbari* gives some indication of the monthly pay the *meorahs* received in the Imperial establishment under Akbar.

The other principal means of transmission of messages and official papers was through mounted couriers. As we have seen, the term *dak-chauki* also comprehended conveyance of messages by relay-runners, but it seems to have been more usually employed specifically for the mounted messengers.

The papers that formed the official post at the level of the suba headquarters comprised “the sheets of the *Waqa'i*’ (the news-reports of the *waqa'i*’ *nigar*), the *Sawanih* (news-reports by the *Darogha* himself in his capacity as *sawanih-navis*), the (reports of the) *harkara* (spy), the representations of the governors (sic: governor), and the *Diwan* of the *suba*, together with the statements of accounts of the treasuries.

The official postal facilities were strictly confined to government papers and correspondence. There was apparently a tendency for *meorahs* to accept private letters, but this is explicitly forbidden in a *dastak* of 1683.

One may conclude this survey of the Mughal postal system by recalling G.N. Clark’s observation that one change in 17th century Europe which deserves to be called “revolutionary” was the rise of government postal services made available to all. Private communication channels could never obtain the speed, regularity and security of the government’s relay-system.

24.5 TRANSPORT

Our sources reveal that the system of transport in India during the medieval period was largely based on carts driven by animals. In addition, for faster travel, individual travellers or a group of travellers generally used horses. In such cases, though, the amount of goods carried by travellers had to be reduced. Porterage, both human and animal, was also a practice prevalent during this period. We give you details on the modes of transport used for communication in the following Sub-sections:

24.5.1 Wheeled Transport

Wheeled carts were the principal mode of transportation, especially of commodities taken over long distances. The travel accounts often give information on the size of the travel party and the number of wheeled carts comprising travel party. These carts were also used for transporting men, women and children and, it is logical to assume, were a preferred mode of transport for weak and infirm.

The types of wheeled carts used during the medieval period have been researched by Jean Deloche. We give here the details as stated by him:

There were at that time two types: the carts which were used by travelers, and the wagons intended for the transport of goods. The first, generally drawn by oxen (*bahali*, *manjholi*, *rahru*, etc.), or occasionally by horses (*ghor bahal*, *ekka*)..., were fitted out with a seat and a kind of baldaquin, supported by bamboos, and were decorated according to the social status of the passengers, with a carrying capacity of one or several persons. In western India they could cover some 50 km a day with oxen of good quality which were able to sustain a reasonably brisk pace. In the countryside of eastern Bihar (Purniya district), where the animals were less efficient, the *manjholi* and *rahru* covered at the time of Buchanan a daily distance of only some 20 or 32 miles. One also found in the western plains light four-wheeled carts drawn by oxen and reserved for the wealthy, bankers or dance groups. More robust carts (*chakra*, *larhi*, *saggar*), also having spoked wheels, were utilized for field work and the transport of

goods, as well as heavy wagons with solid wheels drawn by several pairs of oxen, which have today disappeared except in a few archaic and isolated corners.

Under such conditions, with a maximum load which could scarcely exceed 600 kilos, the carts covered but relatively short distances in one day: some 20 km, which nevertheless offered certain advantages over pack animals.

24.5.2 Porterage

Porterage, both animal and human, was also in use in medieval India though with varying degrees of usage in different parts of the country. Different kinds of domesticated animals were trained and used for this purpose. They were also categorised according to their load-bearing capacities and the speed and distances they could travel. Thus horses and mules formed one category which were mostly used as swifter mode of transportation. In the other category were animals such as oxen and buffaloes. They were employed in situations needing the haulage of bulky goods over long distances though with comparatively slower speed. Camels were used as special category animals for traversing desert regions. Similarly elephants were mostly used in special situations demanding the movement of very heavy loads over short distances.

The employment of humans for the purposes of porterage was mostly for short distance transportation of goods and for transporting other humans in palanquins or litters. The transportation of goods by human porterage has been described by Deloche thus:

Generally, objects were borne in one of two manners: either by placing them on the head, which was protected by a straw ring or by means of a rolled length of cloth, or by carrying them in two baskets suspended on either extremity of a pole borne on the shoulders, equivalent to a shoulder yoke, and called *bahangi* in the North, *kavadi* in the South. The implementation of these methods varied from region to region and among social groups, as well as according to diverse factors which frequently elude our knowledge.

Similar details for litter transport are also available in Deloche's work:

Conveyance by means of litter was widespread. Two types of vehicles were used: the one-pole litter or *palanquin*, consisting of a bodywork suspended from a straight or lightly curved bamboo, the richness of decoration or degree of comfort corresponding to the social rank of the travellers; and, the two-pole litter, made of a framework stretched between two parallel bars, often covered and curtained, almost exclusively reserved for the travel of sovereigns, the women of the *haram* or the procession of the heavy temple statues.

24.6 SUMMARY

An efficient transport and communication system has always been considered as essential pre-requisite for the economic advancement of the state and for the establishment of an efficient and effective administrative system. Under the impact of a growing process of monetization, which became pronounced from the second half of the sixteenth century, trade and commerce received great impetus all over the sub-continent. A major consequence of this was an improvement in the transport and communication in the region. A fairly widespread network of communication routes connecting almost all parts of India came to be reinforced along with an increase in the travel facilities such as resting places and communication support in the form of bridges and ferrys on river crossings. There also developed a fairly elaborate system of postal communication. The transport facilities, however, did not undergo any major change and remained more or less in the same form as they were earlier.

24.7 EXERCISES

- 1) Write a detailed note on the Communication network in the northern part of India during the medieval period.
- 2) What type of resting facilities were available to travellers? Elaborate.
- 3) Discuss the basic features of the organisation of postal communication in Mughal India.
- 4) Write short notes in about 400 words each on the following:
 - i) Bridges in medieval period
 - ii) Wheeled transport

24.8 SUGGESTED READINGS

Deloche, Jean, *Transport and Communication in India*, Volume 1, *Land Transport*, Oxford University Press, Delhi, 1993.

Farooque, A.K.M., *Roads and Communications in Mughal India*, Idarah-i Adabiyat-i Delhi, Delhi, 1977.

Habib, Irfan, "Postal Communications in Mughal India", Paper presented at the 46th session of the *Indian History Congress*, 1985, Amritsar.

Kumar, Ravindra, "Some observation on Masonry Bridges in Mughal India", *Art and Culture in Medieval India*, Prof. Nurul Hasan Festschrift, Qaiser, A.J. and Verma, S.P. (ed.), Jaipur, 1993.

Verma, H.C., *Medieval Routes to India*, Naya Prokash, Calcutta, 1978.

In addition to the above the travel writings of contemporary and near contemporary European visitors to India shall also be of interest. Given below are two of the more important travelogues.

Foster, William (ed.), *Early Travels in India, 1583-1619*, Reprinted by Oriental Books Reprint Corporation, of Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1985. These travels contain the accounts of seven early travellers who visited India between 1583-1619.

Tavernier, Jean-Baptiste, *Travels in India*, 2 vols., tr. Ball, V., Crooke, William (ed.), Reprinted by Atlantic Publishers & Distributors, New Delhi, 1989.

UNIT 25 EIGHTEENTH CENTURY IN INDIAN HISTORY

Structure

- 25.1 Introduction
- 25.2 The Eighteenth Century : Salient Features
- 25.3 The 18th Century Debate
- 25.4 The Mughal Empire, Its Decline and the Genesis of the Eighteenth Century
- 25.5 The Process of Regionalization
- 25.6 How 'Mughal' were these Regimes?
- 25.7 The Economy of the Eighteenth Century
- 25.8 The Indian Economy in the Late Eighteenth Century: The Emerging Differences
- 25.9 Summary
- 25.10 Glossary
- 25.11 Exercises
- 25.12 Suggested Readings

25.1 INTRODUCTION

For the people of India, the eighteenth century appeared as an age of dissolving certainties. Never in its history had the Mughal Empire appeared so vulnerable. Its citadels were being buffeted by Afghan marauders (Nadir Shah, 1739 and Ahmad Shah Abdali, 1748-1767), Maratha adventurers (the Peshwas) and various warrior-peasant groups (Jats, Rohillas, and the Sikhs), while its military-bureaucratic apparatus (the *mansabdari* system), which had been its pride and mainstay stood by helplessly. The fiscal system had also broken down, thereby threatening the life-styles of a genteel, highly urbane class of people and their dependants. The empire was bankrupt and all semblance of political governance and fiscal probity had apparently disappeared. And this was not all. The worst possible ignominies had been heaped on the house of Timur: two emperors, Ahmad Shah (1748-1754) and Shah Alam II (1759-1816) were blinded, and another, Alamgir II (1754-1759) was assassinated by nobles engaged in bitter factional feuds.

The speed with which this happened was bewildering. In 1700 the Mughal Empire under Aurungzeb was at its territorial zenith. Yet by the 1730s of the century many of its core areas had been fragmented into numerous regional polities. While some of these, like the Nawabi of Awadh or the Nizamat in Bengal, took roots as 'successor' regimes, others, like the Marathas or the Jats, emerged on the basis of their sustained and often violent opposition to the Mughal empire. A further thirty years down, the political fortunes of India were clearly moving in a different direction. A European power, the British East India Company, had succeeded in conquering much of eastern India and had begun to exercise a decisive influence on the state of affairs in other parts of the subcontinent. On the basis of these successful political ventures, the Company was slowly but inexorably creating the bases of an early-colonial system of rule. No wonder, contemporaries amazed at the intensity of the disturbances around them thought that this was an age when their world was being turned upside down.

Given the nature of these changes, the eighteenth century has attracted the attention of a number of modern historians and has gradually emerged as the hub of a lively debate. Because of this, the historiography of this century has seen some very innovative advances.

While interpretations differ sharply on many aspects, there are a few areas of unanimity. The older interpretation that the decline of the Mughal Empire was a result of Aurungzeb's religious bigotry has been comprehensively rejected. If Aurungzeb faced opposition from the Marathas, the Jats and some Rajput clans, he was equally troubled by recalcitrant Muslim nobles and officials who were instrumental in leading the factional struggles in the imperial court, and powerful Rajput ruling houses continued to be loyal to the empire.

The earlier stereotype that this was a century of moral decadence and cultural decay has also been rejected. Attention is now drawn to the robust and dynamic cultural life of the regional states, many of whom carried the legacies of high Mughal culture and blended these with the rich cultural heritage of the regions. Lucknow and Hyderabad had emerged as centres of literary and cultural patronage thus becoming the hubs of remarkable cultural efflorescence. Eighteenth century Banaras emerged as a great centre of banking and commerce in north India and combined this with its unique position as a centre of religion, education and pilgrimage. In Bengal, Nadia was the centre of Sanskrit learning and Dayabhaga Hindu law, and Bishnupur became the place where elaborate regional architectural and musical styles grew and flourished. In the south, Tanjore, under the patronage of its Maratha rulers, became a vibrant centre in the fields of religion, music and dance.

Thus historians now view the decline of the Mughal Empire and its aftermath not as a result of religious bigotry or the weakness of individual rulers but as a structural process: as a systemic rather than the personal failure of an individual. But sharp differences nevertheless remain about the causes and nature of this systemic failure. Opinions are divided between those who view the decline as a result of an economic crisis engendered by an over-exploitative ruling class and those who see the entire process as a process of local resurgence fuelled by a long-term process of economic growth. There are also differing interpretations of the changing relationships between state and society, the patterns and processes of economic growth, and the consequences of the tussle between the empire and the localities over the distribution of the fruits of this growth.

But the eighteenth century was not limited to the decline of the Mughal Empire and the consolidation of regional state systems. Much more fundamental changes were occurring in the subcontinent from the middle of the century, and these have understandably attracted the attention of a large number of historians with widely discordant voices. The areas of debate are centred around, first, the reasons of the transition of the Company from a commercial to a political entity; secondly, the roots of colonialism in India, whether it was a purely exogenous process, or did it have local, that is, indigenous roots; and thirdly, what was the nature of its social and economic impact. Implicated in these are questions of continuities and changes and the relative position and importance of each in the new colonial order.

25.2 THE EIGHTEENTH CENTURY: SALIENT FEATURES

In order to understand the broad processes at work, and to make sense of the immense range of issues thrown up by the differing points of view, it is worth keeping in mind the following salient features of this century.

First, the eighteenth century witnessed two transitions. One occurred with the parcellisation of the Mughal Empire into regional, and even sub-regional, political entities. The genesis of this transition lay in the crisis of the empire and its subsequent disintegration. While this mainly involved the redistribution of political power among regional social groups,

the other transition went much deeper. This occurred towards the middle of the century and was unleashed by the political ascendancy of the British East India Company after the battles of Plassey (1757) and Buxar (1763). Involved in this were some new developments, the most important being the transformation of an overseas trading organization, the East India Company, into a ruling power in India, and the use of this political supremacy for military and commercial purposes.

Second, in order to fathom its full implications historians are beginning to look upon the eighteenth century as a 'long' century. Recent interpretations tend to see the political dynamics of this century beginning to unfold in the 1680s amidst the fragmentation of the Mughal Empire. By the 1720s the aftershocks of the disintegration had been absorbed by the stable regional polities which had emerged in most parts. From the 1750s major political realignments had started occurring under the growing hegemony of the Company. This process continued till the 1820s by which time all major indigenous regimes had been either annexed or had become subsidiary allies of the Company. Thus in terms of its political significance the eighteenth century encompassed the last two decades of the seventeenth and the first three decades of the nineteenth centuries. From the economic perspective too a 'long' view is a worthwhile one. There is now substantial evidence to show that political regeneration in the provinces was accompanied by regional economic reorientation. While some places declined, economic growth occurred in other areas and this was spearheaded by local landed and commercial classes; and compared to a prevalent view which stresses economic dislocation from the middle of the century, recent research shows that despite the pressures being imposed on indigenous structures by the ascendancy of the Company, prospects of economic growth were not abruptly closed. Even in Bengal, where the Company's regime was at its most intrusive, commercial and agricultural expansion continued though in somewhat modified forms. Such was the situation till first two decades of the nineteenth century, when by all accounts the slow growth of the eighteenth century was coming to an end.

A **third** meaningful perspective, which has been of a recent vintage, is to see the relationship between the Indian economy and the global economy. The Indian Ocean was part of an elaborate commercial network with the Atlantic and the Pacific, and it was the increasing Europeanisation of early modern trade that set the tone and the future of India's commercial life in the eighteenth century. In its long engagement with this commerce, the Indian side had always provided goods and the services, but under conditions of demand which were mediated by the global networks of European commerce. The profits were significant from the Indian point of view, and much wealth flowed into India through this channel. From the perspective of understanding the eighteenth century, these developments are significant. A substantial part of the problem of continuity between the Mughal and post-Mughal and from there to the early-colonial can be understood if one remembers that Indian commercial life and merchant capital was deployed in the service of wider networks of connections whose impulses were determined as much as from Africa, South-east Asia and Europe as they were from Agra and Delhi. The early-colonial intervention deepened this incorporation. One instance of this was transformation in the networks of the intra-Asian trade in the middle of the eighteenth century when the earlier linkages between India and west Asia were now redirected towards east and south-east Asia under the directions of British commerce. Since the eighteenth century was period of global economic expansion (compared to the seventeenth century which is commonly recognized a period of crisis), and since India's overseas trade also increased phenomenally in this period, any view which sees the eighteenth century only as a period of economic disjuncture or crisis is a questionable one.

25.3 THE 18TH CENTURY DEBATE

Given the rapidity and the significance of the changes which occurred in the 18th century, it is natural that there are differing interpretations of almost every issue involved. Broadly, the debate follows the traditional division of this century into two halves and the protagonists of different points of view can be divided into two broad groups. For the period up to 1750 one can divide them into those who hold an empire-centric view and those who hold a region-centric view. For the period after 1750, the views can be held to broadly conform to the Indianist and Europeansist positions. In other words, for the first half of the 18th century, there are historians whose view of the 18th century is based on the centrality of the Mughal Empire and its institutions in the workings of the society and economy of the country. In this view the decline had catastrophic results. While the extreme edge of this view would interpret the decline as one of political chaos and anarchy, recent interpretations see it more in terms of a structural collapse but with very little positive emerging from the rubble. The regional formations, which succeeded the empire, are ascribed with little potential for improving their performances beyond the levels already achieved as Mughal provinces, whereas oppositional movements like the Jats, Sikhs and Marathas are considered nothing more than predatory-formations with very little positive to speak for them.

In contrast are those who view the developments from the perspective of the provinces and localities. Instead of giving the empire a superordinate role, as is done in the empire-centric perspective, the region-centric approach focuses on how social groups inhabiting different areas of the empire became active agents in determining the course of the political and economic trajectories for their own ends. At one level, the structures of Mughal provincial government was fundamentally transformed which led to the creation of autonomous kingdoms in Bengal, Awadh and Hyderabad. At another level there arose those polities, like the Marathas and Sikhs, whose genesis lay in opposition to the Mughals, but who, ironically, created political systems within the imperial domains which also made use of many of the administrative methods of the Mughals. All these modified provincial authorities gave the erstwhile Mughal grandees new opportunities to deepen their hold on power in the regions, and in addition, their clients and family members were also able to amass large bundles of proprietary rights and rights to farm revenue from the state which in course of time became hereditary estates. A process of commercial growth in the regions underpinned all this.

For the post-1750 situation, the Europeanist explanation gives primacy of place to the ascendancy of a triumphant, expansionist Europe (especially Britain) defeating an India in chaos and disarray. This is by far the most dominant view amongst Indian nationalist and Marxist historians, and provides the foremost historical perspective on the roots of India's economic backwardness. The nationalist view overwhelmingly has been to see the anarchy in eighteenth century India as a momentary but catastrophic lapse in an otherwise unfolding saga of nation building in India's history which allowed a foreign power to conquer and to colonise the country. While the more traditional Marxist view was to see the rise of British rule as a necessary evil as it ended much of the 'feudal' disintegration of society in the eighteenth century, more recent variants see it as a system relentlessly driven by the search for profits, commodities and markets, with no 'progressive' aspects to its credit. But some common assumptions are embedded in both historiographical perspectives as far as the eighteenth century is concerned. The first is the assumption shared by both that order and stability could exist only in large, pan-Indian political structures; and since this disappeared in the eighteenth century, it was a period of chaos, anarchy and decline. The second commonly shared ground is

that of discontinuity. Both see British rule as a fundamental disjuncture: a completely foreign and alien system of domination, totally removed from the traditions of Indian governance or culture.

On the other hand, the Indianist perspective tries to adopt a more differentiated perspective of this transition to colonialism. The rise of the British power is seen not as a one-sided process of conquest and subjugation, but also as a result of Europe's (especially Britain's) deep engagement with India over a long period. Instead of a forced grafting of a foreign regime on Indian soil, the emphasis is on the way in which conditions in Indian society determined the emergence and form of British India. In this argument, the shape of British rule in India was determined as much by the metropolitan interests as it was by Indian agency. Instead of seeing the eighteenth century as a period of unchecked anarchy, the Indianist perspective devotes great attention to the political stability imparted by the 'successor' states of the Mughal Empire. Instead of seeing a picture of economic regression in the disintegration of the empire, the Indianist view is that India's commercial and military sophistication continued in the eighteenth century and the Company used this to its advantage. While there was strong indigenous resistance to this intrusion, Indian agency was a vital ingredient in ensuring the ultimate success of British rule in India. British rule was based on Indian norms of governance, modes of agro-commercial management and the skills of its human resources, but it successfully modified these for its own purposes. Thus in the Indianist view, the eighteenth century was not a century of ruptures, but a century of deep continuities in which past institutions and structures continued albeit in substantially redeployed forms in the midst of vastly expanding commercial opportunities. Those subscribing to this view are often infelicitously referred to as the 'Cambridge School' as many of the protagonists are situated in North America and a number of Indian historians also share this perspective. However, together they constitute what is commonly referred to as 'revisionist' historians.

25.4 THE MUGHAL EMPIRE, ITS DECLINE AND THE GENESIS OF THE EIGHTEENTH CENTURY

Much has been written about the decline of the Mughal Empire. As stated earlier, theories of moral turpitude, weak rulers and communal policies need not be taken seriously as they are empirically unsustainable. Later Mughal emperors, for example Farrukh Siyar, tried in their own way to stem the rot. There is no evidence to suggest that these emperors abdicated their responsibilities, but events were moving too fast for a single person to handle. The other theories focus on a rapidly disintegrating structure, a severe crisis in the Empire's fiscal and *jagirdari* systems, which severely compromised the institutions of governance. This has been written about extensively and Irfan Habib's arguments have been the most influential. For Habib, while the capacity of the economy to expand was self-limiting, there was an unrestrained tendency of the Mughal fiscal system to appropriate greater and greater amounts of the peasants' surplus. This sparked off a tri-polar confrontation between the imperial ruling class, the hereditary land holding classes (the *zamindars*) and peasants, which soon went beyond the capacity of the system to contain or control. Satish Chandra provided important reason when he explained the empire's demise in the inability of state functionaries to ensure the desired efficiency of the assignment (*jagir*) system, thus leading to intense factional struggles. In a similar vein Athar Ali saw the crisis as a result of a growing shortage of *jagirs* and the inability of the system to accommodate the growing number of aspirants to the assignment system in the aftermath of Aurungzeb's Deccan campaigns. However, an important corrective to this was provided by John

Richards who showed that *be-jagiri* (*jagir-less*) wasn't problem in the Deccan as it was not a deficit area, but it was the larger failure to devise a viable system of accommodating local elites in the Deccan which was proving to be the Empire's major drawback in the Deccan. In this view, the crisis arose because of an imperfect imperial consolidation, visible in the failure of the state to effectively incorporate the local agrarian elite, thereby creating deep fissures in the empire.

An interesting argument made by Marshall Hodgson is that the three Islamic empires – the Ottoman, the Safavid and the Mughal – were successful not because of their adherence to a single formal religion, but because of their successful control over the deployment of gunpowder, and the reason why they atrophied or failed ultimately was because of their inability to keep up with the changing technologies of warfare that were happening in the western hemisphere. Can this be applied to the Indian case? Recently, Iqtidar Alam Khan has drawn our attention to the simultaneous correspondence between gunpowder, centralization and resistance: while access to muskets, cannons and gunpowder strengthened the sinews of imperial power, these were simultaneously used by its more powerful subjects to arm themselves and to resist the intrusion of the state. It was logistically impossible to prevent such crucial technology from percolating downwards. Therefore, any notion of the state's exclusive control over firepower as a prescription of its success tends to break down as *zamindars*, *chaudhuris*, and dominant-peasant groups controlled large numbers of armed militia. The Marathas, the Sikhs and the Jats used muskets, as did most other rural-magnates. One must also remember that these people enjoyed various traditional rights and perquisites because of their social/caste standing in the countryside. This made them capable of drawing additional human resources to augment their military strength if necessary, which they did regularly. Though the Mughal army controlled a great amount of military hardware, as a collectivity the local magnates were always a serious military threat, especially considering their strategic location in the countryside. By the eighteenth century the terms of reference between the state and rural magnates, as far as military technology was concerned had equalized because of the concerted upsurge in the countryside. Stewart Gordon has shown how the Marathas were successful in tapping into a vast and heterogeneous military labour market, including the one being provided by Europeans, in the eighteenth century.

Therefore, in order to understand the process of Mughal decline one has to take both a long-term view and a conjunctural view. The long-term view is that the Mughal Empire provided a number of institutions ostensibly to centralize power, but unfortunately those led to periodic crises in institutional and fiscal arrangements of the empire, which the Mughals were unable to sort out effectively. Some examples of this are the inability of the state to affect parity between assessment of revenue (the *jama*) and what was actually collected (the *hasil*), or its failure to prevent transmission losses of up to 20 percent of its revenue from the countryside. There was also the more structural inability of the empire between a set of enduring systems between the agrarian elite and the state. Both existed in a state of perennial contradiction. Of course, there were instances of rapprochements between the two. For example, there was the so-called Rajput policy of Akbar; but even this did not cover the whole of Rajputana or the entire grid of Rajput clans, nor was it able to contain a potent source of political friction. This was further aggravated by the inability of the state to strike out workable (consensual) arrangements with a myriad of small *zamindars* scattered even in the heartland of the empire as well as all over the country, and this accentuated problems. *Mawasat* and *zor-talab* (perennially refractory areas) thus existed cheek by jowl with *sir-i hasil* lands. These were the long-term structural problems.

The conjunctural problem assumed the form of the Deccan crisis, and the sustained oppositional movements of the Jats and the Mewatis in the north India, particularly in the Ganga-Yamuna *Doab*, and of the Sikhs in the Punjab. Other places, like eastern India, where great commercial advances had taken place in the seventeenth century, there was the difficulty of getting adequate tribute as *zamindars* had been able to use a slack revenue system to their advantage. Though this did not cause political instability, it accentuated the financial problems of the empire. This was accompanied by the convergent crisis in two other Asiatic empires which disrupted the established and highly profitable commercial linkages between India and west Asia. In fact in one influential explanation of the economic problems being faced by the great Mughal port of Surat is ascribed to the crisis of these empires.

The conjunctural crises intensified the long-term conflicts between the imperial imperative and the local imperative and brought the empire to its knees.

What is being suggested here is that to understand the endogenous processes of centralization, decentralization, and crisis in the Mughal Empire, the constantly changing and negotiated relationship between the centre and the localities, and the perpetual tensions between the imperial ruling class and the local magnates, have to be kept in mind. These relationships were never fixed at the dictates of the state; they were constantly changing and unfolding. The analysis of the Mughal Empire as an establishment of negotiated political relationships means that there was greater flux in its interstices, and this fluidity allowed for a greater constellation of social groups in different parts of the empire and this explains the various social configurations in different parts of the empire. Studying the empire in terms of the fluidity of the relationship between the centre and the provinces allows us to understand articulation between the regions and the centre. The more the empire tried to centralize, the gainers were the regional groups, which latched on to this process of centralization and benefited from it. As the empire generated enormous wealth through its revenue mechanisms, the tussle between its maximization and the attempts to retaining larger and larger proportions of this wealth in the localities grew stronger.

25.5 THE PROCESS OF REGIONALIZATION

If one adopts a region-centric perspective, alternative versions of the empire and its collapse begin to emerge. Even in the Persian language sources, there are possibilities of reading more decentralized and vulnerable versions of the empire. For example, Andre Wink's advances the notion of *fitna* to argue that the system was constantly being subverted from within, and that there were forces of factionalism and centrifugalism constantly pulling away from the centre. Stephen Blake's description of the Mughal system as a 'patrimonial-bureaucratic' edifice is another such variant reading. What this means is that the Mughals were always walking a tightrope while attempting to balance an elaborately personalized style of rule (the patrimonial) with a highly militarized and centralized vision of the empire. This created a peculiar contradiction, and as M.N. Pearson has argued, the Mughals failed to bridge the gap between a paternalistic, highly personalized form of government and its military aspirations; that while trying to be militarily effective it was not able to carve out a system of rule based on an autonomous military-bureaucratic system. Muzaffar Alam also shows how the imperial process was continuously being subverted by the aims and aspirations of the local gentry constantly attempting to consolidate themselves at the expense of the imperial ruling class.

What we now see is a whole range of pressures pulling away from the Mughal state: these ranged from factions at the centre to the independent consolidation of the local and regional elite. The nature of the elite was not the same everywhere. While in Awadh such

people belonged to the upper echelons of the social system (the *ashraf*), elsewhere they could include more 'subaltern' elements like the Jat peasantry in the Punjab or the Sadgop *zamindaris* on the fringes of the settled zones in Bengal. Merchants and bankers played a crucial role in underwriting them for a consideration. It is this diversity which appears as a striking feature of the newly constituted regional elite in the eighteenth, thus giving us a picture of a system buffeted by multi-polar tensions. The crisis now can be seen as one created by resurgent aspirations of groups below composed of what C.A. Bayly has described as 'many types of military, merchant and political entrepreneurs' all coming together to 'capitalise on the buoyant trade and production of the Mughal realm'. This resurgence did not mean a decline; it meant the social displacement at the top combined with the replacement of some institutions and the reconstitution of others.

The basic point is that seeds of change germinated within the Mughal institutions themselves. Paradoxically, the institutions of centralization generated their own counter-tendencies. Much of the process of regionalization can be explained by the consolidation of the imperial elite who took advantage of the disintegrating *jagirdari-mansabdari* complex for their own purposes. Similar tendencies were at work in the *zamindari* system too. While the Mughals sought to make the *zamindars* work as intermediaries in their land revenue administration, these local elites, highly armed and ruling over substantial domains like petty kings, generated alternative, localized, sub-imperialisms. Also recent researches, particularly in the Mughal provinces of Awadh and Bengal, have done much to revise the older views of *zamindars* as a class of rural exploiters. On the contrary, they were active agents in local economies as financiers, entrepreneurs and consumers. They financed agricultural reclamation, set up markets and traded, and consumed in cash. Their retainers became a sub-elite between them and the peasants, as they were usually given prebends, which they used to extend small zones of high-value consumption in the countryside. They thus rose in rebellion to defend the fruits of their prosperity from the intrusive pressures of state fiscalism. These in turn were used by the provincial satraps to enhance their powers vis-à-vis the centre. In Awadh, the provincial *subahdar* enhanced his power by using such agrarian disturbances as a bargaining counter against the centre. In Bengal, the *subahdar* used the pressing financial needs of the empire and the recalcitrance of some local *zamindars* to augment his power base.

Recent studies of the political processes in eighteenth century have indicated the growth of three types of regimes. First, there were those that replicated the former imperial structures. Ruling these 'successor' states that nominal Mughal governorships: the nawabs of the Deccan, Awadh, and Bengal who tended to perpetuate Mughal forms and practices. The second types of regimes were the polities whose origins were independent of the Mughal Empire. These were the Maratha, the Jat and the Sikh regimes, whose crystallization established new systems, thus representing a real and persistent danger to the Mughal Empire. The third political complex was extremely significant. This comprised many local principalities of Muslim, Hindu or tribal origin located in the frontiers of the semi-autonomous states. As burgeoning Jat *zamindars* began to push them out of the Ganga-Yamuna *Doab*, Rajput clans began establishing petty-kingdoms from Gujarat in the west to Awadh in the north through a process of conquest, migration and settlement. In Rohilkhand and Bhopal, Afghan chiefdoms were established by an innovative combination of conquest, revenue-farming and trading with the northwest frontier. Agricultural colonization, revenue farming and commercial dealings were also instrumental in the consolidation of the Banaras Raj and the great *zamindari* households of Burdwan or Qasimbazar in Bengal. On the northeast frontier of India Mughal expansion was stopped in the 1680s by the Ahom dynasty that maintained an independent Assam under a Hindu tradition of kingship until the British annexed it in the early nineteenth century.

In the south, while the really great royalist concentration occurred only from the 1760s in Mysore, the situation before that, as David Ludden shows, was characterised by petty kingdoms being formed by the Telugu-speaking *nayakas*, who had been subordinate to Vijayanagar and had established their autonomy on its downfall, or from *palayakkarans* or (poligars) who managed to carve out small domains from the territory of the *nayakas*, based on temples and a highly militarised population. On the Malabar coast, the situation was an uneasy alliance between the coastal kingdoms and the land-owning households held together by a mutual sharing of profits from trade, land and labour. An intrusive monarchical system was introduced in this region only after the invasion by the aggressive Mysore state under Haidar Ali and Tipu Sultan.

25.6 HOW 'MUGHAL' WERE THESE REGIMES?

Recent studies of regional government and administration have shown that the political changes in north India in the first half of the eighteenth century denoted no sudden deviation from the established Mughal pattern of politics in the regions. Some of the developments which led to the transformation of the Mughal provinces of Bengal, Hyderabad and Awadh into virtually autonomous kingdoms can be traced back to the end of Aurangzeb's reign and together represented a long-term process of change towards a regional fragmentation of power. The rulers of successor states who were nominal Mughal governors, the Nawabs of the Deccan, Awadh, and Bengal, naturally transplanted many of the cultural idioms of the imperial court to their new capitals. These regimes tended to utilise Mughal forms and practices of governance. Even the Nawabs of Arcot, whose rule was propped-up by the support they could garner from the English, was introducing Mughal principles of administration for the first time in this region. The Marathas, who claimed sovereign rights for themselves in their territories, nevertheless collected revenue on Mughal principles, even if they used different names for their officials. Although the Sikhs developed distinct community institutions like the *khalsa*, which were strongly opposed to Mughal claims, they still collected revenue on Mughal principles and alienated large blocks of land in Mughal-style *jagirs*. Persian remained the official language of diplomacy, of high-level administration, and of high culture in each of these regimes.

Yet there were major differences. Though these regimes replicated Mughal institutions in their own territories they were not regionalised prototypes of Mughal rule. They used Mughal norms but only to a very limited extent and in highly redeployed forms. There were many specific differences.

First, though many of the larger provincial regimes (the nawabis) were established by Mughal grandees, they were highly suspicious of that very institution on whose back they had ridden to power, namely, the *jagirdari* system. Each of the *subahdars* (governors) therefore either broke with its essentials, or modified it enormously to suit his designs. In Bengal, Murshid Quli Khan resumed all imperial *jagirs* and transferred the holders to Orissa. In Awadh, the structure of the *jagirdari* system was maintained, but large *jagirdaris* were broken-up and reallocated among smaller assignees and the nawabs maintained close control over *jagirdari* officials (the *amils*, revenue collectors). In Hyderabad the power of *jagirdars* were curtailed by the appointment of officials like the *daftardars* (record keepers) and *taaluqdars* who were directly under the control of the Nawab himself. Secondly, the Mughal practice of separating the executive and fiscal powers of different office-holders in the provinces was henceforth broken. Murshid Quli Khan appropriated the dual functions of the *diwan* and *subahdar*, as did Asaf Jah in the Deccan, while in Awadh, Burhan-ul Mulk combined the high offices of *subahdari* and *faujdari* (commandant).

The **second** major difference lay in the sphere of fiscal management, and this was ubiquitously widespread notwithstanding the difference in the size of the regime. While the central financial prop of these regimes was the assessment and collection of the land-tax in cash, the management and its execution was given over to revenue-farmers (*ijaradari*) in preference to paid officials or landed intermediaries. The practice of *ijaradari*, thoroughly disapproved by the Mughals, exploded all over India in the eighteenth century. The ambits of tax-farms were extended beyond *mal* (land-revenue) to include *sair* (non-agricultural) taxes as well as various types of public offices and positions. Though the conventional view of historians has been to see *ijaradari* as a ruinous expedient, the evidence on which this view is based is far from conclusive. In Rajasthan, where Dilbagh Singh has extensively studied the spread of this system, an *ijara* contract was reckoned not on the assessed revenue (*jama*, which was often unrealistic) but on the basis of the actual collections (*hasil*) of the previous five to seven years. This would provide an in-built check on rack-renting though there were bound to be loopholes in the system. Studies of Awadh and Banaras have shown that *ijaradari* raised revenue and ensured a higher return for the state while minimizing its administrative overheads. It also provided the scope for a diverse range of people to become implicated in the interstices of the state's fiscal system. Successful *zamindars* could extend their holdings by farming extra land and people with money developed a stake in agrarian management, either by taking on farms themselves or, as was the more common practice, by advancing money to those who did. Revenue farming seems to have expanded in a big way in the Coromandel from the middle of the century, with the 'landed and military gentry' taking the lead in bidding for such farms.

This introduces the **third** element of difference between the Mughal system and the new ones. In all the regional polities, irrespective of their size or geographical location, there developed an extremely close nexus between the state and people with money at their disposal. According to Karen Leonard, the period of imperial decline coincided with the increasing involvement of banking firms in revenue collection at regional and local levels. This involvement increased in the first half of the eighteenth century. By 1750 bankers were the ones who controlled access to the actual collection of land revenue, through provision of credit or cash. They provided the funds that enabled people to become tax farmers and had their own agents into the countryside to collect from the land given to them as security or mortgage. Throughout India the richest merchants and bankers were gaining a stake in the new political order, and in several of the smaller eighteenth-century states trader-bankers had become the key political group by the 1760s. In the larger states, like Bengal, individual merchants were given monopoly rights over commodities like salt and saltpetre and wielded political authority in the saltpetre districts. Why did this reorientation occur? Stable regional centres began to attract banking capital. Bankers migrated from the Mughal core to places like Farrukabad, Lucknow, Murshidabad, Patna and Banaras where they began extending credit to rulers and *ijaradars* (revenue farmers) and guaranteed the remittance of revenue from where it was collected by bill of exchange to the ruler's capital or wherever else it was needed. In areas characterised by political instability like Gujarat, Rajasthan or the western Deccan, merchants quickly found alternative avenues of investment and patronage. The vulnerability of the Mughals against the Marathas led merchants and bankers to migrate from Surat to other cities. Many shifted to Poona, the capital of the Peshwas and to other cities, like Baroda, in the Maratha Confederacy. Credit transactions were quickly extended to the European companies, particularly to the English, who were emerging as major players in the regional politics of this period.

The **fourth** area of difference was the gradual but steady insinuation of the European, especially British, element in the fabric of Indian political life. This was an important

development, whose implications have constituted one of the principal concerns of the Indianist reading of the eighteenth century. Instead of being a great disjuncture, the logic of the events of the middle of the eighteenth century can only be understood as part of a long pre-history of the interface between Europe and India. Though based primarily in commercial transactions, Indian rulers were no strangers to the skills of the Europeans in land warfare as well as at sea. Numerous Europeans were employed in the artillery wing and in the armouries of Mughal armies. During the eighteenth century the situation began to change as many of the larger regional polities began developing massed infantry drilled and armed in the European fashion with European technical and logistical expertise, and Europeans, as P.J. Marshall, says, began to 'infiltrate regimes that were willing to hire services for cash'.

Its full manifestation occurred in the 1740s. As the tussle between the Awadh family of Anwaruddin Khan and his son Mahomed Ali Wallajah, on the one hand, and the Deccani Navaiyitis, a major administrative family led by Chanda Sahib, flared up in 1740s, the British and the French became drawn into the politics of regional state formation. The British supported the Wallajah of Arcot, the French propped up Chanda Sahib. British troops were also hired out to the Wallajah to enable him to consolidate his control over the southern Poligars and even in an abortive attempt to procure for him the very rich lands of Tanjore. Chanda Sahib was defeated and killed in 1752. By 1763, British naval supremacy and financial clout had become virtually unassailable in the Carnatic. In return for their services, the British were rewarded with leases of revenue from enormously productive tracts of land (called 'subsides') and allowed to station their military garrisons in the lands of the Nawab. Equally significant was another dimension of this relationship. British personnel in Madras privately loaned enormous sums of money to the Nawab: money which was borrowed in turn from Indian and European investors, thereby giving rise to, what Bayly describes as 'a paradox typical of eighteenth-century India' in which 'indigenous capital penetrated into the emerging Muslim state system through the good offices of British speculators'.

25.7 THE ECONOMY OF THE EIGHTEENTH CENTURY

Two problems have engaged much of the debate on the economy of eighteenth century India. The first is the economic context in which such diverse patterns of regionalization took place, or whether the processes of regionalization were symptoms of economic expansion, crisis or stasis? The second concerns the state of the economy in the early-colonial transition.

The creation of post-Mughal polities wasn't always a smooth process. From the descriptions contained in contemporary literature, the impression one gets is that of a serious breakdown, anarchy and economic uncertainty. But some of it appears to be exaggerated. The transitions in Bengal and Awadh were largely peaceful, though serious disruptions occurred in the Punjab and the eastern Deccan. Most serious accusations were levied against the Marathas. Their armies ravaged the rich commercial province of Gujarat in the early parts of the century, followed by plundering raids into eastern India in the 1740s and Rajasthan in the late eighteenth century. But whether these, and other instances of temporary dislocations were enough to cause a serious reversal from the levels of prosperity in the seventeenth century is a debatable issue. As Stewart Gordon's study of Malwa shows, once conquest had been completed and Maratha rule was secure, effective administration and a regulated revenue demand on Mughal principles was installed. Agriculture was encouraged and trade revived. The domains of leaders like

Sindhia, the Gaekwads or the Bhonsles supported powerful armies sustained by effectively administered revenue systems by the late eighteenth century. Elsewhere too the situation was mixed. Punjab was clearly beginning to recover from its travails in the late eighteenth century, whereas Rajasthan, whose economic problems began at that time, was thriving during the process of the Empire's disintegration. Stable regimes had also been formed in Rohilkhand, Farrukabad and in Banaras. Expansionism was ingrained in many of these regimes. Awadh managed to usurp vast territories from the Afghans of Rohilkhand. In the south, Mysore under the Sultans annexed most of the Malabar coast, and Arcot spread along the south-eastern coast to grab the domains of the southern *Nayakas*. Such a differentiated process of political formation does not support notions of the decline of the Mughal Empire as an unmitigated economic disaster.

Emergence of New Town Centres

Given the absence of concrete indicators of growth, it is very difficult to clinch an argument either way, but some broad parameters can be considered. Though the economy continued to be predominantly agricultural, the levels of urban growth seemed to have expanded not declined in the eighteenth century. Contemporaries lamented the decline of Shahjahanabad, while other cities, like Sirhind in the Punjab definitely suffered. Mathura which was considered a prosperous and populous city till the middle of the eighteenth century suffered a major blow after it was sacked by Abdali's forces in 1756; yet further down the Yamuna, the great imperial city of Agra was still considered by many in the 1760s to be the richest city in the Mughal empire, not having been plundered by either the Afghans or the Marathas. On the other hand, there is evidence to show that smaller places like Ballabgarh, Bharatpur and Kumbher were growing, and existing trading centres like Hathras or Panipat actually expanded.

Even if north India presents a mixed picture of urban existence, it is impossible to find urban contraction in other parts. Contemporary observers talked eloquently of the increase in Calcutta's population and importance, and while Calcutta's case may be dismissed as a colonial enclave, Dhaka had about 450,000 people living within its environs in 1765 and continued to be as thickly populated later on. In 1756, Murshidabad was declared as 'one of the richest cities in the world'; and in 1764 it was described, by no less a person than Clive himself, as '[a city] as extensive, populous, and rich as the city of London, with this great difference that there are individuals in the first possessing infinitely greater property than in the last named city' In addition to these premier places, Bengal also had cities which were positioned at medium levels of consumption. Towns such as Bhagwangola, Azimganj, Katwa, Kalna, Chinsura and Chittagong were swiftly becoming intermediate centres of consumption, trade and habitation in the eighteenth century.

In western India, the partial decline of Surat was more than offset by the rise of Bombay. There also appears to have been no demonstrable correlation between political turbulence and urban contraction in central India. In Malwa, Maratha depredations in the 1720s had not prevented a pattern of urban growth along an axis different from the previously established Mughal *sarkar* towns. By the 1760s Ujjain expanded as Sindhia's capital and Indore became the base for the Holkar's, and by all accounts this city grew into a large and prosperous trading centre in the last decades of the century. Poona became the new outlet for Chanderi silk during its rapid growth from a small town to the capital of the Marathas. Burhanpur which had earlier served as an entrepot for trade along the Agra-Surat axis now shifted its hinterland to include Pune and Nagpur and Lucknow and Allahabad in the east. In the south, where the decline of the Empire had only a tangential resonance, towns continued to grow. Madras expanded at a phenomenal pace, and under the new regime Hyderabad witnessed remarkable growth, both as a

place of elite residence and as a node of great commercial importance. While the decline of the Empire seems to have had an initially disturbing effect on some centres on the Coromandel, places like Masulipatnam, Nagapatnam and Devanapatnam quickly recovered under the political stability provided initially by *Nayakas* of Ginji and later by the better-developed regional kingdom of Tanjore.

Therefore, the eighteenth century may actually have witnessed a net accretion as far as town life, and presumably an urban-economy, are concerned.

Expansion of Overseas Trade

The other indication of India's economic vitality was the considerable expansion of its overseas trade. In the early 18th century there were disruptions with the damage to the great port of Surat caused by the Maratha invasions and by the crisis in west Asia. Anglo-French conflicts caused temporary setbacks in the Carnatic, but despite this India's overseas trade with Europe increased steadily. Om Prakash has recently shown that while the exports by the Dutch East India Company (VOC) from Gujarat suffered a steady decline between 1700 and 1750, these were counterbalanced by the enormous expansion of exports from Bengal between 1700 and 1752. These fell subsequently, but hovered at an average of about 2 million florins a year till 1785, which was still substantially higher than the value of exports at any point of time in the seventeenth century. While the Dutch ascendancy had certainly ended by the middle of the century, English trade was undergoing its most phenomenal expansion: expanding from £ 1.15 million in 1698-1700, to £ 1.92 million in 1738-40, £ 2.1 million in 1758-60 and £ 5.8 million in 1777-79. The pride of place had now shifted to Bengal. Some historians believe that prior to the British conquest of Bengal, the component of Bengal's export trade under European control was secondary compared to the trade with Asian markets, but there is very little evidence to substantiate such a claim. On the contrary, contemporary estimates of bullion imported into pre-Plassey Bengal show that of the annual importation worth Rs. 10 million, the share of bullion from Asia seldom exceeded Rs.2 million. India's trade was structurally linked to Europe much before the fact of colonization, and the major fall-out of this linkage was an unprecedented export-expansion accompanied by massive injections of bullion into the Indian economy. On an average, the Dutch pumped in 4.69 million florins worth of bullion in the Indian economy between 1700 and 1760. The English East Company brought in a total of £ 8.72 million worth of bullion into India between 1701 and 1721; this had gone up to £ 12.9 million between 1733 and 1756. The victory at Plassey introduced changes to the structure of this trade, but as will be discussed below, these were temporary closures.

The economic implications of such a massive expansion in trade have yet to be worked out for the eighteenth-century as a whole, but they are likely to have been positive. At a subcontinental level, Om Prakash visualizes the impact to have generated expansions in 'income, output and employment'. In Bengal alone he estimates that full-time employment opportunities in the artisanal sector increased at least by 10 percent by the middle of the century. Though he discounts any inflationary impact of this massive influx of bullion, a rise in prices of commodities like rice and sugar is suggested in the prices of provisions listed in the purchases made by the English company around Calcutta. This would suggest that increases in money supply occasioned by larger and larger amounts of silver-bullion being pumped into the economy might have led to a simultaneous rise in both output and prices in the province. It seems Bengal wasn't an isolated instance as Prasanna Parthasarathi has recently detected a similar tendency on the Coromandel coast from the 1720s.

The important point is that bullion was flowing to recharge provincial economies. While substantial amounts of this were being sent to the imperial centre as tribute, most of it tended to stick in the provinces. Early Company observers estimated that such injections of bullion had resulted in a net accretion of at least 25 crores rupees (£25 million) to the Bengal's monetary reserves by the middle of the century. Provincial reorganization could thus occur in the midst of expanding regional economies. This would explain why the hallmark of the eighteenth century 'regional centralization' was an increase in the assessment (*jama*) in the provinces and the propensity of the state to collect revenue in cash.

An overwhelming consensus among historians in India is the view that political turmoil of the eighteenth century had disrupted networks of trade, particularly along the east-west and Agra-Surat axes. While some disruption cannot be ruled out, what is not clear is the extent or the depth of its adverse impact. Extremely fragmentary evidence about rising rates of insurance in the eighteenth century have been provided by Irfan Habib to show an increasing vulnerability of trade in this region, but this does not clinch the issue. Revenues showed no signs of declining. From Rs. 460,000 in 1571-72, Surat's revenue had increased to Rs. 700,000 lakhs in 1721. Cambay's revenue had gone up from Rs. 120,000 in 1719 to Rs.285, 000 lakhs in 1755, while Broach's revenue, which was 45,000 rupees in 1714, stood at Rs. 50,000 in 1726; it hovered around Rs.25, 000 between 1750-60, but had jumped to a phenomenal Rs.400, 000 by the 1780s. Disruptions in western and central India had largely subsided by the 1720s, and according to Sumit Guha that trade increased in the Maratha territories from about that time, and commodity circulation and credit flows significantly affected village production and consumption. Elsewhere too, trade doesn't seem to have been critically disrupted. As Jos Gommans has shows, the Afghans developed the route to central Asia via Multan and Shikarpur. This supplied India with huge numbers of horses and the caravans of Indian merchants passed westward through their territory.

Taking an overview of the economy at the middle of the century, there is no ground to believe that the regionalization had diluted the tenuous commercial integration of the previous century. The Mughal highways operated with minimal disruption, and disruption in one area tended to be compensated by integration in another. *Banjaras* (transporters of grain) continued to ply their trade between Banaras and the Deccan through Mirzapur throughout the century, thus suggesting integrated circuits of long-distance trade even in cheap bulk commodities and foodgrains. For all the alleged problems caused by the Marathas, remittance networks through bills of exchange (*hundis*) between western India, Malwa, Rajasthan and Upper India seems to have held up well. *Hundi* dealers also dominated the complex network of remittances of tribute within the Maratha territories themselves, as they did with the revenues flowing out of eastern India. Credit could still be extended and money remitted over long distances. Bengal's rice and sugar were being traded for textiles from the Coromandel coast, cowrie shells from the Maldives, and for money from the Red Sea. Regional specialization in textile production seems to have intensified in this century, with the lower end of the market increasingly being catered from small, largely rural, production centres. Production was increasingly getting tied to advance contracts. Raw materials, seed or the money were advanced to weavers and cultivators by the rich and neighbours or by the agents of merchants, who received the crops or textiles as finished products in repayment.

What was the situation in the countryside? In the absence of any sustained technological improvement to enhance productivity, higher output could only have arisen by expanding the area under cultivation, or by intensive marketing, or by devising newer devices to control agricultural labour. The eighteenth century shows the existence of all three, either

separately or in various combinations. While the Punjab was undergoing a phase of contraction, and the surroundings of Delhi and Agra were suffering sharp vicissitudes, agricultural reclamation on an extensive scale seems to have been underway in the Deccan and in territories controlled by the Marathas. Rajasthan saw fairly impressive agricultural growth in the first half of the century. Prices rose faster than the level of revenue demand providing the incentive for increasing the area under cultivation and for growing more valuable crops. Both grain, taken by the state as taxation and cash crops were traded out of the province in large quantities. In Bengal, Richard Eaton has identified a marked extension of cultivation in response to the eastward shift of the course of the Ganges delta, which created favourable conditions for opening up new rice growing lands, whose produce went to feed the growing city of Calcutta and textile manufacturing districts of the west. In Awadh and Allahabad evidence of increasing prosperity in both country and towns is adduced in the higher revenue yields and the creation of new market centres extending even as far to the east as Bihar.

Reclamation was being organized by many agencies, ranging from the state to the landed-magnates, revenue-farmers and merchants. New market centres – *peths*, *bazaars*, and *ganjs* – were being established, or old ones were being reorganized under new owners on an extensive scale in Maharashtra, Awadh, Bihar and Bengal. Particularly important seems to have been the proliferation of village level markets, the *haat*, as these allowed exchange networks to percolate right up to the village level. Sharecropping seems to have expanded in a big way. In the Marathas Deccan, the term used for sharecropping was *vatekari*, whereas in eastern India, sharecroppers were known *adhial* or *bargadar*. Client-labour was in widespread usage in Awadh and eastern India, while agrarian servitude and bondage was on the rise in areas of expanding irrigated agriculture in south India.

Such a situation leaves very little scope for doubt about indigenous eighteenth-century regimes witnessing significant measures of economic growth. While data for demographic growth are scarce, there is little ambiguity about the extension of cultivation, or expansion of trade in these regimes. On the whole, therefore, the situation would support the recent 'revisionist' view that the process of the imperial fragmentation had very little to do with the economies of the localities, except in some core regions. The regional economies continued to be buoyant. Pan-Indian networks of trade thrived in the changed political scenario and in some cases may even have expanded, and areas of growth seem to have adequately compensated for areas of decline.

The period after 1757 is usually seen a major watershed in the Indian economy. A recent reassessment of the Company's rule in eighteenth century Bengal by P.J. Marshall finds that in the Company's scheme of political dominance, the primary imperatives were (a) to ensure that their trading privileges were reformulated in terms of absolute rights, (b) to convert limited territorial grants into its outright property, (c) to maximise what it obtained from grants of revenue, and (d) to maintain armed forces at a level which would guarantee its security. Yet, its initial optimism and grandiose self-perceptions were considerably tempered 'by caution in using these powers, which inclined the British to non-intervention and to conserve Indian states as they understood them'. In addition, there were 'severe practical restrictions on what a foreign regime, even with a monopoly of overt force could achieve in conditions in which had only limited contact with the mass of the population'.

In order to understand the role of the Company in determining the fate of the late eighteenth-century Indian economy, one must put its ascendancy in proper context. The decline of the Mughal Empire facilitated the Company's bid for power; it did not cause

it. The old idea that there was complete chaos after the collapse of the empire now stands sufficiently revised. Some chaos there was, but it was geographically limited and was offset by the growth of stable and commercially viable regimes at different levels. The Company's success lay in battenning on to such processes for commercial benefit and in using the rhetoric of chaos to augment its military presence and utility among the contenders of local dominance. They did this with consummate skill in south India in the 1740s and that experience was to serve them well throughout the century. In fact, most of the commercial concessions which the Company later used for political capital (like the *firman* of 1717 in Bengal) were consciously granted by the Mughals or their *subahdars* in the provinces; and the growth of fortified settlements in the east, south and western parts of India occurred in the full gaze of the empire, then at the zenith of its power. This meant that the Company's commercial and military interests were inseparably linked from an early stage of its existence, and that its enterprise in India was geared to ensuring that it was maintained at an optimum level. Therefore the transition to early-colonialism was underpinned by the success already achieved by the Company in ensuring the compliance from its indigenous political and commercial collaborators to the furtherance of its military-fiscal requirements. Conquest was the great facilitator of the transition, not its creator.

One has also to keep the territorial dimension of the early British Empire in mind in order to understand the economic implications of its rule. The British Empire unfolded over a period of a hundred years, and, like its predecessor, grew through a process of conquest, collaboration and co-option of indigenous systems into a gradually evolving pan-Indian framework of rule. Out of a possible 4.2 million square kilometres of territory, the Company had managed to control only about 388,500 square kilometres between 1757 and 1792, most of it located in northern and eastern India. Between 1798 and 1805, Richard Wellesley added another 50,000 square kilometres of territory per year to the British Empire between 1798 and 1805, thus inaugurating, what C.A. Bayly has termed, 'the harder edge of British empire-building' in India. This occurred under unprecedented demands being placed on Great Britain for resources during the Napoleonic Wars, and was characterized by 'a new single-mindedness of the power and dignity of the state, the morality of conquest and British racial superiority'. It also brought to an end the rampant opportunism of the Empire under Clive, of the cautious protectionism, which had characterized Hastings' governorship, and the defensive pragmatism of Cornwallis' tenure. 3.42 million square kilometres of India still lay outside the ambit of the Company's control at the turn of the century, and it wasn't before 1815 that the big push to swallow a large part of it began. With 2.56 million square kilometres under its belt by 1856, the job of imperial expansion had been successfully completed, though forty percent of India still lay outside its direct ambit.

But this view of the Company as a relatively loose structure and its initial vulnerabilities cuts no ice with most historians in India. For them, this regime 'of blue-blooded European ancestry' was different for three reasons: first, it was driven by a relentless urge to maximize revenue; secondly, it reversed the established patterns of trading between India and Europe; and thirdly, it introduced the drain of wealth – the one-way flow of tribute – from India to Britain. The economic impact of such a cohesive system of exploitation was deleterious: impoverishing, deflationary and ruinous to both craft-production and agriculture. Let us examine these issues individually. Naturally, most of the discussion of this would centre on Bengal, which was the primary centre of the Company's rule in the eighteenth century as well as its principal financial pump.

On the question of revenue maximization, the evidence from Bengal, which was the initial laboratory of the Company's fiscal experiment, shows that on an average, 40 to

45 percent of the agricultural output was collected as land revenue. The demand was also raised. With 1755 as base equal to 100, the index of the amount assessed stood at 135 in 1770, 155 in 1778 and 168 in 1783, but had dropped to 156.01 in 1790. The amount of revenue collected also went up but not significantly enough to constitute a radical departure from existing practices. The Company's collections seldom exceeded 85 percent of the assessment, which compares well with situation under the Nawabs who were successful in collecting anything between 90 percent and 65 percent of their assessments. The collection was made exclusively in cash, significantly furthering the process of monetisation in the province. But one aspect of the Company's financial behaviour constituted a radical break from the past. During periods of price slumps, the Mughal revenue officials often accepted payment of revenue in kind in order to reduce the real burden on the peasantry. That element of flexibility was now dispensed with. The Company insisted on all revenue being paid in cash, irrespective of the nature of the agricultural season. This tended to have serious consequences on the poorer cultivators during harvest failures.

Given the fact that collections were made exclusively in cash, the question of maximization of revenue would depend on whether or not the tax-burden had increased in real terms, and this would be factor of the prevailing state of prices. The consensual view of this period is that the real burdens had increased, as this period was one of price-deflation caused by the extraction of tribute; but this is based on a very selective use of the evidence and goes against contemporary accounts, which show a substantial rise in the prices of both agricultural and non-agricultural goods in this period. A study of price figures available from the Dutch settlement of Chinsura and the prices of provisions near Calcutta leave little doubt about the inflationary tendencies at work in eighteenth century Bengal, especially from the middle of the eighteenth century. By the most conservative estimate, agricultural prices had more than doubled during the course of the century with the price-crest stretching between 1750 and 1795. Prices dipped somewhat after 1790 but remained well above the level at the middle of the century level, and continued to be so till 1795; and it was only by 1800 that prices tended to fall, but not below the 1736-40 level. Such increases blunted the edge of the Company's demands on many sections of rural society. While the smaller and marginal peasants suffered considerably, landed-magnates and the merchants weathered the Company's pressures quite well, and in fact prospered. Some historians have also ascribed the rise of a 'rich-peasant class', the *jotedars*, to this period.

Turning to the question of the pattern of trading between Britain and India, the picture is one of overall continuity. Bullion supplies were never discontinued after the battle of Plassey. They were reduced, and even that restriction seems to have been partial. The Company imported £2.46 million of treasure between 1758 and 1768, £1.3 million between 1769 and 1779, £3.83 million between 1779 and 1789. But between 1790 and 1805 the Company pumped in £9.14 million worth of bullion into India of which Bengal's share was a whopping £5.77 million. Bengal had never received such huge supplies at any other time in the past. Private European trade was responsible for the arrival of £5.2 million worth of silver to Bengal between 1796 and 1806, and despite their trade being on a downward slope, the Dutch still imported 4.24 million florins worth of bullion per year to pay for their merchandize between 1790 and 1794. Contemporary grievances, and modern convictions, that a severe shortage of money in the late-eighteenth century was caused by this great reversal of India's pattern of trade need to be seriously countenanced against this evidence. The rate of agio (*batta*) being charged by money-changers for converting Arcot rupees into the Bengal *sicca* seldom exceeded 7 percent in the 1770s, which was considerably less than the rates being charged in the 1720s when Bengal, ostensibly, was receiving huge amounts of bullion.

Commercial reports from the Company's Bengal's manufactories (*aurangs*) in 1773 revealed that the combined investments by the English, the Dutch and the French companies and those made by private European merchants 'exceed double the quantity which can possibly be made in the year'. Customs receipts collected by the Board of Trade in the late 1790s showed that Bengal's exports had tripled between 1777 and 1797, and that most of it was still based on an exchange of textiles, foodstuffs and other raw materials for precious metals and certain manufactured goods. Bengal was still far from becoming a source of raw materials or a receptacle of the finished products of an industrialising Britain in this period, and K.N. Chaudhuri's general assessment that during the 'half century following the revolution of 1757, trade continued to flow along the traditional channels' conforms well with the evidence on the ground. The vitality of Bengal's commercial economy remained substantially unaltered throughout the eighteenth century.

Elsewhere, too, commercial transactions appear to have remained robust. Nagpur, Bundelkhand, Ghazipur and Mirzapur were functioning as important nodes for the distribution of Bengal goods in western India and the Deccan at the end of the century. In the late 1780s, nearly 43 percent of the textiles produced in Banaras were being vended in western India, 49 percent was being sent to Bengal for shipment overseas, and the remaining 8 percent was destined for the Deccan and the northern provinces. Considering the fact that the markets for the luxury-end of Banaras textiles, its silk, was traditionally located in north and western India, whereas Bengal received its medium-priced cottons, this regional division of the trade from Banaras does not show a major change in India's internal market for textiles. By the 1790s, cotton wool from Gujarat and central India, and Malwa opium and indigo had started becoming an important part of India's overseas trade, and may have even partly compensated for the decline of some of the old staples. The North American market for Indian goods was expanding, and in Asia the demand from Europe was being supplemented by the demand from the Indonesia, while the west Asian markets revived by 1790. The attempt by the Company to monopolize the production of the 'new' international staples like opium may not have worked as efficiently as believed by some later historians. As B.B. Chaudhuri has shown, the production or the sale of such cash crops through the advance-payment system did not prevent 'market conjunctions', especially prices, in determining the autonomous response of the cultivators towards these crops; nor could the monopolistic policies of the state obstruct indigenous sources of credit from percolating into these sectors of production. In fact, cultivators often found advances to be an assured source of income and even welcomed them. International demand had also induced an element of regional specialization in the production of indigo. Bengal, Bihar and Banaras produced the finer variety, Awadh produced the 'middling' sort, whereas the 'ordinary' sort was being produced in the Doab and further west.

Other continuities existed. A major one, the financial relationships between the state and the bankers, which had been established during the process of regional growth was continued and even deepened in this period. Indigenous bankers supported the Company during the Plassey 'revolution', and once in place some changes occurred. Though the old banking establishment of the Jagat Seth had declined, the East India Company's Bengal revenue still depended on the advances of Indian bankers, above all on the support of the great Benares businesses. Their capacity to transfer funds all over India by bills of exchange or *hundi* made it possible for armies from Bengal to operate in western India or in the south. One shouldn't underestimate the resilience of the Indian banking system nor its capacity to resist the Company's financial machinations. Recent research in the banking sector of late-18th century Bengal has shown that Bengal's bankers (*shroffs*) continued to operate in the framework of their traditional business practices. They cooperated with the Company, but only on their own terms, and it was

their intransigence which was the main reason why the Company's repeated attempts at reforming the currency of Bengal remained unfulfilled till 1835.

Bengal was not an isolated instance. Studies of banking in other parts of India have also shown the persistence of the relationship between indigenous capital and the early-colonial state. In Bihar, the change in the political regime in eastern India seems to have adversely affected some wealthy provincial merchants, but substantial banking firms of Patna and other cities of Bihar survived and thrived as their remittance business increased under the aegis of the Company. Like their counterparts in Bengal, *shroffs* continued to do good business, taking advantage of the multiplicity of coins. In western India, the linkage stemmed, paradoxically, not from the strength but from the weakness of the Company's finances. Here, the Company was facing an acute shortage of money and this made them turn inevitably to the financial assistance of the indigenous bankers.

The steady expansion of English trade, particularly English private trading towards China in the 1780s cemented this relationship. The share of private trade, which was 7.6 percent of the total overseas trade of Bengal between 1752-58, 6.8 percent between 1759-1764, and 5.96 percent between 1766 and 1772, rose to 41.88 per cent between 1790 and 1799. Some of this trade was undertaken by the import of bullion, but such huge increases necessitated internally generated funds. Commercial opportunities thus expanded for people with money. These were available in good measure from Indian financiers who provided private traders with ready-money loans, or invested in the agency houses, which were growing in Calcutta and Bombay mainly to finance the growing trade of opium and cotton to China.

In southern India, the documentation on the relationship between the Company and bankers is not very clear, but the larger nexus relationship between the Company and indigenous finances seems to have occurred initially in the context of its participation in indigenous state building, particularly in Arcot, reference to which has been made earlier. Prasanna Parthasarathi does not see bankers playing a major role in the Company's finances in the south, but he detects an expanding relationship between it and merchant-financiers, which became critical for the rise of English power. The Company also received financial support from other groups. Using the expanding opportunities of political-profiteering opened by the Company, *dubashes* (brokers/interpreters) drawn from the Komati commercial community of the Andhra region made large fortunes, much of it which they pressed back into the services of the Company's finances, and on the Coromandel, Chetty merchants and Brahman *ijaradars* (revenue farmers) served as part-financiers and account-keepers of the Company's trade. On the Malabar coast, the systems of renting monopolies and an array of new taxes on valuable agricultural produce which had been established during the occupation of this region by Mysore, was used by the Company and private British interests in Bombay to set up lucrative trade in peppers and cardamoms with the help of the indigenous merchants, who had also provided the commercial support base of the previous regime on the Malabar coast. Thus it would seem that in south India too the early-colonial system had the backing of a diverse group of commercial and powerful indigenous people.

For such people, the late eighteenth century was a period of expanding commercial opportunities. The case of Bengal illustrates this well. Here the Company effectively intervened to free the internal market of restrictions imposed by *zamindari* control during the previous regime. These had taken the forms of a proliferation of *zamindari* outposts (*chowkies*) to collect tolls at various rates dictated by the financial predilections of an individual *zamindar* and continuous conflicts between merchants and *zamindars* over the rate of tolls, over market jurisdictions and the movement of commodities. By taking

a number of interventionist measures to regulate the administration of non-agricultural taxes, the Company was able to take a number of steps between 1773 and 1790 to rectify this situation. The chief of them was the abolition of the myriad duties which were levied at the various chowkies upon articles of internal consumption, and their consolidation at the final point of destination. The management of such duties was to be under five customs houses to be established at Calcutta, Hughli, Murshidabad, Dhaka and Patna. The other problem, of the control exercised by the *zamindars* and the *taalluqdars* over markets, was redressed in 1790, when the Company introduced a separation between rent collected in the markets so controlled and the taxes collected there on trade. While rent could continue to be collected on a private basis, the right to tax was henceforth to be vested in the Company. These measures streamlined the structure of internal trade, and enabled a rationalization of incomes between the state, the landed-magnate and the merchant. The combined result of these policies was a proliferation of market places all over Bengal. The increase in their numbers or their establishment in previously deficient areas enabled the peasantry to relate more easily to wider markets, and merchants could move more easily through them with their networks of credit.

Landed proprietors, who set up markets in the interior areas, provided loans to cultivators and generally underwrote the finances for agricultural reclamation, also joined the commercial bandwagon. This was certainly the case in Bengal. Markets created by the petty gentry and great nobles alike were appearing in Awadh, Maharashtra and peninsular India in the much less propitious circumstances of the late eighteenth century. In Maharashtra such places grew into 'little towns' (in the words of Sumit Guha) where a whole range of people could spread themselves into commerce, land holding and revenue farming in equal measure. Landed magnates also tried their hand at the direct cultivation of indigo when markets looked favourable, but most of them preferred to latch on to opportunities opened by the newly expanding horizons in the trade in indigo and opium by routing some of their monies into provisioning the agency houses who raised much of their capital locally.

25.8 THE INDIAN ECONOMY IN THE LATE EIGHTEENTH CENTURY: THE EMERGING DIFFERENCES

While such a picture does not square well with the notions of devastation and decay which reside so dominantly in the received wisdom of early-colonialism, it would be quite wrong to think that nothing had changed in India, or that every change was for the better. The Company's regime was aggressively mercantilist whose orientation was European, not Indian. State policy was financially driven and all institutions were to be streamlined to ensure this ultimate objective. Notwithstanding the great rhetoric which accompanied it, the Permanent Settlement was a feat of mercantilist social engineering to stabilize Bengal's revenue for the purposes of the Company's commerce. Under its terms the Mughal right of taxation, traditionally devolved upon the *zamindars* by the state was fused to their *milkiyat*, their 'private' domains, both of which could now be sold. Though this enlarged the 'rule' of private property in Bengal's countryside, the dip in agricultural prices after 1790 exacerbated matters and left the ordinary cultivator to receive the rough-end of the stick. There is no doubt that agrarian distress had increased considerably in the immediate aftermath of the Permanent Settlement.

What this indicates is that while the early-colonial regime buttressed regimes of indigenous landed and commercial properties; it did so by increasing the vulnerability of many at the poorer ends of society. The case of Bengal illustrates this process well. The Company

was unrelenting in revenue being collected in cash irrespective of the conditions of the current harvest. This removed an important cushion, which the peasant had during the previous regime and became a major cause of mortality and distress during the famine of 1769-70. But notions of universal agrarian distress and a devastated peasantry would be over-pessimistic. The situation on the ground was more complex. Agricultural reclamation along the northern edges of the province and along its estuaries was continuing robustly and the fruits of it were being mopped up by the *zamindars* and the *jotedars*. Their positions, especially that of the *zamindars*, were becoming stronger in relation to sharecropping tenants and day labourers. Though the evidence for this is patchy, some historians believe that *jotedars* in the northern fringes were behaving like '*kulak*-landlords': providing credit and engaging in agricultural trade over short distances. Rural stratification had increased in the course of the century, and its pace appears speeded-up during the latter part.

In south India, British intervention, while widening and deepening the circuits of cash transactions, consolidated the position of the leading *mirasidars* (peasant-proprietor) as 'village contractors'. As David Ludden tells us, these *mirasidars* now began combining cultivation with revenue farming and local level agrarian management. 'Mahajan' *mirasidars* used their control over land, labour and various commercial assets to accumulate financial resources that enabled them to contract for village revenues. But this was accompanied by a drastic change in the social conditions of the less privileged groups who were pushed into social and economic subordination. David Washbrook shows how the Company's direct intervention in south India consolidated two apparently contradictory elements: traditional social relations and modern laws of contract. The first was designed to preserve the existing social structure, while the second was geared to expanding commercial opportunities, and both these were detrimental to the position of labour. While custom was upheld to legitimize traditional bonds of labour control, agricultural wages were determined by laws of supply and demand, and enforced by a system of contracts. The labourers, especially those belonging to the low-castes, thus stood doubly deprived.

The Company was also a hard commercial taskmaster. In its dealings, the Company as a monopolist-trader was extremely harsh with producers under its control, relentlessly enforcing the delivery of what was due to it and constantly attempting to depress the wages of the weavers in its employment. This made them extremely vulnerable to any sharp changes in the prices of food: highest famine mortalities were usually recorded among artisans working at the Company's manufactories. In south India, Parthasarathi's study of weavers in the Coromandel also draws a picture of growing artisanal vulnerability under the new dispensation. He shows that under the Company the weavers entered a new regime of labour control, which removed many of their past entitlements, and this led to a sharp decline in their wages and economic status.

But what we must also remember that this harsh regime did not cover the majority of cotton-textile weavers, at least not in Bengal, and many artisans managed to find loopholes in the system. There was a huge internal market for the more common varieties of cotton textiles, while the luxury-end of production hadn't completely dried up; and these meant that cotton textile producers and upcountry cotton merchants could still do well even under these trying circumstances. The silk industry is another good example of this differential impact. While Bengal's silk exports to Surat had shrunk from Rs. 0.45 million in 1766 to Rs. 0.03 million in 1789, the north Indian market seems to have held up well. In 1789 the upcountry consumption of raw silk from Bengal was worth Rs. 1.99 million; in 1790 it was pegged at Rs. 1.68 million. In the meantime, the Company's investments for Bengal's silk had increased from Rs. 0.92 million 1766 to Rs. 5.54 million in 1789.

This had induced a structural shift of Bengal's silk from an internal to an international market with somewhat serious consequences. Any drop in the Company's investment for silk had serious repercussions for the silk-growers (*chassars*) and the winders' incomes, and contrary to cotton, the existence of a small internal market for silk held out slim prospects of a limited recovery. Any improvement depended on the vagaries of the international market. A partial upturn in the 1790s was offset by a depression caused by the outbreak of the Napoleonic Wars in Europe, and it was only after 1813 that silk exports began to pick up from Bengal once gain. By that time silk production in places like Murshidabad and Rajshahi had already gone into steep decline.

Thus, despite increasing the scope, scale and volume of commercial transactions, the end-result of the Company's intercession was to tie the Indian economy into the north European cycles of trade and production. This integration wasn't new. It had begun with the increasing in the seventeenth century with the steady expansion of European trading in India, and its great expansion in the early eighteenth century had speeded up the process considerably. The difference now was that key sectors of India's economy were henceforth tied into the vicissitudes of this global-economy, and downturns in the latter caused harm to these important components of the Indian economy or foreclosed the possibilities of their autonomous growth. While many Indians were able to enrich themselves enormously in the process, much of the profits accruing from expanded commercial opportunities were siphoned away from India with little or no corresponding benefits to the country. There was rampant fiscal and commercial profiteering. Private British and European individuals made huge profits from revenue farming, from the expanding trade in opium or indigo, and from political corruption. These were mostly pumped out of India to East Asia, especially to Macao and Canton (port cities on the southern edge of China) through the agency of private British shipping and Portuguese commercial houses, where it was used to make further fortunes for the European expatriates. The agency houses became the front through which the salaries, perquisites and often illegally made money by individuals was siphoned out of India. £17.67 million were taken out of Bengal alone through these channels between 1757 and 1796. Much of the Indian capital in the service of private trade was thus dissipated through such remittances.

The remittances of private fortunes were accompanied by the official transfer of substantial amounts of India's surpluses to Britain as tribute. This was the drain of wealth in its classic sense, which, understandably, has come to occupy centre-stage in understanding the impact of the early-colonial system on the India economy. While an estimate places the combined (that is, on private and official accounts) transfer under this head at £4 million in the 1780s and 1790s, lower estimates ranging between £1.8 million and £1.92 million per year have been suggested by others for the period between 1757 and 1793. Given the nature of the data, it is difficult to establish incontrovertible figures, but these were indeed enormous. They were also unprecedented not just because of their magnitudes alone. Enormous amounts of up to 1 crore rupees (£1 million) a year had been sent to Delhi from Bengal in the 1720s. The difference of the transfers under the tribute of the late-eighteenth century arose on the grounds that for the first time official channels of trade were used to transfer private fortunes. Additionally there was no mobility of labour and capital between Britain and India to partially compensate for this loss as would have existed in the past when enormous amounts of imperial tribute being remitted from Bengal to Delhi in the past. General economic indices however do not suggest that this drain had succeeded in paralysing the Indian economy. As discussed earlier, commodity prices held up well till the end of the century and there was no shortage of money. But what is indisputable is that transfers of such magnitudes from India were easing the massive deficits on Britain's balance of trade with both India and China, thus

leaving the Company free to divert its finances to the aggrandizement of India by enlarging the scale of its subsidies from Indian powers and by borrowing money from private Indian and European capital in India. India was now subsidising the colonisation of its own economy.

25.9 SUMMARY

The eighteenth century was marked by the decline of the Mughal Empire, giving rise to the emergence of several regional centres of power. Towards the middle of the century another factor came into the forefront with the establishment of the political power of the British East India Company, which had much deeper implications. The eighteenth century is interpreted by the historians from two angles, one set of historians, following an empire-centric approach, argue that the decline of the Mughal empire was catastrophic resulting in 'chaos and anarchy'. The other set of historians, who have followed a region-centric approach, emphasize that though the empire declined, this did not result in 'chaos and anarchy'. Regions became vibrant centers of socio-economic activities and the Indian economy continued to expand despite the political problems. This process was not substantially disrupted under early British rule, though numerous changes did emerge which were subjecting the Indian economy to unprecedented financial burdens.

25.10 GLOSSARY

Chaudhuri	Semi-hereditary <i>pargana</i> level official, mainly concerned with revenue collection.
Florin	A silver coin first struck in twelfth century Florence, and noted for its beauty. In India, this coin was widely used by the Dutch traders and was valued at about forty cents.
Jagat Seth	Lit. Bankers to the world. It was the title wielded by the famous Jain bankers of Bengal. It was during Siraj-ud Daulah's reign, the then Jagat Seth played a pivotal and treacherous role together with Siraj's maternal uncle Mir Jafar, Umichand and Rai Durlabh in determining the outcome of the battle of Plassey in 1757.
Jagirdari system	The assignments given in lieu of salary to the nobles. The areas thus assigned were called <i>jagir</i> and its holder <i>jagirdar</i> . However, <i>jagirdar</i> was not allotted the land instead he received the income/revenue from the area assigned to him. <i>Jagirs</i> were frequently transferable.
Jotedars	Village landlord. The <i>jotedars</i> used to take lands on long-term leases from the <i>zamindars</i> and then got that cultivated on contract on a sharecropping basis. The lease so granted by the <i>zamindar</i> for the purpose of bringing the land back into cultivation at concessional rates. However, peasants' rights in the <i>jotes</i> were recognized by a set of customary codes.
Mansabdari system	<i>Mansab</i> means rank. Each individual entered in the Mughal bureaucracy was allotted a <i>mansab</i> . It has dual ranks – <i>zat</i> and <i>sawar</i> . <i>Zat</i> determined the status of its

holder in the official hierarchy and the personal pay of the holder. *Sawar* rank denotes how much contingent (horses, horsemen, and equipment) a *mansabdar* was supposed to maintain.

Taalluqdars

Substitute for *zamindar*. The term came into usage during the late 17th century.

Zamindars

Hereditary superior right holder. The *zamindar* was entitled to a percentage of the total revenue collected. It was generally 10% (though varies upto 25%) of the total revenue collected. When the *zamindar* was collecting the revenue for the state it was known as *nankar* and when the state was directly collecting the revenue by-passing him he was entitled to *malikana*.

25.11 EXERCISES

- 1) 'The eighteenth century was a century of universal decline.' Comment.
- 2) Critically analyse the 'empire-centric' approach. Do you agree with a view that the eighteenth century was a century of 'anarchy and chaos'?
- 3) How would you view the eighteenth century in the context of the regions emerging as vibrant centers of socio-economic activities.
- 4) Examine the region centric approach of historians in the context of the eighteenth century.
- 5) Analyse the state of Indian Economy during the eighteenth century.
- 6) What continuities and changes do you see in the Indian economy in the late eighteenth century?

25.12 SUGGESTED READINGS

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M.A. History

List of Courses

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MHI-01	Ancient and Medieval Societies	8
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MHI-05 History of Indian Economy

Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
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UNIT 26 MERCHANTS AND MARKETS: 1757-1857

Structure

- 26.1 Introduction
- 26.2 The Background: An Overview of India's Trading Economy in the Seventeenth and Early Eighteenth Centuries
 - 26.2.1 Rurban Trade
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 - 26.2.3 Urban Centres, Market Places and Production
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- 26.3 The Eighteenth Century Crisis and the Prelude to Colonialism
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- 26.4 Early Colonialism and India's Foreign Trade 1757-1800: Two Case Studies
 - 26.4.1 Decline of Surat
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- 26.5 The Final Years of Transition 1780-1800
- 26.6 The Flowering of the Colonial Economy 1800-1857
 - 26.6.1 Private European Merchants
 - 26.6.2 Pattern of Early Colonial Trade
 - 26.6.3 Post 1813 Colonial Trade
- 26.7 Deindustrialization: The Debate
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26.1 INTRODUCTION

The period between the British subjugation of Bengal in 1757 and the transfer of power in 1947 saw a dramatic transformation of the Indian economy. From being at the center of the Indian Ocean trading system as the principal provider of textiles, finished goods and a variety of spices, India slipped to the rank of one of the poorest country in the world. Paradoxically, this transformation was accompanied by the extension of market economy and the rise of a modern economy based on machinery and wage labour. The complexity of India's economic experience in the two centuries under review is generally and legitimately understood to have been embedded in the structure of political and economic relations described as 'colonialism' coming in the aftermath of the British subjugation of the subcontinent in course of the eighteenth

century. The present Unit intends to plot the story of India's economic transformation in two phases – between 1757 and 1857 when the colonial regime was cobbled together largely under the initiative of the English East India Company and the century following the assumption of India's sovereignty by the British Crown. The second phase, the theme of the next Unit, saw the greater integration of India into the world system of trade and exchange and the beginning of modern industrialization in the subcontinent. We will, in this Unit focus on the non-agrarian sector of India's economy – on the dynamics of indigenous merchant society and market networks as these came directly under the impact of the new structures of economic relations that the ascendancy of the English East India Company introduced.

26.2 THE BACKGROUND: AN OVERVIEW OF INDIA'S TRADING ECONOMY IN THE SEVENTEENTH AND EARLY EIGHTEENTH CENTURIES

Historical scholarship in the last three decades has substantially enhanced our understanding of the Indian trading economy in the early modern period. The range of India's commercial networks and the vitality of the Indian trading community is a fairly well established fact. No longer is Indian trade seen as being socially marginal or irrelevant or the Indian trader as some kind of insignificant peddler of the Van Leur (see Unit 21 for details) variety. The overseas trade of the subcontinent was of impressive proportions dealing with both the exotic and the ordinary and solidly grounded on a lively internal market structure, which was supported by a network of integrated commercial institutions as well as by links to the political and administrative establishments. India's overseas trade was characterized primarily by the export of textiles and a range of manufactured products and spices and the import of bullion. The centrality of merchants and markets in the working of India's economy leaves little room for doubt or ambiguity about the nature, scale or indeed, levels of development of the Indian economy in comparison with the economies of Western Europe. The Indian trader was not simply a peddler engaged in small, countless retail transactions in fragmented and volatile markets subject to chronic fluctuations. The location of the subcontinent in the trading system of the Indian Ocean combined with the advantages of India's manufacturing potential that enabled her to place at the world market textiles at competitive prices, facilitated the development of a complex trading structure that was impressive in volume and value.

26.2.1 Rurban Trade

The seventeenth century constituted the golden years of India's maritime trade. This was largely the outcome of the stabilization of Mughal power in the subcontinent and the consolidation of the Islamicate in West Asia. Both these sets of political developments were instrumental in integrating the trading system of the Indian Ocean giving it a pan Indian Ocean dimension and thereby producing an intricate network of commercial exchanges and movement of peoples and produce. As the chief supplier of textiles, India commanded a special place in the network exporting a huge range of goods and importing in return a substantial volume of bullion. These bullion imports fed directly into the Mughal mints that turned it over into the regnal coin, which was the principal instrument for both revenue payments as well as commercial transactions. The export trade was integrally connected with the subcontinent's internal trade through the twin mechanisms of bullion inflows and cash revenue payments. As the Mughal state required the cultivators to pay land revenue in cash and not in kind and furthermore in the regnal coin, the pressure to

market agricultural production stimulated internal trade and absorbed the imports of specie that entered the stream of exchange. A complex hierarchy of markets emerged to channel the movements of a whole range of goods. Studies on this have suggested that for Northern India, there were three principal types of markets. At the lowest level, rural produce was exchanged in makeshift markets – periodic, temporary structures in large villages while the commodities traded in were mostly necessities of life. Directly above these centers, were regional markets catering to trade again mainly in essentials but the volume of transactions was larger and the markets were fixed rural centers called *qasbas*. Above the *qasbas*, were large urban centers that directed the trade in high value goods including a vast range of textiles for both elite consumption within the country as well as for overseas markets in the Indian Ocean. Here it may be worthwhile to remember that the staple of the Indian Ocean commerce was medium and coarse quality cloth that was extensively used by the populations of west and south east Asia. Over and above this hierarchy of markets was the long distance trade in grain transported in carts and by peripatetic communities such as the Banjaras. The volume of this trade is not easy to quantify but available clues would suggest that it was large. The Banjaras who organized the transport of foodstuffs by land on pack oxen had in their large camps or *tandas* anything between 12000 and 20000 bullock capable of carrying 1600 to 2700 tons of grain. Movements of grain responded to the needs of marching armies during a campaign and it would seem that in the first half of the eighteenth century, when there was a marked increase in political decentralization, the grain trade actually expanded – a case of a war economy powering the trade in necessities.

26.2.2 Monetisation

The impulse for internal trade and the consolidation of markets (at various levels) was largely the pressure exerted by the re-distributive mechanisms of the Mughal State in the form of a huge revenue assessment and extraction. The emphasis on cash revenue collections and the stimulus for cash crop production, according to Irfan Habib led to increasing monetization of the economy, to stratification in rural society and over time to large-scale peasant immiseration as the poorer of them contracted debts to pay the revenue demand. The idea of the self sufficient and isolated village is no longer seen as tenable for the available evidence indicates quite clearly that exchange of goods was to be found at every level. Notwithstanding the dominance of subsistence production and the one way flow of goods from village to urban center, the coexistence of deficit areas with those of surplus ones and the policy of the State to collect cash revenues generated pressures to sell and thereby stimulate trade and exchange. Over and above this level of exchange, there was the steady development of intra-regional trade that testified to the growing integration of the Indian economy. The profusion of craft production, of textile manufacture inevitably drew upon a wide range of raw materials that were not always locally available. A case in point is the Gujarat, Bengal connection, where raw silk imports from Bengal sustained the silk industry of Ahmedabad.

26.2.3 Urban Centres, Market Places and Production

India's export trade threw its own hierarchy of urban centers and market places. The centrality of textiles in the export trade meant that India's chief port cities were located around an arc of manufacturing and supply centers. The chief ports of seventeenth century maritime India were Surat on the west coast, Hugli and Masulipatam on the east and southeastern seaboard respectively. The export trade as mentioned earlier centered around textiles that commanded flourishing markets

through the century in west Asia. The trade of the North European trading companies constituted but one segment in this trade for the bulk of the textile production was absorbed by markets in the Persian Gulf and Southeast Asia. Besides textiles, indigo, saltpeter, sugar and spices were important export items (see Unit 21), the movement of which was adequately supported by the existing infrastructure of roads, communication networks and banking and insurance facilities. Thus an exporting merchant based in Surat could draw on the produce of a wide hinterland extending as far as Lahore and Burhanpur and Dacca. An interlocking system of supply merchants and markets connected the port towns with the manufacturing interior giving rise to a hierarchy of market centers and intermediary merchants who functioned as brokers for the shipper and the export merchant.

While the great towns and port cities functioned as international concourse of merchants engaged in long distance trade, the manufacturing towns in the interior served as market centers where buyers through their agents negotiated with sellers. Export merchants located in port cities contacted general brokers who in turn worked through commodity brokers specializing in the supply of specific items. They in turn worked through under contractors or sub brokers who were directly in touch with manufacturers or artisans. Their access to the producers was contingent upon the existing system of cash advances for production. Here, it is important to remember that for the greater part of the seventeenth and eighteenth centuries, weavers and artisans were price workers and were technically free to turn over their produce to the open market. The actual business of industrial production or of manufacture was organized in some cases by state or nobility sponsored factories or *karkhanas*. For the rest, the manufacture was very much an individual activity and in the case of textile production, arguably the most important line of manufacture, the weaver and his loom constituted the basic unit of production. (see Unit 18) Admittedly, weaving as an economic activity was a caste based occupation with specific groups deploying their traditional skills in claiming a monopoly control over production of specified items. This was especially true of textiles – specific caste groups undertook the business of manufacturing specialized cloth like red silk goods and resisted any attempts by other groups to encroach on their preserve. The weaver was an independent artisan who owned his loom but was dependent on the intermediary merchant for cash advances to buy yarn and other raw materials (commonly known as putting out system). These cash advances became critical in a situation where the poverty of the weaver and his restricted access to markets forced the artisan to commit his produce to the creditor.

A number of important monographs on the weaving industry in the pre colonial and early colonial period have tended to stress the similarities between the putting out system in Europe and the Indian method of textile production that relied on the system of commercial advances. The system was different, for in the Indian case, the advances were almost always in cash and never in raw materials. The weavers needed working capital to buy raw materials and to support themselves during the season of manufacture. As the Committee appointed by the English Company to enquire into the failure of the Surat investment in 1794 commented, it was only through the under contractors that the weavers found regular subsistence ‘by acknowledging submission to a people who pay them regularly for their work as it comes from the looms besides occasionally assisting their exigencies and supplying them in sickness’. K.N. Chaudhuri argues that implicit in the system of advances was the idea of a contractual obligation on both sides. Just as the merchant was assured of receiving his supplies on time with a reasonable degree of certainty, the weaver regarded the advance as a deposit on orders. Once the money was delivered

to the weavers it created at once a short-term supply monopoly. This meant that if the buyer for some reason did not accept the product they would have to forfeit the deposit. Of course merchants took precautions to minimize this risk but during conditions of rising demand and a responsive market, weavers could often exploit the situation to their advantage. In fact it was precisely on this issue that the English East India Company faced a running battle with the artisans and the intermediary brokers for the rejection of items supplied on grounds of even technical deficiency (mostly measurement) resulted in the weavers selling the rejected goods to other buyers at attractive prices.

26.2.4 Merchant Shipping

The diversity of markets and the overlapping levels of trade found reflection in the Indian entrepreneurial structure that accommodated large wholesale merchants with access to substantial capital assets and warehousing facilities and small retailers who combined peddling with pilgrimage. The hierarchy in India's commercial society was the product of both sociological and functional impulses. Ashin Dasgupta spoke of the dichotomy between the Muslim shippers located on the coast and the Hindu financiers and brokers whose business was largely shore based. Neither of these categories were fixed – the taboo on sea travel for instance did not apply with the same force in the Coromandel, where Hindu merchants invested in shipping and performed physically voyages to southeast Asia. In Surat, Masulipatam and Hugly, the principal ports of maritime India in the seventeenth century, the most affluent group was the ship-owning merchants who operated the business of export and freight. Examples of this category were the Chellabys and Ghafurs in Surat who owned ships, traded on their own account besides letting out cargo space for the region's freight trade. A ship owning merchant generally earned his profits in three ways. He could hire out a ship to more than a single merchant by taking on a cargo of goods on commenda.: the ship owner guaranteed to pay the shippers the value of the goods (principal) and the agreed ratio of the profits unless the goods were not sold for some reason. Alternatively, the ship owner could become a merchant in his own right by borrowing money on bottomry; the ship itself in this case becoming the security for the loan and whatever money was paid after paying the loan and the interest constituted the ship-owner's earnings. Finally the ship-owner could borrow at respondentia – the ship-owner agreed to sell the goods on board as in commenda, returning the value of the loan including the interest but only if the goods arrived safely at their destination. Of course in a single voyage all three procedures could be used as indeed, they were in seventeenth century Surat, where ship-owners reserved a part of the cargo space for their own use. In fact, a large proportion of the profits came from the proceeds of the freight business, which they monopolized. They let out their ships to pick up the season's freight for which there was sizeable demand from among the multitude of the city's small traders – Patani Bohras, Parsis and even Hindu/Bania groups. The latter constituted an important segment in the trading hierarchy – persistent in their commercial pursuits; they could not be driven out of business by rich merchants no matter how influential.

26.2.5 Banias and Sarrafs

The shore based Hindu and Jain merchants, often described collectively as Bania who traded on their own account, and performed a variety of inter-dependent commercial functions, occupied the second level in the trading system. These related to the business of brokerage, retail and supply and banking. In the Coromandel, the Chettys – the local commercial caste, combined banking and brokerage with sea

trade while in Bengal the supply and banking sectors was shared between local commercial groups and resident merchant groups from Western and Northern India. In addition, there were the Armenians – the most important diasporic group and described by K.N.Chaudhuri (1983) as ‘highly skilled arbitrage dealers who developed geographically mobile forms of commerce with an ability to measure risks of overland trade’ The banking sector was particularly well articulated in course of the seventeenth century and was in the hands of Hindu groups called *sarrafs*, who financed the production of trade and the marketing of imports. The principal rationale behind the organization of indigenous banking in Mughal India was the overriding need to convert imports of bullion into regnal coins, the only admissible currency for all transactions. *Sarrafs* or moneychangers operated the business of assaying or converting all coins – foreign, old into the coin of the realm and worked in tandem with the Mughal mints whose capacity was stretched particularly during the peak trading season. The mints too were under the control of the *sarrafs* who farmed the minting rights. (for details see Unit 22)

Sarrafs also operated the *hundi*, which perhaps constituted the most important and distinguishing feature of the Indian banking system. Simply put, a *hundi* was a bill of exchange promising payment after a specified period ‘usually two months or less’ at a particular place and allowing a discount which included interest, insurance charges and cost of transmission. *Hundis* became in course of the seventeenth century the principal instrument of remittance and the standard form of payment in all commercial transactions. In long distance trade, this form of payment not only met the requirements of an expanding demand for credit, but reduced the risks involved in the physical transfer of money across uncertain frontiers. The *sarrafs* issued and discounted *hundis* that enjoyed by the end of the seventeenth century extensive circulation not only within the subcontinent but also beyond in the trading ports of the Indian Ocean.

The working of the *hundis* was as follows. Bankers took the responsibility of transferring funds from one centre to another and would charge for the service an amount, which depended on a number of variables. For instance this would take into account the volume of traffic between the two points in question, the exchange rate between the two points and the *sarrafs* own charges. Broadly speaking *hundis* were issued and discounted in two ways. The first was to draw money from a sarraf against a promise to pay him in another town where the *hundi* would be presented before the banker’s agent. The alternative was to pay cash down to the banker with a promise from the latter that the money would be recovered in the selected destination on presentation of the *hundi*. In the former case, the sarraf’s charges were higher since the risk devolved on him was correspondingly higher and because there was a time element involved. The person who drew the money had use of it for a period of time while the *hundi* matured. Between the mid seventeenth and the first quarter of the eighteenth century, the use of *hundis* grew more complex and pervasive as networks proliferated and became more enmeshed. Major transfers became possible across distant regions and attracted the comment of eighteenth century observers like Muhammed Ali Khan, the author of the *Mirat-i Ahmadi*. “instead of collecting cash”, wrote Ali, “the possessor of the *hundi* could give it to one of his own debtors and so free himself from that obligation. Not only this, similarly he may transfer it to another, until it reaches a person against whom the drawee of the *hundi* has claims and who, therefore surrendering to the latter relieves himself of the debt” Thus, in other words, *hundi* had become a form of money which was exchanged against cash at a certain rate. This practice later known as *anth* grew

rapidly in the eighteenth century and we shall have occasion to talk about this at a later stage.

The social base of the merchant groups was by and large confined to specific Hindu castes that may for the sake of convenience be described as bania. This was an occupational-cum caste category that included commercial castes, both Hindu and Jain and occasionally Brahmins like the Nagars who in Gujarat had taken to the commercial calling. There were other castes like the Khattris in the Punjab and U.P., the Chettis in the Coromandel all of whom lay claims to some sort of Vaisya status in the caste order. The Muslim merchants, Bohras, who dominated the shipping and export business, were in Gujarat for the most part although there were important Turkish groups as well. In the Coromandel, there were the Chulias or Marakkaiyars, an endogamous body of Tamil speaking Muslim merchants who dominated the trade of the southern Coromandel. Caste and community differences would not appear to have impeded the working of the trading system – the entire structure was predicated on a measure of cooperation. Informal associations, linkages with the ruling power structure and personal friendships were important as mediating influences that on occasion could even deflect the market.

To conclude, one may on the basis of existing work suggest that the non-agrarian sector of the Indian economy had evolved through the sixteenth and seventeenth centuries into a dynamic and integrated system responding to market forces and capable of generating a degree of capital accumulation. Irfan Habib in his classic essay on the 'Potentialities of Capitalist Development in Mughal India', argued that from the point of view of merchant capital, the economy had reached a fairly advanced stage. However, he added the caveat that the credit and banking system, which was arguably the most impressive component of the economy, catered primarily to commerce. There was no provision or indeed predilection for any form of proto industrial investment or experiment or technology. The take off thus was not a foreseeable possibility. Equally significant were the constraints that accompanied the workings of the Mughal revenue system that was intrinsically exploitative and by its very nature bound to break down under the weight of its internal contradictions. Practically no rural market existed for urban crafts and thus when an agrarian crisis developed, it was bound to extend to the entire economy. Capital had failed to develop an independent basis for itself – its fortunes lay with the Mughal ruling class and the system they represented. Thus when the crisis came during the eighteenth century, merchant capital floundered and faced the most serious challenge ever. The high profit margins that the merchants had been used to created a sort of complacency and restricted the possibility of technological innovations. The outcome was disastrous when the twin pillars of political order and a sustainable demand market collapsed in the aftermath of Mughal decline and the growing ascendancy of the English East India Company.

26.3 THE EIGHTEENTH CENTURY CRISIS AND THE PRELUDE TO COLONIALISM

The crisis of the eighteenth century has been in recent years one of the most debated issues in Indian history. Was the century a period of unmitigated decline leading inevitably to the British conquest of Hindustan? Was it a century of large-scale decentralization, when the region came into its own to produce distinct cultural and social formations? Was decentralization coterminous with decline or was that very much the product of a particular reading that was only as valid as an alternative

understanding of the same phenomenon? These are questions that have cropped up in course of the debates between nationalists, Marxists and later revisionists and we will have occasion to refer to these when we set out to identify some of the more important developments that characterized the reorganization of markets and merchants networks in course of the eighteenth century. For the moment we shall focus on the actual components in the crisis – in other word locate the changes in the existing political and commercial systems following the decline and collapse of the Mughal Empire in the first half of the century. The regional manifestation of the political crisis was not uniform – Bengal prospered in the first half of the century and grew stronger while Gujarat underwent a serious crisis in terms of political authority and economic stability. And yet given the degree of integration in the Indian Economy, it was only natural that the crisis affected all the regions in one way or the other especially in the sectors of trade and exchange.

26.3.1 The Crisis

What constituted the eighteenth century crisis? Simply expressed, this amounted to the slackening hold of the central authority in Delhi over its provincial governors, the failure of the provincial authorities to extract revenue from local agrarian society and control local magnate influence or quell agrarian revolts, the virtual collapse of communications and networks that hampered the easy movement of goods and credit, the contraction of demand on the part of the Mughal ruling class for manufactured goods and items of trade and the total collapse of all governance. This coincided with the disintegration of Muslim power in west Asia and the steady expansion of European private trade in the Indian Ocean at a time when profits from overseas trade were already under pressure. The result was a series of cataclysmic blows to the overseas trading sector and to the local merchants who faced a two-pronged crisis from about the second decades of the eighteenth century. There were regional variations to this story but none that could offset the consequences of the convergence of Mughal decline and European commercial penetration.

The vulnerability of the Mughal political edifice was apparent even as early as the closing years of the seventeenth century. With the death of Aurangzeb in 1707, the emergence of factional politics in the imperial court, widespread rural disturbances in the regions and the eruption of Maratha raids in Hindustan created an unprecedented situation of insecurity. In Gujarat itself, the premier maritime *suba* (province) of the Mughal Empire, the crisis assumed a complex aspect. The increasing isolation of the region from the hinterland, a direct consequence of Maratha raids compounded with the fissures within the region's political system to produce an extremely volatile situation for local merchants. The contraction of the hinterland deprived Gujarati traders of the markets of Northern and Central India, where their import items were usually marketed. Of greater consequence was the collapse of the administration within the region after 1720 when the incursions of the Marathas and their occupation of the *Athavisi* in 1723. The *Athavisi* was a conglomerate of twenty-eight villages from where Surat had traditionally drawn her revenues. Imperial dictates after 1720 lost their teeth as every Mughal official began to covet the lucrative posts within the administration. In Surat the posts coveted were those of the *Mutasaddi* (incharge of the port) and the *Qiladar* (incharge of the fort) and the Admiralty of the Imperial Fleet. With a collapsing revenue structure, the administration took recourse to a policy of mercantile taxation precisely at a time when profits from trade were flagging, The merchants responded to the crisis by agitating against the city administration but only with limited success.

26.3.2 Rise of European Private Trade

The consequences of these developments on Surat's trade can be easily imagined. The loss of markets in Hindustan together with conditions of instability in West Asia undermined the foundations of Surat's prosperity. As early as 1707, when Gujarati shipping was at its height, the increased volume of Gujarat's exports had glutted markets in the western Indian Ocean so much so that voyages had proved unprofitable. In the following decades, the situation deteriorated even further with the expansion of British private trade. Asian shipping gave way to British private trade as local freighters preferred to invest their cargo on European bottoms in the hope of better protection against the increasing problem of piracy on the high seas. The traditional trading order, which had so far revolved around Surat's preeminence and the leading role of her merchant shippers cracked up in the wake of political insecurity and European competition. Merchant protest proved ineffective for it neither arrested the decline of the city's trade nor the decay in the administrative system. It was, however, instrumental in introducing the English East India Company as a potential protector and political aspirant and in facilitating a new alignment between sections of the city's commercial population and the English East India Company. This in turn became the prelude to early colonial control in the region.

26.3.3 Decline of Indian Ports

The effects of the political crisis were apparent so far as the region's trade and markets were concerned. The value of Surat's export trade dipped from 16 million rupees in 1700 to 6 million in 1740s and never recovered in the decades to follow. The crisis of the export market had its inevitable repercussions on the internal trading and finance structure that had sustained it in the past. The *hundi* network was seriously undermined as merchants and European factors found it increasingly difficult to avail of credit. Interest rates escalated and Surat suffered from a wave of bankruptcies. The contraction of bullion imports affected currency – by the 1760s the problem of debased currency became serious. The Muslim shippers were among the most adversely affected as the competition of European private traders and their increasing political influence in the city cut into their ventures. Bereft of any protection from the state, they failed to put up an effective resistance against the aggression of the English traders who steadily encroached upon the freight trade turning it over into a virtual monopoly by the 1750s.

The decline of Surat was paralleled by the decay of Hugli on the east coast. The old port city made way for the rising English center of Calcutta and British shipping. The ramifications of the Mughal crisis were markedly different in the Bengal *suba*. Here, a succession of competent governors had built up an efficient administration by securing the cooperation of the local elite groups – magnates and bankers who played a vital role in the machinery of revenue management and collection. The benefits of internal security and growth did not, however, insulate the province from the larger effects of the eighteenth century crisis or from the aggressive expansion of English private trade. The decline of west Asian markets did not leave the Asian merchants in Bengal entirely unaffected. Further, the Surat-Bengal trade in raw silk and cotton entered a period of rapid decline especially after 1765 – a development that adversely affected the credit networks. The increasing menace of piracy in the high seas aggravated the situation as more and more merchants preferred to tie their cargo with English country shipping. In Bengal as elsewhere, English private trade edged Asian competition altogether in the sector of export trade and freight. The

first half of the eighteenth century also saw a corresponding expansion of European commerce in Bengal bringing in its wake, increasing imports of silver, employment opportunities for supply merchants and weavers with the result that the commercial and banking sector continued to grow and represent a dynamic component in the Bengal economy. However, the displacement of Asian merchants shipping, the rise of Calcutta and the English private traders and the articulation of their aspirations, the fall out of the commercial crisis of Hindustan on Bengal's inter-regional and coastal trade did not bode well as future developments indicated.

Both the intensity and spread of Maratha raids in Hindustan and the revolts of peasant castes like the Jats and Sikhs against Mughal authority in the heartland and the Punjab resulted in a serious agrarian and commercial crisis. Agricultural production suffered while the connecting linkages between agriculture and trade were severely disrupted. The complex grid of markets and communication networks that had supported India's internal and export trade collapsed leading to shortages of production, currency deficit and urban decay. The European Companies in Western India, for instance, commented extensively on the shortage of yarn and other raw materials that weavers faced as a result of the Maratha raids and the abandonment of looms by artisan groups and the existence of famine like conditions. The large scale incidence of Sikh revolts in the Punjab, the Afghan and Rajput uprisings in the Awadh region played havoc with the inter regional traffic in the 1720s resulting in a severe shortage of cash in the Punjab and the Delhi - Agra region.

The phenomenal expansion of English private trade in the Indian Ocean had far reaching effects. Not only did it adversely affect the operations of Indian traders, it fostered a growing tendency among Company officials and private traders to intervene in the regional political set up and manipulate the prevailing disaffection to their advantage. Even before the articulation of such political ambitions became a tangible factor that threatened to alter the existing equations of power, the influence of the English East India Company had become a critical determinant in the realignment of India's overseas trading system. The Company's monopoly control over the freight trade meant that the Muslim shippers were displaced and that their hopes of readjusting to the crisis were slim. At the same time, the growing strength of the Company encouraged local merchants whose interests were not immediately threatened by the Company's activities to contemplate a closer partnership with the Company as a counterpoise to the decaying Mughal administration and to the threats of the Maratha contenders. Collaboration of a sort was thus built into the emerging structure of colonial dominance and served to inflect the process of realignment in India's trading sector.

26.4 EARLY COLONIALISM AND INDIA'S FOREIGN TRADE 1757-1800: TWO CASE STUDIES

The expansion of British private trade in the second and third decades of the eighteenth century emboldened the Company servants to manipulate the existing political set up to their advantage. Without entering into the debate whether the English take over in Bengal was by design or accident, it is important to stress the fact that the Company authorities from about the 1740s strenuously attempted to extend their privileges and were prepared to resist the local administration in the face of any encroachment – real or perceived. In Bengal, these 'privileges' assumed the form of extending the provisions of the Mughal *farman* (royal decree) of 1717 for carrying on duty free trade, to fortifying their trading settlement in Calcutta and

even extending protection against fugitives escaping Mughal law. In western India, the focus of Company politics was control over the Imperial Admiralty that would facilitate and formalize the Company's efforts to dominate the shipping in the Indian Ocean and to give Company servants in Bombay and Surat a decided edge over the region's freight trade to the Gulfs of Persia and Arabia. The strategies adopted by the Company towards their political project lay in forging connections with important local groups, potential collaborators against the ruling administration. Assuming the role of protectors and patrons of client groups against the arbitrary Mughal administration, the Company represented their interests with threats of force and succeeded by the late 1750s in building a viable support base for their ventures. The strategies produced the desired results – backed by merchants, magnates and other disaffected groups, the Company assumed effective power in Bengal and Surat in 1757 and 1759 respectively. These victories enabled the Company to become a major player in regional politics and use the benefits of political office to pursue their commercial interests. The take over had important implications and as the Company enforced measures to dominate the carrying trade and to achieve a monopsonistic control over the purchase of export items, the economy suffered from certain distortions.

The effects of Mughal decline and of the expansion of the English East India Company in the trade of the Indian Ocean did not spare any particular merchant group even if some fared worse than others. But did this mean that the trading economy went completely under even before the historic date of 1757 that inaugurated a new era in the commercial growth of the English Company? For it is important to remember that it was not before the end of the eighteenth century, that the nature of India's overseas trade changed substantially and she became a supplier of primary goods oriented entirely to the needs of the metropolitan economy. This Section proposes to examine the nature and functioning of the India's trading economy in the critical half century of transition, to analyze the status and strategies of India's merchant groups as they struggled to come to terms with altered reality embodied in the emergence of the English East India Company as the dominant player in the economy. We shall concentrate on two regions – Bengal and Western India, two rather atypical and contrasting cases – one, where the effects of Mughal decline were particularly acute in the first half of the eighteenth century but one that survived better the early colonial onslaught, whereas the other which escaped the tyranny of Mughal decline but which was the first to go under in the face of early colonial penetration.

26.4.1 Decline of Surat

For purposes of convenience, the study will be divided into two time periods – one between 1757-1780, when the traditional structure and orientation of India's overseas trade sustained an irreversible and major dislocation subsequent to the establishment of the English East India Company's monopolistic control over shipping in the Indian Ocean and the other between 1780 and 1818, when Indian merchants attempted to adapt to the changing conditions. Also by 1818, the colonial economy had been put in place and the decisive shifts in the structure, orientation and compositions of India's trade had been registered. For Surat, the figures of decline are pretty dramatic. Ashin Dasgupta (1979) spoke of a severe slump in the value of trade from 16 million rupees in the last years of the seventeenth century to 3 million in 1740 – a trend that continued right through the century. The expansion of English private trade in the western Indian Ocean in the 40s and 50s of the 18th century, documented by Holden Furber (1965) was an additional factor that aggravated the commercial crisis of the Indian merchants. The assertion of English private trade became in effect a

major determinant of the Castle revolution of 1759, when the Company assumed charge of the Imperial Admiralty, Surat castle and shared power with the ruling Nawab. The transformation of the Company's political status enabled the authorities to consolidate their commercial ventures even if the markets in west Asia remained sluggish. Beginning around the 1720s, the private trade of the Company was dominated by the presence of senior servants at Bombay and Surat. Both the Governor of Bombay and the Chief of Surat exploited their office to further their private deals. Furber gives us a detailed account of Robert Cowan (Governor of Bombay) who was extensively engaged in private shipping and freighting and was eventually dismissed from Company service in 1734. Henry Lowther, Chief of Surat and William Wake, Governor of Bombay were important players who made use of their position and entered into partnerships with local notables to prosecute a vigorous trade. What is important in the story of Bombay's private trade is the growing resolve of the English merchants to wrest political control for commercial ends. Their confidence derived largely from the growing success of the Bombay Marine – the Company's naval force – in eliminating rival claims over maritime jurisdiction, thereby claiming control over navigation and shipping. Indian trade and shipping had to accept English colours and the protection of the Marine if they were to traffic at all. The visible expansion of English shipping was not as yet at this stage accompanied by a fundamental alteration in the orientation of Maritime India's trading structure. European trade remained oriented to traditional markets and dealt with traditional commodities. The change was thus, at least in the first phase restricted to the growing European preponderance in the carrying agency and the resultant displacement of traditional Muslim mercantile groups.

The Castle Revolution of 1759 largely sponsored by Surat's Hindu merchant groups and by the English servants in their capacity as interested private traders introduced important change since the political set up. The Company assumed the position of *Qiladar* and with it enjoyed considerable powers of mediation in the city's administration. This enhanced their commercial advantages. Michelguglielmo Torri (1982) has argued that the Revolution enabled the private traders to formalize the monopoly control over the city's freight trade. Of the officials engaged in the Gulf trade, the most prominent were W.A. Price, Chief of Surat (1759-62, 1767-69, 1771-74), and Thomas Hodges, Chief of Surat (1762-67) and Governor of Bombay (1767-71). The first stage in the enforcement of the monopoly was taken in 1759-60, when it was announced that only those Surat ships hired by the English Chief and chartered by him to the city freighters who wished to send goods to the Gulfs would be allowed to proceed. What this in effect meant was that the ships of the English Chief and those of his favorites had exclusive rights to proceed first. At a meeting called the Noorbundy, the English Chief conferred with the shipper freighters about the rates of freight prevailing that season and also the commission due to the English Chief and then given permission to pick up the season's freight. Others were not technically prohibited from making independent voyages but the Chief had sufficient power to render these difficult if not impossible. We come across a number of conflicts with senior Surat merchants like Mulna Fakirodin in the Mayor's Court.

The workings of the monopoly did not always go as anticipated. As Torri has shown, the interests of the Surat Chief were occasionally at variance with the English representatives in Basra who complained to the Court of Directors. Also the Muslim merchants through their contacts with the Turkish authorities had occasion to forward their complaints to London with the result that regulations to free the trade were introduced in 1769. These regulations prohibited all discrimination and ordered that all merchants, 'whether Muslim, Hindu or Parsi or English' were free to put up their

ships for freight for the Gulfs of Persia and the Red Sea. On paper, these regulations threw open the freight trade, as merchants no longer had to cope with the excesses of the Surat Chief or Bombay Governor. However, these were late in coming and did not immediately restore the situation. However, Torri argues that the Muslim merchants of the city did succeed in regrouping and recovered important ground by the closing decades of the century.

While there is some evidence of the partial revival of Muslim shipping and the initiative of the Muskat Arabs in the trade of the western seas in the last decades of the century, it is difficult to argue for a Muslim recovery so to speak. There is little doubt that the Gulf trade continued for the greater part of the century to operate at very low levels and that the older 16 million mark was never repeated. The displacement of the Muslim ship-owning category was irreversible and the group was never able to recover its former position of advantage. The undermining of the English monopoly in the 1770's did not redress the situation for trade itself by this time was on the wane. The collapse of Gulf markets following conditions of political insecurity in west Asia and the diversion of European commercial interests in China boded fundamental changes for India's trading structure.

The community of non-Muslim merchants – the Banias and the Parsis fared better under the conditions of transition. For one, their interests did not immediately clash with those of the English private traders. Their investment in shipping and the freight trade was only marginal with the result that they were quite prepared to switch to English carriage. Further, their services as brokers and bankers made them indispensable for the conduct of English trade. In Western India, the connection was particularly significant. Here, a combination of circumstances resulted in the formation of a critical partnership between the English Company and the Bania community, the latter emerging as key financiers of the Company's trade and politics. The relative success of the Banias was made possible by their access to capital and credit instruments that became vital for the survival of the Company in western India. This is not to suggest that the community did not face the pressures of declining demand, of capital shortage or the contraction of Surat's Gulf trade. What seems to have happened was that following the stabilization of Indian politics around the 1780s when there was a partial reintegration of trading networks in Hindustan and Central India, the Bania merchants were able to adapt to the changing situation and consolidate their business as supply merchants and financiers. Thus, as Lakshmi Subramanian has argued, whereas the emergence of the Anglo-Bania order had occurred in a period of languishing trade and political crisis immediately preceding the Castle Revolution, its consolidation was carried out in conditions of resurgence and revival of trade. That brings us to the second phase in the period of transition, when following the stabilization of English power in Eastern India and the consolidation of indigenous regimes like those of Mysore, Hyderabad and the Maratha power in the Deccan and Central India, there was a partial integration of trading channels and credit flows in the hinterland.

26.4.2 The Case of Bengal

Developments in Bengal's trading economy in the years immediately following Plassey (1757) tended to affect more adversely the local merchants and their trading networks. As far as Bengal's overseas trade was concerned, the rise of the Calcutta fleet had by the 1740s displaced the local Asian shipping operating from Hugli. The more important long-term change was the shift to the east – the so-called commercial revolution in the Indian Ocean that Furber (1976) later elaborated. From about the

1760s the focus of English shipping and trade in the Indian Ocean moved from the declining west Asian markets to the ports in Southeast Asia and China. This was the harbinger of the new colonial economy that went beyond the traditional Asian networks to create a new set of global linkages adhering to the imperatives of the metropolitan economy.

The results of the British take over on Bengal's internal economy were even more brutal. The assertion of political power by the Company was an effective weapon in the removal of limits on private trade. The Company servants could and did make use of the political change to claim the right of exemption from custom duties, local dues and to challenge the workings of established state monopolies. The 1757 grant following Plassey that confirmed the British trading privileges in Bengal, the guarantees that goods bearing the Company's *dastak* (seal) would pass without paying customs resulted in an unprecedented expansion of British private trade. Not only did this affect the custom receipts of the Bengal Nawabs, it posed grave threats in terms of law and order forcing the Bengal Nawabs to confront the Company. The confrontations were in vain as the English traders eroded the traditional preserve of local merchants, and aggressively trafficked in opium and saltpeter. The increasing investment in Bihar's opium was in itself the product of the burgeoning China trade, the dynamics of which reflected all too clearly the emergence of a colonial economy and a new trading dispensation. Indigenous supply merchants were squeezed out of business as the Company exercised monopoly control over the salt petre and opium business. Even earlier, the textile trade had come under greater supervision with the result that the status of the artisan and merchant changed. From being independent price workers, they became Company weavers forced to commit their produce to the Company appointed *gumashtas* (agents). The decay of manufacturing towns like Dacca and the collapse of the indigenous merchants – Seths and Basaks – testified to the changes that had set in in Bengal's trading economy. The subordination of the economy to the requirements of the English Company's global commerce worked itself out in the closing decades of the eighteenth century, which witnessed the configurations of the colonial economy.

In conclusion, one may suggest that in the period of transition between 1757 and 1780, the Indian economy was subject to a variety of pressures, which threatened to alter the basis and orientation of the traditional structures of trade and merchant networks. Admittedly, the orientation of India's trade remained with traditional Asian markets and on the bi-lateral exchange of goods for specie. K.N.Chaudhuri (1983) in fact made this point when he argued that Indian trade for half a century after 1757 continued to operate along traditional channels and its composition was based on the exchange of fine textiles, foodstuffs and other materials for precious metals and manufactured products. However, the activities of the Company in controlling the freight and shipping in western India or in controlling the supply of export goods in Bengal were not without consequence. In Bengal, the elimination of the rival European trading Companies and the local Asian merchants resulted in a long-term decline of Bengal's European commerce. After 1765, with the Company's acquisition of the *Diwani* that gave them the right to the revenues of Bengal, Bihar and Orissa, there was a growing tendency to deploy Indian revenues in trade. This affected the imports of bullion into the economy resulting in serious deficits of coin. The ruthless expansion of private traders in the internal trade of Bengal undermined the moral economy and left merchants and bankers permanently crippled. The impact of Company controls on weavers, in order to monopolise their produce severely affected the artisans as they were compelled to submit to the Company's coercion. In western India, the situation was somewhat different. The Company was just one player among many

and did not enjoy the benefits of a secure revenue base. Consequently it was critically dependent on local financial support. The continuing importance of the Gulf demand for Western India's textiles meant that the weavers and merchants could not be forced to produce exclusively for the Company. It was only at the very last years of the century that the Company could contemplate extension of coercive measures in western India and that too very tentatively.

Regional variations in economic performance were closely linked to the timing and nature of British political penetration. These have added fuel to the more recent debates about the nature of the early colonial impact on the trading economy of eighteenth century India. We shall have occasion to refer to these once we plot the developments that followed in the closing decades of the eighteenth century, when slowly but inexorably the colonial economy was assembled. From about the late 70s and 80s of the century, India's overseas trade changed direction although it was not before 1800, that the outlines of the new economy became perceptible.

26.5 THE FINAL YEARS OF TRANSITION 1780-1800

The post 1780 situation saw the growing influence of the Calcutta and Bombay trading ports and their impact upon the adjacent hinterland economies. In part these consequences signified the end of an older trading order and the slow and sometimes almost ad hoc assembling of the colonial economy. The initiative lay very much with the English East India Company and its servants who in their private capacity used the newly acquired political authority to eliminate all competition and explore new possibilities of trade that linked India to the larger trading world. However, for most of the period, the imperatives of early colonial trade constituted an important but not exclusive determinant in the realignment of merchant, market and credit structures in the subcontinent. The imperatives of Company trade, constituted a very important but not an exclusive determinant of the country's trading economy. The realignment of merchant and market networks in the last decades of the eighteenth century were as much in response to the emerging colonial factor as they were to indigenous stimuli that came in the wake of the new balance of power that the presence of the Maratha Confederacy and other regional polities like those of Hyderabad, Mysore and even the Punjab represented. C.A. Bayly (1983) in this connection, has argued that the early colonial economy in India had indigenous origins in the sense that the external or colonial demand factor converged with the internal one to produce a situation that generated a variety of opportunities for commercial groups and stimulated a measure of urban growth evident in the rise of towns like Nagpur, Mirzapore and Benaras.

The political context for the trading economy of India in the closing decades of the century was determined largely by the expanding presence of the English East India Company and by the stabilization of Maratha power in central and western India. The rise of the cross-country trade routes provides us an example of the reintegration of commercial and credit connections that followed in the wake of tribute payments that tied up the areas of the Maratha Confederacy with its center in Poona. The annual movement of tribute payments from Baroda, Ahmedabad, Nagpur and Gwalior to Poona working simultaneously with renewed pilgrimage traffic under Maratha patronage stimulated commercial exchanges that in turn fed into the expanding trade of the Calcutta and Bombay commercial poles. For example, Bombay's trade with Poona was so impressive even before 1770 that Charles Malet, the English Resident in Poona had occasion to remark that 'a state of hostility with this empire little

affects the commercial intercourse which must be attributed to its being in the interests of the farmers of the customs and landholders not to impede the intercourse and as to the latter, it must certainly ever be our interest to promote it'. However, by the 1790s, Bombay's trade with Gujarat – the cotton bowl of the region – became perceptibly more significant in view of Bombay's growing trade in raw cotton with China. This coincided with the emergence of a further line of dependency tying the eastern Maratha domain to the Calcutta commercial pole :(? port). Increasing Bengal demand for raw cotton from the Maratha cotton bearing tracts in Central India like Amrawati and Nagpur through Mirzapur stimulated the growth of middle sized towns engaged in the supply of cotton. This was a genuine case of transition – drawing from both local stimuli as well as from the pressures of a changing external situation.

The rise and growth of Mirzapur and of Benaras as a financial center supporting the cotton trade best illustrates the dynamics of a trading economy in transition. The context for the emergence of Mirzapore was provided by the rise of cross-country trades supported by the transactions of the Maratha Confederacy and the operations of the English East India Company. The latter's financial operations resulted largely from the dispatch of the Bengal surplus into the deficit presidencies of Madras and Bombay funneled through the existing credit network of Indian financiers and dovetailed into the inter-regional commercial network. To begin with, both these factors were significant in the reactivation of the cotton traffic between northern, central and eastern India. By 1776, Mirzapore had emerged as the great cotton mart of the Benaras district and Benaras the great financial capital of the region. Enjoying the benefits of political security under the Rajas, Benaras became a key conduit for the cotton trade and a major center of *hundis* that financed both the tribute transfer operations of the Awadh Nawabs and the English Company as well as the cotton trade of the local merchants. The steady growth in Maratha demand for silk and luxury fabrics as well as coarse textiles for the armed forces began to exert a strong pressure on the region's balance of trade situation and it became clear that the region was on the verge of a massive take off. Thus Bayly argues that the internal demand factor represented by the Maratha requirements had already gone a long way in making Mirzapore's commercial reputation and its accessibility to the English Company. Thus when the time came, it proved easy to expand the cotton trade for the purpose of re-export, first to Bengal and then to China. In other words, indigenous developments had created a situation of expansion and adaptation in Mirzapore and Benaras both of which, thereafter could adjust to the emerging colonial situation.

The colonial factor worked thus. From the late 18th century, Bengal was not in a position to meet the demands at Dacca and Murshidabad for medium and high quality cloth. This coincided with an unexpected development in 1784, when it was decided to bring cotton overland from central India and Bundelkhand to be transported by river to Bengal. This spurred the growth of towns like Kalpi, Farrukhabad and Mirzapore and Agra that were already beginning to play a nodal role in the inter-regional commerce of textiles and cotton. The year 1784 was a turning point for the reduction of duties on tea in Britain created a strong demand for the commodity. But tea could be bought only in exchange for raw cotton, which created a huge demand for the product. The subsequent rise in the price of Gujarat's cotton made it profitable to import Mirzapore cotton. In fact the connection became so close that between 1790 and 1820, the price of cotton at Mirzapore depended entirely on the relative prices in China, the anticipated demand there and the quantity likely to be produced in Gujarat.

The gradual reorientation of the Indian economy to the pressures of Company trade was not without benefit to Indian commercial groups. While the displacement of India's traditional trade had undoubtedly undermined Indian shippers and exporters forcing them to play a subordinate if not nonexistent role in the changing set up, the realignment of markets and merchant networks in the half century of transition enabled the regrouping and deployment of merchant capital in the proto colonial trade of the late eighteenth century. Bania merchants collaborated with the European private merchants in the expanding trade of cotton in Gujarat. Naupatti bankers were active in Mirzapore's cotton traffic. The community of bankers consolidated their links with the Company emerging as key collaborators of the new regime. In western India, their presence was especially important as they handled the huge flow of credit transfers that proved vital for the survival of the Company establishment in Bombay.

26.6 THE FLOWERING OF THE COLONIAL ECONOMY 1800-1857

The Indian trading economy in the first colonial century was distinguished principally by a massive fall in the share of indigenous traders in foreign trade, a complete cross over to raw material exports in place of finished goods and a shift to new markets in the Indian Ocean, like China and Southeast Asia. Together, these changes helped integrate the Indian economy to the larger world system with its nerve center in Western Europe – equally, these changes destroyed the structures of traditional business and trade dispossessing certain groups while enabling others to find new opportunities in the changing scenario. The Company-British private trader combine established a clear domination over the growing sector of India's export trade, which even by the closing decades of the previous century had shifted to markets in the eastern Indian Ocean. The change in direction was fed by a change in commodity composition – textiles, the traditional export staple giving way to raw cotton, opium and indigo, all of which facilitated purchases of Chinese tea and speeded up the integration of the Indian economy into the global system.

26.6.1 Private European Merchants

The assembling of the colonial economy was a near logical sequel to the political expansion of the English East India Company and the spectacular expansion of English private trade that among other things intensified the problem of remittance. This in turn inflected the course of overseas trade making inevitable an artificial link up of trade transfers between India, Great Britain and China and thereby setting in motion a new trading pattern and structure. The principal carriers of the new and burgeoning trade were private European merchants, who enjoyed a special license from the Company to carry on the country trade, which the Company could not handle. As agents for investment and the remittance of private savings of civilian and military officials of the English Company, they played a key role before extending their ventures to finance the import and export of the country trade. They organized themselves into agency houses – sometime around the 1780s – and by the end of the century, became the most important trading group in terms of both numbers and the volume of traffic they dominated. Their number increased from 15 in 1790 to 27 in 1828, 61 in 1835 and finally to 93 in 1846. Between 1783 and 1813, when the Charter Act partially ended the East India Company's India monopoly, the Agency Houses were very closely connected with the Company officials who were also their constituents. Their shipment of country goods to Europe were confined to the

privilege trade, i.e., space hired out in the holds of the Company's East Indiamen. Most of their energies were directed to the China trade where they shipped opium and cotton, key staples in financing the tea investment of the Company and also the principal channels of remittance. The Company encouraged private traders – both Indians and Europeans – to engage in the trade and hand over proceeds of their sales to its representatives in Canton (China). The English East India Company granted licenses to select private traders to carry on business, which the Company could not handle, creating in the process a kind of sub monopoly. The latter repaid the merchants in bills of exchange drawn on their treasuries in India or on the Court of Directors in London. A close bond was thus formed between the Company and the Agency houses. Historians have seen the agency houses as the main instrument through which western capitalism and business institutions were introduced into the subcontinent in response to the requirements of the world market. Thus political subjugation and the imperatives of remitting profits to England created a situation where the produce of Indian villages serviced European trade – a development that was hardly natural or born out of the spontaneous pressures of market and competition.

26.6.2 Pattern of Early Colonial Trade

The configurations of early colonial trade were determined largely by changes in the development of trade relations between India, China and England. Here tea played an important role. The popularity of tea in England generated a huge demand for this exotic product of China. Britain had hardly anything to offer in exchange for tea and with the mounting pressure against bullion exports. The financing of tea imports required an imaginative rerouting of Indian produce that enjoyed a demand in the Chinese market. Cotton and opium provided the key to Britain's problems of trade balance. At the same time, the triangular trade arrangements seemed to solve the problems of remittance. Integrating the movement of funds between Britain, China and India through bills of exchange drawn on London or on the Company treasuries in India, the Company and the private traders were assured of regular channels of capital and remittance facilities. Thus private merchants shipped cotton and Opium to China, deposited the proceeds of their traffic into the Company's treasury at Canton and received bills of exchange drawn either on London or India. The Company on its part had access to treasure that it could deploy to purchase consignments of tea. It was this complex interlocking of financial and commercial interests that shaped India's trading economy and exposed Indian merchants and producers to an altogether new set of circumstances over which they had very little control. The items that entered this new trade were chiefly raw cotton and opium followed by indigo and sugar.

A quantitative analysis of India's foreign trade reflects a very high rate of growth. According to K.N.Chaudhuri's estimates, exports expanded from Rs. 68 million in 1814-15 to Rs.183 million in 1853-54. The expansion in imports was even more impressive from Rs.11.9 million to Rs.124 million in the same period. Bombay by virtue of its locational proximity to the cotton bowl of India enjoyed an edge in the raw cotton traffic. By 1805, the aggregate amount of cotton exported from Bombay, amounted to 80000 bales of cotton. The principal agency houses handling this traffic were Forbes & Co., Fawcett & Co., Alexander Adamson & Co. and Tate & Co. Their investments principally lay in shipping cotton consignments to China and Britain and reinvesting their dividends either in tea or in bills of exchange. The trade in raw

cotton did not turn out to be of long standing and was soon superceded by the opium traffic that dominated the China trade for more than half a century.

The two outlets for Indian opium were Calcutta and Bombay, with their proximity to opium producing areas in Bihar and Malwa respectively. Barring small amounts shipped to Malaysia and Indonesia, these exports were destined for China. The agency houses dominated the trade in Bengal where it was managed as a state monopoly. The government gave out loans to the cultivators, brought the product to Calcutta and there auctioned it each month generally well above the cost price to private merchants who shipped it to China. In Bombay, the situation was different for the Company here it made no attempt to monopolise its production or trade. The fragile basis of the Company's authority in western India, the relative strength and independence of local traders and the web of interests that connected the merchant/banker with the princely states of western and central India and the Portuguese private traders stationed in coastal enclaves like Daman and Diu to oversee a clandestine traffic in the produce combined to work in favour of the local merchants, exporters and suppliers.

26.6.3 Post 1813 Colonial Trade

The expansion of India's foreign trade in the decades after the Charter Act of 1813 coincided with the second phase in the development of the agency houses. A large number of new houses came into existence. These were formed largely by adventurers from Britain. Faced with competition, these houses tended to explore other fields for investment – and came up eventually with indigo. A temporary demand for the dye combined with the problem of Bengal's balance of payments made indigo an attractive proposition. What followed was thus an overextension of trade and indigo production, which in the long run created more problems for the houses. The most serious problem was one of wildly fluctuating markets – an inevitable fall out of the remittance factor. This hiked up prices in Calcutta independent of its prices in London and the result was a glut on the London market. This combined with the contraction of fluid capital in Bengal aggravated the situation. The transfer of the Company's debt and a slump in prices in 1825 proved to be the final straw. Bullion imports fell off while a number of agency houses sold their assets and left. Between 1830 and 1833, the entire edifice crumbled wiping out a generation of agency houses. A new crop came up after the 30s to inaugurate a very different phase of Indo-European business.

So far, we have focussed on the changes in the commodity composition of India's exports. A very major transformation occurred in the field of her imports as well. The period of the Charter Acts corresponded with the most productive phase of the Industrial revolution in Britain. The phenomenal expansion of the British cotton industry combined with the high price elasticity of demand for British textiles in India and the new rate of customs levied in Calcutta in 1815 to produce a flood of imports of cotton piece goods, twist and yarn from Britain into India.

What was the impact of these developments on Indian merchants and their commercial networks? The disappearance of handlooms from India's exports and the subordinate position that she subscribed to in the new system of trade and balance of payments were obvious and crippling liabilities that early nationalists and economic observers commented upon. To what extent did the new economy dispossess indigenous enterprise; promote de-industrialization and block avenues of capitalist growth and accumulation for Indian merchants? We shall attempt to address these

questions by looking at the way in which the new economy functioned and the location of Indian merchants in the dynamics of the new system and its workings. One thing needs to be constantly stressed and that is the differential advantage enjoyed by British traders in the new system as a direct consequence of British political control. Also the very nature of the trade given that it was largely induced by extra market considerations of balancing payments and remittance servicing subjected it to violent fluctuations of both the British economy as well as the policy operations of the Company's government in India. This is, however, not to suggest that Indian merchants failed to play the game to their advantage or that regional variations did not exist. In fact, the timing of British colonial control proved to be decisive in determining the trajectory of Indian enterprise. In Western India, for example, where colonial control was late in coming and where it was hamstrung by local factors and had, therefore, to accommodate parallel structures of local authority, the nature and direction of Indian trading enterprise was remarkably different.

Indian Merchants

The merchant world of India went through a complex process of redeployment in the first half of the colonial century. Those of whom who survived the crisis of the eighteenth century fitted into the new colonial system largely in the capacity of dependent partners of British firms in the expanding country trade of India. In Western India, the partnership proved to be vital and sustained – it was in the cotton and later opium trade that the conjunction between British private traders and Indian merchants produced its most striking results. Parsis and Bania merchants emerged as the most important players of Bombay and Western India's colonial traffic. Asiya Siddiqi's (1995) work on Jamsetjee Jeejeebhoy demonstrates the close connection between Parsi enterprise and British agency houses. His income derived from a variety of sources: the profit of trade on his own account, the income from hiring freight on his ships, interest on loans to shippers, dividends on shares in marine insurance companies and commission on the sale of his own bills. His prodigious talent and wealth did not, however, insulate him from the inherently unequal trading structure under which he operated. Backed by a worldwide field of operations, British merchants were able to buy and sell bills of exchange at rates that Indians could hardly afford. So much so that they had often to import British textiles and metals as a means of remittance. Thus while European remitters eagerly sought American bills, Jamsetjee found them undesirable and difficult to sell in Bombay. The problems of payments and remittance arrangements affected other ventures – for instance we find Jamsetjee unable to operate his country shipping in the face of competition for private European shipping. The victory of English shipping, argues Asiya Siddiqi was not simply a technological one. "Just as their links with the dominant international networks, of commerce and banking, centered in Britain, enabled the Liverpool trading houses to sell bills of exchange at rates which Indian merchants could not afford so also were English ships able to offer freight far cheaper than what Indian ships could do". Given these conditions, the success of Jamsetjee must be seen as a testimony to his agility and acumen that enabled him to build a substantial fortune.

Below the Europeans and the Parsis who dominated the first tier of Bombay's export trade was the supply merchants and financiers whose links with commodity production proved vital. Recent works by Amar Farooqui (1995) have emphasized the significance of the trade in Malwa opium as a source of capital accumulation. Malwa opium became the instrument, with which against heavy odds, indigenous groups in western and central India carved out a niche for themselves within the

overall colonial structure. This, Farooqui argues, was reflected in the far greater participation of indigenous enterprise in the development of capitalism at Bombay compared to that of Calcutta. The Malwa trade was a huge smuggling operation, in which the main participants were the Marwari soucars, Gujarati and Parsi merchants of Bombay and Ahmedabad and the European agency houses. The wholesale trade in opium was dominated by the soucars – mostly Gujarati and Marwari who made advances to cultivators (in collusion with the princely states of Rajputana and Central India), and collected the produce. They had large warehouses where they stocked the produce. They engaged in large scale speculation and gambling in stocks. Farooqui describes the two favourite forms of speculation and trading in futures. These were *jullub* and *cowri sutta*. The former practice was an anticipation of price at certain dates ‘accompanied by unreal entries and transfers’. *Cowri sutta* was a similar form of gambling wherein, ‘one soucar or bania giving another, before the harvest a Cowree, as a pledge, that he will pay him a specific price, at a certain date, for a specific quantity of grain.’ They serviced both petty traders as well as the agents of large opium dealers, based in Gujarat, Bombay and Rajasthan. The latter represented the second important layer in the traffic. The merchants of Ahmedabad and Bombay – both Parsis and Gujaratis worked through agents who contacted the wholesalers for procurement of the commodity and arranged for the transport of the drug by caravan to various ports on the west coast including the Portuguese centers of Daman and Diu and Goa before its final shipment to the Chinese market. By the 1820s, the networks of Bombay, Gujarat and Rajasthan opium merchants encompassed the major opium marts of Malwa, where their agents bought opium directly from the opium wholesalers.

Ujjain was the principal center for the export trade in opium. The really important dealers were Lakshmichand Panjray, Jadonjee Chabeelchand, Bhaidas Gokuldas, Appa Gangadhar. Connections with the Marathas- Holkar and Sindhia – enabled them to establish a syndicate of sorts. Among the Ahmedabad traders, we hear of Khushal Nihal Chand, Karamchand Dhongarshee, Dayaram Dulobha not to speak of indigenous Parsi firms of Bombay who affected their purchases through the medium of Malwa traders. Clearly, then the workings of the opium trade in western and Central India enabled indigenous commercial groups to develop a viable commercial base and a significant source of capital accumulation that strengthened opportunities for future enterprise.

Bengali Banyans

The same could not be said for merchant enterprise in Bengal. Not that a regrouping of commercial interests under the colonial dispensation, did not occur. The emergence of the Bengali banyans as dependent partners of the European private traders and later agency houses was an important development and as P.J. Marshall (1974) pointed out, ‘Europeans traded on the capital of their banyans or Indian agents; or to be more exact the banyans traded on their masters’ names and authority’. Men like Ramdulal Dey, Nabakishan, Madan Dutta, Duttaram Ghosh invested money in trade and amassed fortunes, a sizeable portion of which was invested in land. The world of business in Bengal was primarily determined by the imperatives and workings of colonial trade, which meant that any fluctuations in the trade were bound to adversely affect their operations. Unlike as in western India, where, an important segment of commercial activity remained outside the domain of official/European control, business enterprise in Bengal was inextricably tied to European colonial enterprise with the result that the Indian constituents necessarily operated from a position of disadvantage.

The ubiquity of the Bengal Banyans has to be located in the context of the consignment trade that developed after the opening of the India trade. In the absence of a proper consignment system, private traders urgently required the services of the banyan who would 'in return for customary commissions and perquisites, etc. to take charge of safety and security of goods and with all due care and diligence to keep all such goods, wares and merchandise of the firm. Goods were from time to time deposited with or entrusted to them to redeliver when they shall be required or disposed of in the like order or condition as deposited or entrusted, reasonable wear and tear expected'. It was through the Banyan, that all purchases and sales were affected. He had to assume responsibility for quality and timely transactions. His knowledge of the market was expected to mediate trade effectively. In fact, banyans like Ramdulal Dey satisfied all these conditions and yet failed to make that critical cross over to large-scale trade. The expansion of private trade and the advent of the American clippers constituted for the banyans in the first decade of the nineteenth century the gateway to profit and wealth – a point that the career of Ramdulal Dey exemplifies.

The Banyans, representing the indigenous component of the trading economy of Bengal were located firmly in the colonial trading structure that had firmly been put in place by the first half of the nineteenth century. By the 1820s indigo emerged as the most significant export item for remittance with the result that there was an over investment in the commodity leading eventually to the first major commercial crisis in Bengal in 1829-33. Exports of indigo for instance expanded from 40,000 maunds in 1800 to 120,000 maunds in 1815 and to 118,111 in 1826-30. The banyans had a considerable portion of their capital tied up in the agency houses with the result that when the crash came following over speculation, shortage of bullion and government indifference, the entire edifice of Indo-European business crashed. It did not, however, result in the eclipse of Banyan activity. They surfaced again, this time as key partners of the new agency houses that depended on them for working capital. By the 1840s the banyans had become agency house partners in name and fact.

The Agency houses in the 1840s were of two categories: export based and import based. The exporting houses were principally involved in the production and export of country products such as indigo, sugar and silk. As the funnel for capital for indigo planters and other European producers, they were the debtor houses. They depended for their working capital on Banians, government advances and funds supplied by the importing houses. The importing houses were formed by British manufacturers to serve as agents for the sale and distribution of yarn and textiles sent on consignment from Britain. They accumulated capital from sale of their goods and remitted the proceeds to England through bills hypothecated to indigo and other exports. Indians were intimately involved in both sectors – Marwari bankers based in Burrabazar provided capital for importing houses, advanced money to dealers in cloth and became the key middlemen for distribution of cloth upcountry. They also speculated in opium, many of them lost out after the opium war. Banyans associated with export houses enjoyed a brief period of glory, a rare, almost meteoric even if short-lived success. The most notable among Bengali businessmen in this decade were Dwarkanath Tagore, Motilal Seal and Rustamji Cowasji, who figured as dominant partners in British enterprises such as the Union Bank, and in a number of insurance and coal companies. The coming of age of Bengali business did not solve the basic problems of capital sourcing – clearly the most important constraint faced by business groups in Bengal. Almost all the assets of the bank for instance were committed to financing the production of a single export item, namely indigo with the result that when indigo prices slumped owing to conditions of depression in England, there was a universal fall out of European managing agencies and their Indian constituents.

Thus while on paper, loans to indigo concerns were dropping, in fact the bank continued to increase its support to indigo cultivation. And in annual reports directors disguised their loans under euphemistic headings. This was a dangerous trend given the fact that indigo prices were dropping steadily after 1840. The more they declined, the more capital had to be borrowed to keep them in operation, the more capital borrowed, the more indigo had to be contracted for – thus flooding the market and keeping marginal concerns in operation. The Union Bank colluded in this charade until 1847 it became no longer possible to stem the rot. The bank went into liquidity even as the agency houses collapsed.

The collapse of the Union bank has been seen as a watershed, marking the end of Bengali business enterprise in large-scale business. Thereafter capital tended to remain tied to land, with Bengalis preferring to invest in *zamindaris*. Historians attempting to explain this tendency in terms of the appeal land held for Bengalis as both as source of safe investment and as a way of life, the stranglehold Europeans had on large scale trade and industry especially in the high noon of imperialism and speculative mentality born out of the get rich approach of European principals who contributed thereby to the culture of cliques and cabals. After 1848, commerce and industry were dominated by British capital and their Marwari associates who enjoyed familial traditions of support and credit and were willing to make long-term investment commitments.

26.7 DEINDUSTRIALIZATION: THE DEBATE

No essay on the trading economy of India in the period of transition and early colonialism can be complete without referring to the debates on de-industrialization. This debate in a sense encapsulates the larger question of the impact of colonialism on India's trading economy, whose workings we have already outlined. That the subcontinent's trading profile underwent major changes, in terms of commodity composition, direction and business organization can be taken as given. That India lost her primacy as a supplier of textiles in the world market, that her merchant groups suffered displacement in the principal sectors of shipping and export and that the imperatives of colonial trade and remittance shaped the configurations of India's economy are facts that need no further elaboration. The implications too are clear enough and it was, therefore, not without reason that the nineteenth century came to be regarded as the era of stagnation and stasis for the Indian economy. The debate came into the public domain as early as the late nineteenth century, when nationalist critiques of British rule stressed the destruction of India's handicrafts and the disruption of the traditional socio-economic order under the shattering influence of market forces represented by western capital and mediated by the colonial state. The stagnation of industrial enterprise, the enfeeblement of agriculture and the decline of traditional crafts embodied the inherently exploitative nature of British rule in the nineteenth century. Subsequent historical scholarship on the nature of India's pre colonial economy took into account the colonial factor in their reassessment of India's pre colonial economy, arguing that it accommodated definite capitalist elements and that the intervention of European control thwarted the logical progression of the Indian economy. Morris D Morris (1968) attacked this position in the late 1960s when he argued that the capacities of the pre-colonial Indian economy were not as significant as they were made out to be, and that the British did 'not take over a society that was ripe for an industrial revolution and then frustrate that development'. Further he argued that British imports of cotton did not wipe out the handicrafts industry and that imports of yarn actually strengthened the competitive position of the indigenous handloom sector despite the fall in cloth prices. The demand for

cloth was elastic and the fall in price led to a movement down the demand curve. The amount of capital consumed arose and the vast expansion of British cloth skimmed off the expanding demand. The handloom weavers were thus no fewer in number than they were at the beginning of the colonial period. Morris' bold even if bold proposition, backed by little or no empirical data was refuted by Toru Matsui (Morris, 1969) Others argued that even if the competitive position of the handloom industry was strengthened by cheap yarn imports, it could not counteract the decline in the traditional spinning industry. Again from the long term point of view, the fall in the price of cloth per piece was greater than the fall in the price of yarn required for one piece of cloth and therefore the remuneration for weaving one piece of cloth was less and adversely affected the productivity for labour of traditional handicrafts. However, Toru Matsui concedes that foreign cloth could not penetrate as effectively as desired and that there was a potential realm available for Indian handloom weavers. The debate was further advanced by Bipan Chandra (1968) who demonstrated the lack of correspondence between yarn imports and piece good imports. The ratio of yarn imports to piece good imports was in fact very low. The artisan survived only because Lancashire failed to reach the Indian market and because British rule was not efficient enough to create the perfect market. Tapan Raychaudhuri (1968) also questioned the assumptions of Morris regarding the increase in per capita income as a sound indicator of economic change and of the beneficial aspects of British rule. Subsequently, A.K.Bagchi (1978) in an authoritative essay on deindustrialization in Bengal and Bihar established on a complex reading of Buchanan Hamilton's report and later census data the real incidence of de-industrialization and a relative decline in the strength of the population attached to industry. While it is true that quantitative evidence for the strength of the artisan community and its displacement in the nineteenth century is slender and that we have virtually no data on incomes, it would not be far fetched to suggest that the changes in the structure and workings of India's foreign trade affected segments of the merchant and artisan classes. Even if there was a degree of adjustment and the expansion in the trade of new commodities balanced the decline of older ones, the benefits of structural adjustment were limited and did not cover the costs of social and economic displacement. If some merchants did well, it was because of the porous nature of British rule that left some gaps for Indian merchants to carve a space for themselves.

26.8 SUMMARY

Recent scholarship has recognized the vitality of the Indian trading economy in the early modern period. The Indian merchant was in no sense a peddler, engaged only in multiple retail transactions. There were wholesale merchants with impressive capital stocks operating within complex networks of commercial exchange. India's overseas trade brought in a huge inflow of bullion accelerating the levels of monetization and urban development in India. However, the weakening of the political centre in the early eighteenth century affected the fortunes of ports like Surat and Bengal. The latter decades of the eighteenth century saw the growth of British private trade and a re-alignment of trade routes. Indian commerce could not remain impervious to the political changes, but the impact of the eighteenth century crisis was not uniform in all quarters. While the decline of Surat was irreversible, Bengal survived until the mid century when the British conquest inaugurated a new phase in the region's trading experience. Indian merchants now regrouped themselves as brokers and banyans to the European private trader.

26.9 GLOSSARY

<i>Banjaras</i>	:	Transporters of grain and other bulky goods. During the medieval period they were the important link between the rural-urban trade.
Bottomry	:	A speculative investment; money was lent out for a particular voyage. The lenders were to bear all the risks of voyage. The rate of interest depended upon the risk involved in a particular voyage.
Castle Revolution of 1759	:	In 1759, the English East India Company, backed by a section of the merchants in Surat city, occupied the Surat castle and assumed joint control of the city.
<i>Commenda</i>	:	A practice in which merchants combine their resources for mutual benefit.
Respondentia	:	A form of marine insurance and speculation.
<i>Tanda</i>	:	A <i>banjara</i> camp.

26.10 EXERCISES

- 1) Discuss the pattern of growth of India's trading economy in the seventeenth and early eighteenth centuries.
- 2) What role did the Banias and *sarrafs* play in the seventeenth and early eighteenth centuries trade?
- 3) Analyse the working of the *hundis* within the pre-colonial economy.
- 4) Discuss the impact of European intervention on Indian merchants and trade during the eighteenth century.
- 5) To what extent did the eighteenth century 'crisis' influence trade and markets?
- 6) Discuss the condition of Indian merchants during the first half of the nineteenth century.
- 7) Analyse the role of Bengali Banyans in the nineteenth century Indian trade.

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UNIT 27 COLONIALISM AND TRADE: 1857-1947

Structure

- 27.1 Introduction
- 27.2 Foreign Trade: Trends and Commodity Composition
- 27.3 Internal Trading Networks
- 27.4 Merchants: Europeans and Indians and the Racial Division of Economic Space
- 27.5 Three Trading Communities: Chettiars, Marwaris, Shikarpuris
- 27.6 Merchants' Organizations and Business Structures
- 27.7 Summary
- 27.8 Exercises
- 27.9 Suggested Readings

27.1 INTRODUCTION

The history of India's economic development between 1857 and 1947 is demonstrated by a well-known paradox. As Amiya Bagchi so pithily put it, India in 1900 while remaining the brightest jewel of the British Empire was one of the poorest countries in the world. The reasons for this paradox have engaged economic historians working on this period. Why did India grow so slowly if at all in the colonial period? What role did colonial rule play in the arrested growth and stagnation of India's economy? What were the structural changes in the organization and orientation of India's trade? How did these affect merchant activity and the industrial experience of colonial India? How did merchants and markets respond to the changes brought about by the colonial subordination of India's trading economy and its integration with the larger international economy? These are some of the questions that this Unit will address as it attempts a broad overview of the nature, trajectory and ramifications of India's trade and development. The focus will be squarely on the non-agrarian sector, on trade and markets, the changes that were recorded therein and their effects on the population. The Unit will also review some of the more recent debates on Indian merchant capital and its workings under the colonial dispensation.

The period 1857-1947 saw the consolidation and workings of formally established colonial rule in India. It was a period when the British Crown exercised direct control over a little over 60 per cent of land area in India maintained close control over the affairs of the Indian princely states. These years also saw the integration of India's economy to the imperatives of the world economy in which Britain held a dominant position. This directly fostered an extension of the market economy in India, which was increasingly integrated with the global economy, the nucleus of which lay in metropolitan Britain. India became a central pillar of the international trade economy, and accommodated in the process a large inflow of foreign capital. By 1914, three

quarters of total investment in business and industry in India came from overseas. The imperatives of the international economy generated major infra-structural changes within India, where the British rulers introduced a uniform system of weights and measures, currency and communications. How instrumental were these changes in generating economic growth? Or did these benefit the colonial regime only? How did colonial interests affect Indian interests? What was the impact of the drain of wealth that underpinned the colonial regime, where the government supervised a transfer of wealth from India to Britain in the form of profits of foreign business and government charges? These questions are germane to any discussion of India's performance under colonial rule and have long formed the subject matter of intense debate among nationalist, Marxist and revisionist historians who argue for an objective assessment of the colonial regime.

27.2 FOREIGN TRADE: TRENDS AND COMMODITY COMPOSITION

In terms of sheer volume, India's foreign trade registered a significant increase from the late nineteenth century. Access to statistical evidence makes it easy to calculate the exponential rate of growth in overseas trade for the entire period from 1834 to 1940. According to K.N. Chaudhuri, the average annual rate of growth for this period, was 3.23% for exports and 3.68 for imports. (See Table 1) In spite of variations between individual decades, the period 1850 to 1914 was marked by certain homogeneity, a feature, which was lost after the First World War. The reasons for the expansion in exports lay in the expansion of multilateral trade between Great Britain, the United States of America and Japan in the second half of the nineteenth century, and in which India, by virtue of its location as a colony and as a major supplier of primary agricultural and processed goods played a crucial role. Equally important factors were a reduction in the length of sea routes and the consequent fall in transport costs, railway construction in India and elsewhere, all of which combined to raise the levels of world trade to a new and unprecedented level. India could hardly escape the consequences of global flows driven largely if not exclusively by Britain. Changes in these flows produced vacillations and fluctuations in the movement of India's exports and imports.

Table 1: Compound rates of growth (annual) in India's foreign trade 1834-35 to 1940-41

Date	Export	Import
1834-35 – 1940-41	3.23 (per cent)	3.68 (per cent)
1834-35 – 1865-66	5.61	6.01
1866-67 – 1890-91	3.27	3.69
1891-92 – 1915-16	3.84	4.15
1914-15 – 1940-41	– 2.72	– 2.33
1834-35 – 1850-51	3.61	5.61
1851-52 – 1860-61	6.31	10.10
1861-62 – 1870-71	1.37*	5.43
1871-72 – 1880-81	2.37	4.50
1881-82 – 1890-91	2.52	4.43
1891-92 – 1900-01	[no trend]*	1.23
1901-02 – 1910-11	4.80	5.43
1911-12 – 1920-21	3.00	6.49
1921-22 – 1930-31	– 1.20*	– 2.30*
1931-32 – 1940-41	4.00	3.10

* indicates that the statistical tests are not significant owing to wide random fluctuations.

Source: Chaudhuri, K.N., 'Foreign Trade and Balance of Payments (1757-1947)', in Kumar, Dharma (ed.), *The Cambridge Economic History of India 1757-1970*, Vol. II, New Delhi, 1982, Tables 10.6, p. 832.

Table 1A: Total value of India's foreign trade (excluding treasure), 1834-1915

Year	(thousands of rupees)			
	Imports	Exports	Index imports	Index exports
1834	42,611	79,934	100.0	100.0
1835	47,818	111,064	112.2	138.9
1836	55,369	132,401	129.9	165.6
1837	50,324	112,427	118.1	140.6
1838	52,406	117,747	122.9	147.3
1839	58,312	108,627	136.8	135.8
1840	84,159	134,555	197.5	168.3
1841	77,885	138,252	182.7	172.9
1842	76,036	135,518	178.4	169.5
1843	88,177	172,534	206.9	215.8
1844	107,540	165,902	252.3	207.5
1845	90,874	170,286	218.2	213.0
1846	88,966	153,554	208.7	192.1
1847	85,976	133,123	201.7	166.5
1848	83,448	160,885	195.8	201.2
1849	102,998	173,122	241.7	216.5
1850	115,587	181,641	271.2	227.2
1851	122,404	198,792	287.2	248.6
1852	100,708	204,646	236.3	256.01
1853	111,226	192,951	261.02	241.3
1854	127,426	189,272	299.04	236.7
1855	139,434	230,392	327.2	288.2
1856	141,945	253,384	333.1	316.9
1857	152,776	274,560	358.5	343.4
1858	217,285	298,628	509.9	373.5
1859	242,651	279,602	569.4	349.7
1860	234,937	329,706	551.3	412.4
1861	223,204	363,170	523.8	454.3
1862	226,323	478,596	531.1	598.7
1863	271,455	656,254	637.05	820.9
1864	281,509	680,270	660.6	851.03
1865	295,992	654,911	694.6	819.3
1866	316,786	456,654	743.4	571.2
1867	357,057	508,740	837.9	636.4
1868	359,901	530,621	844.6	663.8
1879	329,275	524,713	772.7	656.4
1870	344,691	553,361	808.9	692.2
1871	320,918	632,092	753.1	790.7
1872	318,746	552,507	748.03	691.2
1873	338,198	549,960	793.6	688.01
1874	362,221	563,592	850.0	705.07
1875	388,916	580,914	912.7	726.7
1876	374,406	610,138	878.6	763.3
1877	414,641	652,223	973.08	815.9
1878	378,005	609,375	887.1	762.3
1879	411,660	672,123	966.08	840.08
1880	531,167	745,806	1,246.5	933.02
1881	491,133	819,684	1,152.5	1,025.4
1882	520,957	834,851	1,222.5	1,044.4
1883	552,793	881,760	1,297.3	1,103.1
1884	557,030	832,552	1,307.2	1,041.5
1885	556,558	838,812	1,306.1	1,049.3
1886	617,773	884,701	1,449.7	1,106.7
1887	650,046	905,436	1,525.5	1,132.7
1888	694,404	970,495	1,629.6	1,214.1
1889	691,974	1,034,603	1,623.9	1,294.3
1890	719,753	1,002,273	1,689.1	1,253.8
1891	694,323	1,081,735	1,629.4	1,353.2
1892	662,652	1,065,954	1,555.1	1,333.5
1893	770,214	1,065,033	1,807.5	1,332.3
1894	735,289	1,089,137	1,725.5	1,362.5
1895	729,367	1,143,347	1,711.6	1,430.3
1896	761,173	1,039,840	1,786.3	1,300.8
1897	736,470	976,327	1,728.3	1,221.4
1898	721,015	1,127,997	1,692.08	1,411.1
1899	753,044	1,090,833	1,767.2	1,364.6
1900	808,945	1,077,185	1,898.4	1,347.5
1901	887,805	1,248,952	2,083.5	1,562.4
1902	858,191	1,293,966	2,014.01	1,618.7
1903	925,922	1,535,171	2,172.9	1,920.5
1904	1,044,127	1,577,220	2,450.3	1,973.1
1905	1,121,137	1,618,356	2,631.09	2,024.6
1906	1,172,421	1,766,739	2,751.4	2,210.2
1907	1,366,475	1,774,854	3,206.8	2,220.3
1908	1,287,868	1,531,431	3,022.3	1,915.8
1909	1,225,512	1,879,681	2,868.3	2,351.5
1910	1,337,067	2,099,616	3,137.8	2,626.6
1911	1,440,554	2,279,898	3,380.7	2,852.2
1912	1,666,296	2,462,183	3,910.4	3,080.2
1913	1,913,079	2,490,074	4,489.6	3,115.1
1914	1,449,307	1,821,780	3,401.2	2,279.08
1915	1,381,693	1,994,803	3,242.5	2,495.5

Source: *Statistical Abstracts for British India, Cf. Chaudhuri, K.N., 'Foreign Trade and Balance of Payments (1757-1947)', in Kumar, Dharma (ed.), The Cambridge Economic History of India 1757-1970, Vol. II, New Delhi, 1982, Tables 10.7A, B, C, pp. 833, 834, 837.*

The period 1834 and 1866 constituted years of highest growth for both exports and imports particularly during the decade following 1850. The main impulse for expansion came from the outbreak of the Crimean War and the beginnings of large-scale railway construction in India. Following the Crimean War, the rupture of trade relations with Russia, which was a principal supplier of oilseeds, flax and hemp gave a fillip to the demand for substitute products from India, while the transfer of a large part of the railway capital raised in England inflated the imports. This trend of increasing exports continued into the following decades of the 60s. This time, the American Civil War and the opening of the Suez Canal in 1869 became the determining factors. The American Civil War created violent fluctuations in the export trade; India's exports doubled in value between 1860 and 1865 only to fall in 1866. (See Table 1A) Most of the fluctuations were the result of the shortage of raw cotton from American sources to British textile mills forcing the latter to rely on Indian exports causing cotton prices in India to rise steeply and a spectacular growth in demand for cotton.

There was a perceptible slowing down in the decades between 1870 and 1900. Two sets of factors were responsible for this trough. One was a series of famines and agricultural pressure in India and the other a prolonged depreciation in the gold price of silver, which caused the exchange value of the Indian Rupee to decline continuously until 1893. The devaluation in the Indian Rupee achieved what D. Rothermund has called the 'miracle of stable export prices' which stimulated and sustained India's foreign trade. Around 1900, the situation showed signs of improvement and a strong upward trend continued right through to 1911.

The two World Wars proved to be critical for India's export trade and its industrial experience. The First World War affected India's import trade more than the exports traffic. The cessation of trade with hostile countries and the dislocation of markets in Britain, France and Belgium caused an immediate decline in both imports and exports. The revival of exports from 1916 took place in the context of increasing government war time demand for jute bags, hides and skins for the manufacture of army boots and greatly benefited Indian exporters. Imports on the other hand lagged in their rate of recovery although after 1919, there was a veritable upsurge in imports as well.

The boom in trade came to an end in 1920 and it was not until 1924 that the import trade began to revive once again. The world depression affected India's trade and by 1932, there was a serious decline in both exports and imports. The adverse terms of trade and the sheer absolute size of the decrease in foreign trade produced serious deflationary effects on the economy. The general recovery, which began in 1935, was checked by the two-year recession starting in the US in 1937. With the outbreak of the Second World War, there was a perceptible increase in the value of both exports and imports. The two World Wars and the depression of 1929 were among the most important single external events that influenced the structure of India's foreign trade and business.

If fluctuations characterized the course of India's overseas trade in the second half of the nineteenth century, the changes in its commodity composition were no less marked. As far as exports were concerned, major shifts took place in the composition of trade. India became an exporter of agricultural produce and an importer of manufactured products. The complete elimination of Indian handloom textiles from international markets, a development that began in the first decades of the century, was among the most visible change in the period under review. India was left to largely export primary commodities, which she exchanged for the advanced industrial products of the west and in the event became a classic case of a colonized economy.

Not that this eliminated all possibilities for economic gain and activity for indigenous merchants. In fact, as we shall see, the distribution of British goods was affected through indigenous mechanisms of marketing and retail controlled by a number of enterprising business communities.

The principal exports in the second half of the nineteenth century were food grains, jute, oilseeds, tea, hides, skins and cotton. Of these both cotton and jute which became the basis for industrialization were linked with war time contingencies that catapulted Indian exports into the world market. For instance, the story of cotton exports was linked with the disruption of American cotton supplies during the Civil War, and when Indian cotton emerged as an invaluable substitute. In terms of value share in India's total exports in the 60s, raw cotton accounted for 52.2%. The boom was an important starting point of a long-term change in the direction of the cotton trade in India. Even after American cotton exports resumed, India was able to keep up its own exports largely due to the growth of the textile industry in Europe. Added to this was the emergence of Japan who by 1913-14 had emerged as a major customer for Indian cotton using 45 per cent of the total exports. (See Table 2)

Table 2: Exports from India: commodity composition, percentage share of selected items in total export value, 1850-1 to 1935-6

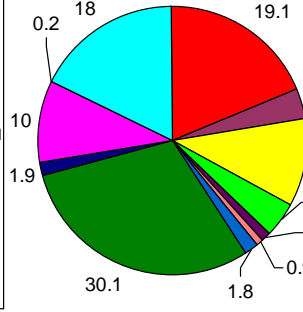
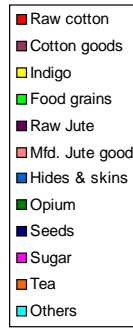
Year	Raw cotton	Cotton goods	Indigo	Food grains	Raw Jute	Mfd. Jute good	Hides & skins	Opium	Seeds	Sugar	Tea
1850-1	19.1	3.7	10.9	4.1	1.1	0.9	1.8	30.1	1.9	10.0	0.2
1860-1	22.3	2.4	5.7	10.2	1.2	1.1	2.0	30.9	5.4	3.1	0.5
1870-1	35.2	2.5	5.8	8.1	4.7	0.6	3.7	19.5	6.4	-	2.1
1880-1	17.8	4.2	4.8	17.1	5.2	1.5	5.0	18.2	8.6	-	4.2
1890-1	16.5	9.5	3.1	19.5	7.6	2.5	4.7	9.2	9.3	-	5.5
1900-1	9.4	6.4	2.0	13.1	10.1	7.3	10.7	8.8	8.3	-	9.0
1910-11	17.2	6.0	0.2	18.4	7.4	8.1	6.2	6.1	12.0	-	5.9
1920-1	17.4	7.6	-	10.7	6.8	22.1	3.5	-	7.0	-	5.1
1930-1	21.0	1.6	-	13.5	5.8	14.5	5.3	-	8.1	-	10.7
1935-6	21.0	1.3	-	-	8.5	14.5	-	-	-	-	12.3

Imports: Percentage share of selected Items in total value, 1850 to 1933-4

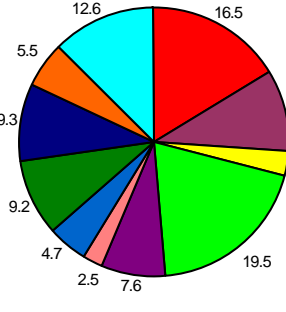
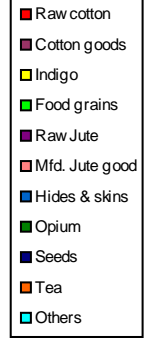
Year	Cotton twist and yarn (%)	Cotton piece goods (%)	Metals (%)	Machinery (%)	Railway Materials (%)	Mineral oils (%)
1850-1	9.0	31.5	16.8	-	-	-
1860-1	7.4	39.6	10.6	-	8.1	-
1870-1	10.1	47.0	8.1	-	4.4	-
1880-1	7.4	45.5	7.5	-	2.2	-
1890-1	5.2	37.9	8.4	3.0	4.5	3.3
1900-1	3.1	33.8	8.6	2.9	4.8	4.3
1910-11	2.3	31.2	11.2	3.7	4.6	2.5
1920-1	4.0	26.4	12.1	6.7	4.2	2.5
1930-1	1.9	13.5	9.7	8.7	-	6.4
1933-4	2.2	13.1	8.2	11.1	-	5.1

Source: Statistical Abstracts for British India, Cf. Chaudhuri, K.N., 'Foreign Trade and Balance of Payments (1757-1947)', in Kumar, Dharma (ed.), The Cambridge Economic History of India 1757-1970, Vol. II, New Delhi, 1982, Tables 10.11, 10.18, pp. 844, 858.

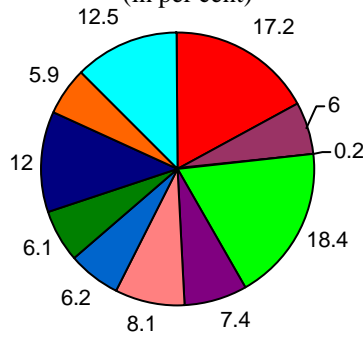
Exports from India: 1850-1
(in per cent)



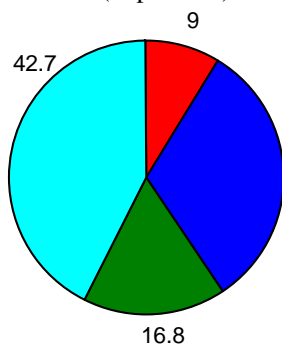
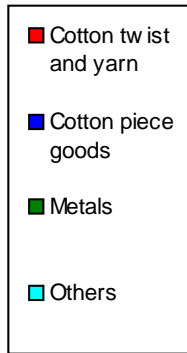
Exports from India: 1890-1
(in per cent)



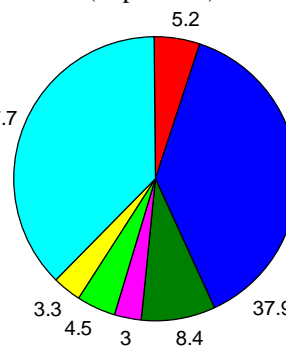
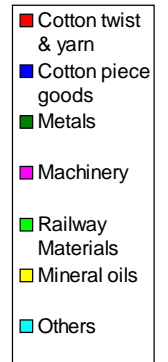
Exports from India: 1910-11
(in per cent)



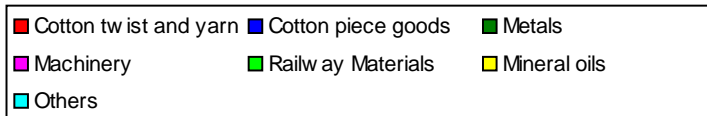
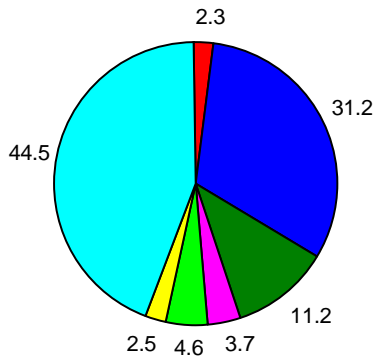
Imports from India: 1850-1
(in per cent)



Imports from India: 1890-1
(in per cent)



Imports from India: 1910-11
(in per cent)



Closely following on the tracks of cotton was India's export trade in food grains. During the fifty years preceding 1914, India possessed a very large export trade in food-grains, which accounted for 10 to 20 per cent of total export value. Indian wheat commanded an important market in Britain. After 1922, the wheat trade entered a phase of decline partly due to the increased demand for wheat in India itself and partly because of competition from other wheat growing countries.

Accompanying the increased level of trade in food-grains, was a growing demand for container bags. This generated a demand for jute as an export item, which in turn and over time led to the establishment of India's second major manufacturing industry in this period. The principal catalyst for the initial expansion of jute was the Crimean War that disrupted supplies of Russian hemp and flax. In the 1880s, according to K.N.Chaudhuri, India took a lead in the export of finished bags eliciting the resentment of Dundee (in Scotland) mill-owners who in the early years of the twentieth century complained of Indian competition in the American and Australian markets. Between 1900 and 1914, the industry in Bengal was unusually prosperous and both exports and profits in these years were exceptionally high. (See Table 2A)

Table 2A: Invoice amount of investments from Bengal, from season 1766 to 1780

	Piece goods	Silk	Saltpetre	Drugs	Total
In season					
1766	£329,498	£91,602	£14,123	£2,288	£437,511
1767	415,774	132,596	12,345	4,746	565,461
1768	500,797	137,299	16,071	4,171	658,338
1769	576,281	142,328	17,733	5,944	742,286
1770	451,152	160,337	16,606	5,570	633,665
1771	571,542	170,457	21,452	5,007	768,458
1772	697,778	136,270	24,275	7,555	865,878
1773	508,622	94,431	22,306	7,213	632,572
1774	466,944	160,016	14,262	7,645	648,867
1775	659,255	239,514	23,968	10,100	932,837
1776	446,277	318,406	16,736	7,104	788,523
1777	614,539	434,268	23,971	9,455	1,082,233
1778	595,079	633,836	23,252	14,057	1,266,224
1779	563,675	481,862	26,146	10,770	1,082,453
1780	639,938	554,237	34,911	25,872	1,254,958
	£8,037,151	£3,887,459	£308,157	£127,497	£12,360,264

Source: Ninth Report of Select Committee, 1783, Appendix 6. Cf. Chaudhuri, K.N., 'Foreign Trade and Balance of Payments (1757-1947)', in Kumar, Dharma (ed.), The Cambridge Economic History of India 1757-1970, Vol. II, New Delhi, 1982, Tables 10.2C, pp. 819,

Of the three remaining exports, seeds, hides and skins, and tea, the first was next only to cotton and jute in total exports and before 1914, India was the world's largest supplier of rapeseeds and groundnuts. Unlike tea, the trade in hides and skins and oil seeds was not new. It was tea that was a classic example of import substitution from a non-colonial to a colonial era. The industry owed its existence entirely to British capital and enterprise. The real expansion for tea as a significant item of export came in the 1880s.

The structure of India's imports remained stable through out the period. Miscellaneous items made up India's imports. A variety of Asian products such as coffee, Chinese tea and sugar and spices from Southeast Asia constituted one category. The second group consisted of European luxury goods and finally there was an entirely new class of articles of mass consumption, namely textiles, metal goods, paper and glassware. Cotton textiles accounted for the bulk of the imports, which fell off only towards the end of the First World War. With the maturing of Indian industry and

the emergence of Japan as one of the most efficient producers of cheap cloth, the monopoly of Britain in the Indian market was definitely broken.

India's exports far exceeded that of imports and yet India remained in trading deficit with Great Britain. This was a consequence of the nature of the imperial connection that tied India to Britain and that imposed on the colony the burden of Home Charges that included the administrative and defense expenses incurred by Britain. As Rupee prices fell continually, the payment of the tribute to Britain generated an increasing quantum of unrequited exports of primary produce from India and the effects of railways and integration into the world market remained partial and limited.

27.3 INTERNAL TRADING NETWORKS

If overseas trade represented the visible face of the colonial economy and its functioning and enabled an integration of the subcontinent with the larger global economy, it was the internal trading network that provided the critical scaffolding for India's export trade and for the subsequent development of Indian industrial enterprise. Until the emergence of the modern industrial sector in the aftermath of the First World War, indigenous merchant communities remained largely confined to what Rajat Ray has called the world of the bazaar, which was distinct from the world of modern business and industry but which remained closely inter-related. The bazaar was aligned to internal trade, especially to the marketing of agricultural produce, the financing of inland trade in commodities, the facilitation of movements of artisan production and peasant crops. Operating the bazaar were bankers or shroffs and commission agents or *arhats*. The former used bills of exchange or hundis to finance and market the trade in agricultural produce as well as the marketing of imported goods. The size of their operations was impressive and enabled them to accumulate capital and forge long distance connections in the inland market, and which proved critical when they made the transition to industry.

Even historically, India's inland trade had strong links with maritime trade. The opening of the country through the railway network made the links even stronger. The development of the railways under colonial rule both expanded and diverted the movement of goods in the interior. For instance, the Great Indian Peninsular Railway diverted cotton traffic that had in the eighteenth century moved along the Ganges river to Bengal was diverted from Nagpur in central India to Bombay. In the process old routes dried up. Boat and steamer traffic down the Ganges and Jamuna dwindled as the East Indian Railway ran up the Gangetic valley to Agra. The inland trade of India came to flow through the railway network that was essentially oriented to the export trade controlled by imperial interests, and which enabled the two leading foreign firms – Ralli Brothers and Volkart Brothers to set up buying organizations far into the interior of the country. Even though admittedly, the railway network was intended to facilitate the operations of European export interests, the establishment of a far reaching network of distribution channels stood Indian merchants and middlemen in good stead as they worked in the capacity of brokers and upcountry dealers. However, this is not to deny the evident hegemony of the foreign firms who had the pick of the business or that indigenous firms tended to operate in areas in which foreign firms found either more risky or not sufficiently lucrative in terms of profit margins.

In addition to the trade in agricultural products that followed the railway network and serviced the export economy, there was the caravan trade to central Asia. We have a compelling description of this trade operated largely by peddlers from

Neeladri Bhattacharya's work (2003). This trade brought into India from Bukhara and Samarkand, Persian carpets, currants, dyes, saffron, goat and camel hair, sheep skins and dyes from Kabul and furs, horses, manna, wool and bullion from Bukhara. The return trade was in English cotton piece goods, silks, chintzes, spices, drugs,, medicines and Kashmir shawls. There were shifts in this traffic as well in the period under review; for instance, the fine horses of Bukhara no longer commanded the same prices in the later nineteenth century. Imports of silks also shrank, while those of dried fruit, fur and skins went up. Among exports, cotton manufactures and tea gained ground together accounting for 60 per cent of the total value of exports to Afghanistan and Iran in the 1940s. By the second decade of the twentieth century, over Rs.3 to Rs. 4 lakhs worth of charas (medium of payment) was annually coming into Punjab through Ladakh, constituting 55 to 65 per cent of the value of imports; raw silk, borax, wool, horses and ponies accounted for the rest. Among exports again, tea and cotton goods became important, the former accounting for 25 to 30 per cent and the latter 55 to 65 per cent of the total value.

No account of India's trade in the period under review will be complete without reference to the movement and migration of Indian merchant capital into the world of the Indian Ocean. As we know, between 1750 and 1850, the merchant world of India had gone through a complex process of regrouping and had undergone major reverses especially in the sector of foreign trade. During the first colonial century, there was undoubtedly a massive fall in the share of India's foreign trade controlled by its indigenous traders. However, the latter had whenever possible responded to opportunities, functioning as collaborators with British private merchants. This collaboration proved particularly significant in the case of the opium trade, which became one of the most important sources of capital accumulation for many Indian mercantile groups – the Malwa soucars being a case in point and so vividly described by both Claude Markowitz and Amar Farooqi.

Rajat Ray has in an important essay (1995) argued that even in the era of 'high imperialism', i.e. the 1858-1914 period, Indian merchants continued to play a role in international trade, which was not purely residual. While the trade between India and Europe was monopolized by British business, the trade of India with the rest of Asia and Africa remained with the Indians. Trade with Southeast Asia increased considerably in the second half of the nineteenth century – so did the trade in the western Indian Ocean. It is to this sector of Asian trading enterprise that we shall now turn our attention.

27.4 MERCHANTS: EUROPEANS AND INDIANS AND THE RACIAL DIVISION OF ECONOMIC SPACE

The configurations of the Indian trading economy in the high noon of Imperialism were determined by the communication and transport revolution that accompanied colonial rule in the nineteenth century. Dramatic changes in shipping and transportation embodied by the railways and steam shipping fundamentally altered the organization and finance of Asian trade and gave Western capital mastery around the 1870s. The great liners swept the high seas displacing the sail ships and enforced a monopoly by the formation of rings among themselves, (also called Conferences) from about 1875. This was accompanied by telegraphic communications that provided the basic conditions for forwards trading on a large scale. The large European firms extended their grip over the commerce of the east, selling cargo several months ahead, did their import and export business on the principle of simultaneous operations. What

this meant was that as soon as a firm purchased produce in India, for a price fixed in rupees, it simultaneously sold its bill to an exchange bank, fixed the exchange in pounds, and engaged the freight with the shipping line. Three operations were necessary to fix the sterling price of produce ahead of delivery – the price of rupees, the rate of exchange and the rate of freight – all fixed simultaneously for a small margin. Under these altered circumstances, the Asian merchant consigning goods on a ship for whatever these might fetch at a port of call were over. Only large firms with a base in the metropolitan country, that is Britain could operate in such complex conditions. (Conferences were in essence monopoly rings to exclude all competitors by such means as rate wars and deferred rebates. Supported by government contracts for carrying mail, the P&O Company and the British Indian Steam Navigation Company grew into giants and dominated the coastal and overseas shipping of India. Formed in 1875, the P&O Company formed the first ring called the Calcutta Conference, with a few other steam ship lines of London, Glasgow and Liverpool to prevent all comers from entering their preserve. The system was extended to China in 1879.

Working in tandem with the shipping conferences were European Managing Agencies and Exchange banks that in their new incarnation completely distanced themselves from Indian collaboration. Early exchange banking had been located in India with strong Indian partnership; now they shifted their headquarters to London beyond the reach of Indians. Indian directors were shut out. The banks monopolized the financing of India's export trade that was concentrated in the hands of the shipping Conferences, the managing agencies and the exchange banks. The managing agencies closely financed and supported by the banks were engaged in extensive imports of manufactured goods and in exporting raw cotton, jute, gunnies, hessian, cotton yarns, grains and seeds, tea and a variety of country produce from India.

The increasing racialisation of the economic space whereby Europeans dominated the uppermost tier of the trading structure meant that Indians were necessarily pushed into a corner. How did they respond and what were the options available before them? Prevented from competing with the Europeans, they turned inwards and concentrated on inland trade that fed and serviced crucially the export import lines. Trading communities like the Marwaris and Gujaratis emerged as principal distributors of British imports and as the major players in the marketing of agricultural goods in the subcontinent. Taking advantage of the spreading railway and telegraph network, Marwari and Gujarati trading communities stepped in to finance and market the trade in agricultural products and import items. This provided the context both for the emergence of what Rajat Ray has called the Bazaar economy that was segregated from the consolidated enclaves of European banks and corporations.

The most important class of merchants in the inland trade of India were the Marwari shroffs or bankers and commission agents (*arhatiyas*) who controlled the flows of money and produce in the *mandis* or market towns of the interior. The *arhatiyas* were distinct from ordinary brokers in that he guaranteed the bills or *hundis* through which trade transactions were made between buyer and seller. The *arhatiya*, functioning as a link between the buyer and seller, gave a contract of guarantee, undertaking that delivery should be taken on due date or given at the price at which the order was accepted failing which he would be liable to pay the difference. The *arhatiyas* controlled the expanding grain trade and financed the smaller merchants or *beparis* who brought the grain to the market towns. The *arhatiyas* maintained grain stores and speculated on the difference of grain prices between distant market towns. The larger commission agency houses were bankers, acting for merchants

from other areas and allowed them to draw credit for their business transactions. The system of interlocking commission agencies formed a network through which long distance trade and credit developed in the interior of the country into a dense web in course of the nineteenth century.

The prominence of the Marwari merchants in the mid nineteenth and twentieth century dated from the first decades of the nineteenth century, when they developed for the first time the futures trade in opium. The fluctuations in opium prices together with the unstable exchange between India and China made the opium market particularly favourable for high speculation. Regular Marwari opium futures trading in Bombay started in the 1840s while in Calcutta it developed from the 1860s. Huge fortunes were made in opium speculations with the result that the community was well placed to enter the money market and subsequently develop speculation in the stock market.

The banking business and the merchants associated with it underwent a major transformation in course of the nineteenth century. It may be recalled that until the establishment of the official British system of treasuries and a uniform silver coinage, the hundis of Indian bankers had functioned as critical instruments in the remittance of funds during times of peace and war. After 1860, the situation changed and the *hundi* became a pure trade bill, a means by which bankers financed and facilitated the rapidly increasing flow of inland trade along the railways.

The emergence of the bazaar in the context of expanding internal trade as a distinct but inter-related sector of the colonial economy demonstrated the vitality of Indian business, that was able to carve for itself an important niche in the transformed trading economy of colonial India. The bazaar was not, in any sense a marginal or inferiorised strata in the business world of India – like the European banking sector, it dealt with financial instruments and mobile credit and financed the *arhatiyas* or commission agents and functioned as a parallel interlocking system of trade, exchange and credit.

The link between the bazaar and the European exchange banks, was however tenuous. There was no unified money market in India and different rates prevailed in each of its three segments. The money employed in native banking and commerce, the money employed in European commerce, and banking and the metallic currency issued by the Government of India and partly kept in reserve in treasuries. Whereas the money circulating in the first two sections consisted of paper, the money in use among the people was in metal. The usurious rates at which the common people obtained loans had no relation whatever to the rates of mobile money at the command of banks and the bazaar.

The two most important Marwari banking firms in the nineteenth century were Tarachand Ghanshyamdass and Bansilal Abirchand, both of whom began with opium and cotton speculation. In the 1920s, the banking house of Bansilal Abirchand with their headquarters at Nagpur commanded a huge network of more than thirty branches spread over the Bombay Presidency, central India, Bengal and Madras Presidencies and the princely states of Rajputana, Hyderabad and Mysore. The Poddars of Ramgarh who owned the firm of Tarachand Ghanshyamdass, had at their command an even wider network in India to help distribution of Burma Oil.

The accumulation of capital and skill and commercial intelligence enabled indigenous merchants to discover new avenues of commercial gain and discover new possibilities for export business that was at one level, outside the strict confines of the colonial economy and at another was part of the integrative operations of the capitalist world.

Contrary to the generally held assumption that Indian capital was unable to penetrate the capitalist world economy dominated by the Western powers, recent scholarship has established the importance of Indian capital movements and migrations in the nineteenth and twentieth centuries. While admittedly the international trade of Asia in the later nineteenth century was monopolized by European and American banks and shipping corporations, Asian shipping and capital was able to find a new sphere of activity in inter-Asian trade. As the volume of exchanges along the coast of Asia and Africa increased steadily with the concentration of cash crops in areas of natural advantage and with increasing imports of food into these areas, Indian capital found profitable outlets in financing the trade in food grains and textiles to Africa and Asia. Furthermore, like the Chinese, the Indians who had a long tradition of experience and expertise in handling money and brokerage, were able to take full advantage of the internationalization of the economy. Thus it was no coincidence that trading communities like Chetties of South India should have moved into Burma from where the export of rice created a new trade in money. Similarly the business in money arising from the export oriented clove plantations in and around Zanzibar was monopolized by enterprising Gujarati merchant communities.

27.5 THREE MERCHANT COMMUNITIES: CHETTIARS, MARWARIS, SHIKARPURIS

The Nattukottai Chettiars were among the most important and impressive participants in the pan-Asian bazaar economy that functioned in tandem with the colonial economy controlled by European capital and enterprise. To this community goes the distinction of having opened 'Lower Burma' to commercial agriculture. Emerging as intermediaries between the native cultivators who had neither access to capital nor expertise in handling credit and the colonial economy, they became indispensable to British banks.

Historically the community was known to have engaged in extensive money lending to the Sivaganga and Ramnad *zaminaris* on *hundis* and mortgages and in marketing and financing the grains collected as rent in these two estates. As early as the 1830s they were attracted to Ceylon and the Straits settlements and subsequently after the British annexation of 1852 to Lower Burma. There they quickly built up their liquid reserves and concentrated their capital on overseas credit operations in four zones, namely, Burma, the Federated Malay States, French Cochin-China and Ceylon.

The overseas expansion of Chettiar finance and banking started with Ceylon, where their initial business involved supply of rice and piece-goods from India, pawn-broking and shop-keeping. These activities subsequently led to banking and trade in money which accompanied the development of European plantations. Until the 1840s, European planters were dependent on Chettiars for their exchange operations. The planters who obtained sterling bills on London for shipments of coffee, converted the bills into silver rupees, the current coin of Ceylon, through the agency of the Chetty bankers. The Chetty bankers shipped silver rupee coins on native vessels for which they paid a shipping charge of two rupees per bag of rupees brought from India. With the entry of the Oriental Bank in 1847, the Chetty bankers lost this branch of commerce and reoriented their ventures by stepping in as intermediaries between European exchange banks and native Ceylonese borrowers. The exchange banks made large advances to the Chettiars for short term periods at two or three per cent above the bank rate and the Chetty bankers in turn made advances to local Ceylonese at a margin of three per cent.

In Southeast Asia, the Chettiars operated initially as traders selling lungi cloth dyed on the Coromandel coast to the Malays. With the annexation of Lower Burma by the British, the Chettiars moved in as moneylenders and as financiers of the rice trade. By the beginning of the twentieth century, the Chetty network was widespread in Burma, its headquarters located in Mogul Street in Rangoon and connected closely with four principal upcountry markets – Mandalay, Bassein, Henzada and Moulmein, which acted as the principal channels for the movement of funds to the Chetty banking establishments distributing loans for the rice crop in the interior.

The banking business of the Chettiars sustained a huge expansion in the twentieth century and on the eve of the Great Depression, their business had increased five times over – with 1650 firms operating a working capital of 750 million rupees. It was in the same period that Chetty capital moved to new and profitable areas of investment. As Singapore became important, the Chettiars turned from peddling in Coromandel cloth to large-scale financing of opium imports from India which in turn led to banking. This was undertaken in close collaboration with the European exchange banks – the Chetti opium importers formed an important channel through which the paper notes of the exchange banks circulated in the straits.

The movement of Chetty capital and enterprise was not an isolated phenomenon. Like the Chetties, Gujarati merchant communities spearheaded an impressive movement of capital into the western Indian Ocean. Bhatias, Khojas and Cutchi Memons came into prominence in the second half of the nineteenth century, when they established themselves in all the major ports of the Arabian Peninsula. Originally grain sellers, these communities began migrating into Bombay in the latter decades of the eighteenth century and went on to form merchant colonies in Muscat, Aden and Zanzibar. The substantial trade that developed between India and east Africa and centered primarily on Zanzibar was largely a preserve of various groups of Gujarati merchants. Trade with the Middle East, particularly with the Persian Gulf remained also an important area of activity for many Indian traders from Kutch and Kathiawar, Sind, Gujarat proper and Bombay.

The movement of Gujarati capital and enterprise while driven by the imperatives of the colonial economy was clearly able to carve for itself an important domain of autonomy in the trade of the Indian Ocean. Their chief function was to distribute Manchester cloth in Arabia and Africa. Later in the period, the Japanese relied on their network as well and eventually the Bombay mills used the same agency to push their products in the Red Sea zone.

The regular steamship service between Bombay and the Persian Gulf made Bombay the principal market from which the Arab countries and Iran purchased goods. The vitality of Gujarati merchant enterprise in Bombay had been consolidated through the nineteenth century, with the result that they were able to step in as critical intermediaries in the trade. With their strong position in Bombay, built up through family connections, they built up an extensive network for the distribution of goods in the Western Indian Ocean. The marketing network that they built up fell into three zones: the Persian Gulf, the Red Sea and the coastal stretch of Africa from Zanzibar to Mozambique. In the Persian Gulf, their main centre was Muscat, where a settled Indian community conducted an active trade with India in rice, grains, spices and coffee. As early as 1840, Muscat boasted of a strong Indian community (some 2000 Indian merchants). In the succeeding decades, this settlement became more

entrenched. Indents for Manchester goods were sent by the Muscat Gujaratis to their Bombay agents who placed the orders with the shipping firms in Bombay. The Bombay agents made payments against the bill of lading and then drew *hundis* on their Muscat correspondents at 21 days at a commission of 2 per cent. Bahrein and Kuwait were two subsidiary centres of Gujarati trade in the Persian Gulf. Shells and pearls were the principal items that entered this trade.

On the Red Sea, Aden dominated the trading network. Its imports of piece goods and yarns were sizeable and its trade stretched beyond the British settlement. Three or four large Indian firms in Aden, with branches in Bombay and Djibouti controlled the entire import of yarn and piece goods and distributed it on the other side of the Red Sea.

In East Africa, the Gujarati trade zone centering around Zanzibar extended to Mozambique in the south and to Kampala in the north. Resident Gujaratis imported a variety of Indian goods - rice, piece goods, wheat and flour from India and exported cotton, cloths and ivory to India. The typical Gujarati firm in Zanzibar had a branch in Bombay that undertook the business of importing piece goods from a local piece-goods merchant on cash against documents, and of shipping the goods to the Zanzibar office on credit. Thereafter, the Zanzibar office would, instead of making cash payment to Bombay, utilize the proceeds of sale for purchase of cloves for the Bombay market. The Zanzibar Indian firms also dealt in Manchester goods and Japanese goods. In Zanzibar, the Gujaratis importing and wholesale firms passed on the imported goods to Indian retailers who formed a network in the country. Credit for 90-120 days was readily extended to this secondary network – a nexus so dominated by Gujarati capital that the foreign firms made no attempt in Zanzibar to obtain direct access to the markets. The importance of Zanzibar declined in course of the twentieth century making way for Kampala to emerge as the principal centre of the Gujarati network.

A third merchant diaspora studied recently by Claude Markovits was constituted by the Shikarpuri merchants and Sindworkis who operated very different networks. Shikarpur was the centre of a financial network which developed in the second half of the eighteenth century following the rise of the Durrani empire (in Afghanistan, 1747-c. 1823-6). The decline of Durrani power did not entirely deflect Shikarpuri enterprise for taking advantage of the capital that the merchants had accumulated, they were able to take advantage of a new surge in Indo-Central Asian trade from the 1840s to build a far-flung network based on the financing of the caravan trade and on the close links with the Uzbek Khanates of central Asia. This was a network that functioned quite independently of the British connection and was able to maintain it until the Russian revolution. The case of the Sindworkies was quite different. Hyderabad in Sind was home to a community of bankers and merchants who had close links with the Amirs of Sind and who were overthrown by the British in 1843. Undeterred, the Sindworkis exploited the growing commercial connections between Sind and Bombay to embark upon a new venture, namely that of selling local craft productions to a European clientele, first in Bombay, then in Egypt and then worldwide. These two networks, a study in contrast had many features in common in that they both used 'traditional' forms of business organization and of accounting techniques. At the same they, at least the Sindworkies operated in conditions of a global economy.

27.6 MERCHANTS' ORGANIZATIONS AND BUSINESS STRUCTURES

How does one explain the relative success of merchants in colonial India? Historians have suggested that the success of merchant communities like the Chetties, the Gujaratis and the Sindhis were largely to do with the community structure, their accounting system, partnership arrangement, agencies and communal mechanisms of bazaar rate determination. In the case of the Chetties, whose business organization and practices have been studied by David Rudner. Their community structure provided a firm foundation to the commercial organization of the Nagarathars. The Nattukottai Chetties called themselves Nagarathars because the community was divided into nine *nagarms* (townships) with a temple at the head of every such unit. Each temple levied a tax on every married couple assigned to it. Among the member thus apportioned, the *nagaram* settled disputes out of court by arbitration.

Their system of accountancy was the double entry system of bookkeeping in which Chetty boys were trained from year 8. Sons of rich parents were apprenticed to learn business in firms that did not belong to their parents. Chettiar firms generally were partnerships between relatives through marriage. The same Chettiar male could be partner in several firms, which gave rise to a system of interlocking partnerships across the four zones.

A characteristic feature of Chetty enterprise was the system of agencies and inter-bank system of accounting. An agent entered into the banker's service on a three-year contract and before setting out for his overseas destination received an advance in salary that amounted to Rs.300 for Burma in contrast to Rs.100 for Madras. On his return, he got a net ten per cent share in the net profits if he was considered industrious during his agency. Auditing of accounts was done triennially while control of the agent was maintained by examination of weekly or monthly dispatches of the book extracts and issue of instructions by correspondence. Six months before the expiry of the agency, the new agent was sent to learn the business and familiarize himself with local business conditions. The agent then returned home, settled accounts and resumed his engagement either with his earlier employer or with another banker, or start business on his own. Under such a complex and interlocking system, Chattiars were found to act in multiple capacities, either as partners banking on their account or agents of their caste men.

The Chetty banks adopted among themselves the inter-bank system of accounting. This involved crediting and debiting interest with each other at the end of the year after exchanging a memorandum of interest calculations accepted by both parties before adjustment was made in the books. Chetty inter-bank rates varied every month according to seasonal demand. Overseas Chetties fixed the current rate every month at an assembly in a special building where each banker secretly indicated his figures to a chairman who announced the average and arrived at the rate in accordance with the demand and supply for capital among the Chetties and the bank rate then prevailing. The community also made use of weekly meetings to fix the *thavanai* rate or the interest on deposits from outsiders.

Among Gujarati businessmen as well as the Sind merchant networks, the business organization remained strongly centered round community ties. Markowitz mentions the workings of the *shah-gumastha* system in connection with the Shikarpuri merchants. Distinguishing it from the Chetty system where Markovits argues the

agents were not partners in the same sense as the Shikarpuri *gomasthas* (agents). The system originated before the eighteenth century but by the 1840s it was firmly in place in Shikarpur. It allowed a small group of bankers located in Shikarpur to control financial and commercial transactions over an extensive area. The *sarrafa* or the banker was the merchant capitalist or *shah* who advanced the funds to his agents or *gomasthas*, who were remunerated in the form of a share in the profits of the financial and commercial operations they undertook for him. Once in central Asia, the *gomasthas* started their own business and became *shahs* in their own right. The basic function of the system was to ensure a regular supply of capital for long distance financial and commercial ventures. The *hundi* was the cementing mechanism in the network – within the Shikarpur circuit *hundis* were honoured on sight. In Hyderabad on the other hand, among the Sindworkies, there developed a kind of dual system that combined features of the *shah-gomastha* system with that of European commercial partnerships. These were associations of several *shahs* or capitalist partners with several *gomasthas*. The firms had head offices and branches and demonstrated exceptional longevity.

27.7 SUMMARY

What is one to make of the story of Indian trade in the global economy of the late nineteenth and early twentieth century? Obviously it cannot be detached from the reality of colonial subordination and the imperatives that the colonial connection engendered. Without discounting the dynamism and resilience of Indian merchant capital and initiative in working the regional and global economy of the period, it must be kept in mind that the workings of colonialism undermined the full potentialities of trade and its prospects for industrialization. Historians have debated at length the impact of colonialism on the Indian economy. Despite the significant additions made to our understanding of the subject, there is little doubt that the workings of the colonial economy were instrumental in restricting the basis of the Indian economy and slowing its take off. Tapan Raychaudhury for instance drew attention to the fact that the so called integration into the world economy by means of railways was largely if not exclusively oriented to foreign exports that favoured British capital and led to the growth of enclaves with very little linkage effect. By developing in enclaves, foreign activity created for itself a separate leaving a subordinate one to the traditional businessman. More recently, Rajat Ray who argues that it is too simplistic to posit a simple opposition between a modern European dominated world economy and an Asian bazaar economy has contested this dualist characterization of the Indian economy. In his view there emerged within the world capitalist economy, a specific sub-formation, namely the bazaar which was clearly subordinated to the former but which nevertheless adapted itself successfully to the world economy dominated by Europe. A third view is that of Markovits who accuses Ray of remaining dualist. For him, what is more important is to identify the specificities of the local situation that enabled some Asian merchant networks to adapt successfully and not see them as a form of global sub-formation within the international economy. Each network found its place within the global order through a complex process of negotiation that involved conflict as much as collaboration.

The linkages between trade and early industrialization were important. The proceeds from opium and cotton speculation in Western India formed the capital base of both Gujarati bankers as well as Parsis who founded the first textile mills in Western India. One of the characteristics of trader-industrialists, especially the bazaar industrialists was the combination of bazaar transactions while expanding into the modern sector. Bazaar industrialization, according to Rajat Ray, remained strictly limited for it catered to the

domestic market primarily and here the poverty of the masses was a major constraint. The one way free trade policy which India was forced to adopt retarded the industrial development of India. The base of the industrial sector remained narrow and this meant that enormous technical and infra-structural constraints had to be overcome before industrialization could take off.

27.8 EXERCISES

- 1) Analyse the changing pattern of India's trade during the second half of the 19th century.
- 2) What role did the India merchants play in India's trading economy during the late 19th century?
- 3) Analyse the impact of railways on Indian markets and merchants.
- 4) What accounts for the dynamism of the 'bazaar economy' in the colonial period?
- 5) Analyse Chettiar participation in the 'pan-Asian bazaar economy' during the second half of the 19th century.
- 6) Discuss the operation of the Gujarati merchants in the Oceanic trade during the second half of the 19th century.

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M.A. History

List of Courses

Course Code.	Title of the Course	Credits
MHI-01	Ancient and Medieval Societies	8
MHI-02	Modern World	8
MHI-03	Historiography	8
MHI-04	Political Structures in India	8
MHI-05	History of Indian Economy	8
MHI-06	Evolution of Social Structures in India Through the Ages	8
MHI-07	Religious Thought and Belief in India	8
MHI-08	History of Ecology and Environment: India	8

MHI-05 History of Indian Economy

Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
- Block 2** : Emergence and Structure of Complex Economy
- Block 3** : Early Medieval Economy and Its Continuities
- Block 4** : Expansion and Growth of Medieval Economy-1
- Block 5** : Expansion and Growth of Medieval Economy-2
- Block 6** : Trade and Markets
- Block 7** : The Rural Economy
- Block 8** : Craft Production, Technological Change and Industrialization

UNIT 28 AGRARIAN POLICY AND LAND RIGHTS

Structure

- 28.1 Introduction
- 28.2 Motives and Contexts of Land Policies
- 28.3 Revenue Settlements
 - 28.3.1 The Permanent Settlement
 - 28.3.2 The Temporary Settlements
- 28.4 Subsequent adjustments
 - 28.4.1 Preserving Property
 - 28.4.2 Tenancy Reform
- 28.5 New Kinds of Land Rights
- 28.6 Consequences
 - 28.6.1 Differentiation
 - 28.6.2 Politics and Civic Character
- 28.7 Summary
- 28.8 Exercises
- 28.9 Suggested Readings

28.1 INTRODUCTION

Agrarian policy comprises all the actions of government towards agriculture. It includes policies relating to land revenue, surveying and records; to land ownership, tenancy and rural labour; to agricultural production and trade; and to the science and development of cultivation. It is complex and its detail may seem dull. But it is very important. It affects, among other things, the following:

- *politics* – how power is exercised in the countryside; how the state tries to gain support; what interests it represents;
- *government* – what it can and cannot do, and what it is for; the state's income and how it is spent;
- *economy* – the terms on which societies organise the production of food and the exchange of goods; the comparative importance of cultivation, processing, industry and services; a country's or a region's standing among others;
- *well-being* – the social distribution of food, work and wealth; levels of health and population;
- *culture* – attitudes towards property, employment, family and inheritance; other social and moral values, such as the significance and purpose of cultivation; how people think about socio-economic classes and 'rights'.

For a foreign government, agrarian policy therefore provided what is arguably the most important point of influence upon the subject people and territory. In India the British, though so few and distant from the majority of people, could use agrarian

policy to change the nature of landholding, the availability of land, and the capacity of people to move from one place or one job to another. They could use it to influence the kinds of crop that were grown, the manner in which credit was provided to cultivators, and the ways crops were marketed. They could use it to affect the patterns of consumption, the basis of prestige, and the terms on which some Indians gained dominance over others. They could use it to control and reward favoured classes, and to transform India's internal and international economy.

Or, more precisely, as we should not think of any government as being all-powerful and all-knowing, they could introduce policies for a variety of motives, and find that they produced a range of intended and unintended effects.

With hindsight, we can see that agrarian policies led to a kind of revolution in India. Though agrarian legacies and continuities were important, the picture of an India of unchanging villages was never true. But the picture became even less accurate during the nineteenth and twentieth centuries.

28.2 MOTIVES AND CONTEXTS OF LAND POLICIES

This discussion will concern itself with only one aspect of colonial agrarian policy, the large aspect related to land rights. There are two main contexts, relating to the motives lying behind the policies.

First is the motive of *control*. Land policies are partly about ensuring that there is order in the countryside, and that revenue is readily relinquished to the state. This does not mean that land policies were merely a form of coercion. Just as important, they offered a means of persuasion. The British wanted to support or create classes which would have an interest in collaborating with them, and which would be able to curb those who tried to resist or avoid the state's authority. The British also intended (though they did not succeed) to ensure basic levels of well-being in the population as a whole, so as to avoid the costs and dislocation of famine, disease and desertion, and thus protect future state revenues.

Second, there is the question of *trade*. In the eighteenth century British trade with India centred on exchanging India's manufactured cotton-goods for bullion (silver and gold). This was partly because there was little market in India for British produce, but also because silver and gold were not simply money but commodities wanted by India that Europe could supply relatively cheaply. Even cheaper for the British East India Company, however, was to make its purchases in India using revenues from Indian territories, and profits from the sale of products in which the Company established a monopoly, such as salt and opium. Such strategies also implied land policies.

Later, from the mid-nineteenth century, this not very efficient or profitable system gave way to one that sought to draw on a much wider range of products, and to involve a much bigger proportion of Indian consumers. This meant that land policies became even more important. Overseas land and labour resources were now beginning to support and enrich the population and the capitalists of Britain, as its industrialisation progressed. At first, slave plantations, north American development, and newer colonies of settlement played a larger part in this process than India. But India soon became a source of raw materials (cotton, jute, indigo) and of some foods and drugs (opium, tea, coffee, wheat), and also a market for British manufactures. The surpluses earned by India's foreign trade (except with Britain) helped Britain to finance its own deficits in trade

with some other countries. India was also a vital site for British employment, services and investment.

Contrary to what is sometimes thought, colonial land policies were not exactly calculated to achieve these effects, which were the outcome of countless individual economic decisions and not of any far-seeing state plan. But certainly Indian land policies were expected to help or at least not to hinder British economic interests, which were also supported by the economic theories of those days. The success of the policies can be seen in the extent to which India's countryside *did* perform the roles required of it by British industrialists, merchants and consumers.

28.3 REVENUE SETTLEMENTS

The basis of land policy was the revenue settlement, meaning the decision as to how much would be paid to the state for land, who would pay it, and on what terms and conditions.

28.3.1 The Permanent Settlement

The tendency in India was for strong states to reach down as near as possible to the actual cultivators for information about agriculture and land-holding, and in order to fix responsibility for the payment of land revenue. No pre-colonial states managed to do without local intermediaries – lords, record-keepers, headmen, and so on – but many kept careful records relating to land-holding and revenue payment. The most celebrated survey was that ordered by Todar Mal, finance minister of the Mughal emperor, Akbar. During much of the seventeenth century, this and further surveys permitted a system of regulated revenue settlement based on assessments of agricultural output.

In the eighteenth century, however, there was an ever-increasing demand for revenue. This was attributable to a number of factors: the growth of stronger regional states, the cost of warfare, investment in production and trade, tributes paid to others (especially the Marathas and the British East India Company), and loss of income to intermediaries or to the powerful, again including the European trading companies, which generally avoided local tolls and taxes. This need for money led to agreements between local rulers and either the powerful elites (a few *zamindars*, then meaning the territorial lords and official revenue-collectors) or efficient 'fixers', so-called revenue-farmers or *ijaradars* chosen by auction. In general these arrangements implied short-term increases in revenue in return for a reduction of central control.

In 1765 the British East India Company gained control over the revenues of Bengal and Bihar. At first the Company worked through deputies who also served the Nawab of Bengal; and, even when it took control directly at the behest of the Governor, Warren Hastings, in 1772, it still awarded the revenue-collecting right to the highest bidders for terms of one or more years. But the Company was gaining information through access to the revenue records (moved to Calcutta), the experience of some European collectors, and also a commission of inquiry in the districts. Strong theoretical and practical arguments were advanced, notably by Council-member, Philip Francis, that short-term revenue-farming was unwise.

In 1789, therefore, a ten-year settlement was declared by the acting Governor, Sir John Shore. In 1793, under the new Governor, Lord Cornwallis, this was superseded

by a settlement that was declared permanent: that is, the rate of tax was fixed for ever. The settlement was to be made by local arrangements using the existing records (without survey) and with what were thought to be (but in many instances were not) hereditary landed interests, the *zamindars*.

Many considerations lay behind this system, which was ordered from Britain. It provided a means of running India through general rules, set out in a long list of Regulations enforceable by the courts. Such minimal direct government was favoured by the political theories of the day. The system was also thought suited to Indian expectations and to conditions in Bengal, where the self-seeking servants of an imperfectly organised commercial company were now in possession of an empire. Making the settlement with *zamindars* would secure, or if necessary create, an indigenous rural aristocracy. Permanence would place a clear and fixed limit to the government's share of production, and thus encourage investment, higher productivity and trade, which then would increase the government's income indirectly.

To some extent these goals were achieved, though the Company soon turned against the Bengal system. The cultivated area increased, and more crops were grown for local and international markets, adding to an already commercialised agriculture, and to established means for the reclamation of land. *Zamindars*, despite pockets of resistance, gave up their broader military and political roles, and became adjuncts to a new political order and subjects of the Company's government. Gradually, from the early years when land could barely be sold at any price, a valuable land market grew, along with population, giving meaning to the rights created in and after 1793. New landlords, at first often resisted by local communities, were able to call on state force to ensure their possession. A tendency in favour of separate rather than shared landholding led to partitions under official scrutiny, so that the number of *zamindars* increased markedly, especially in some districts. Land became a reliable security for borrowing and mortgages, but also, therefore, a means whereby traders and moneylenders could extract agrarian produce at lower cost and somewhat reduced risk to themselves.

The permanent settlement attached possession to revenue-payment. In the past, non-payers could be punished in their person – by imprisonment or torture, for example. Now their property was at risk. Some great *zamindars* lost out, as the revenue demand was often set at rates that were initially very high (a notional 90 per cent of income). But new regulations were introduced to help the remainder, over the next few decades, by giving them near-absolute powers over their tenants and over tenants' property, including standing crops.

Some agrarian classes had their pre-existing rights recognised. This qualified those given to *zamindars*. In some areas intermediary landholders (*jotedars*) gained most from the permanent settlement, through directly managing production. On the whole, however, the legal position of cultivators was weakened. For most of the nineteenth century, until changes in the law and in official attitudes, they did not share in the benefits as incomes from agriculture improved. Even in the eighteenth century, dispossessed and opportunist people had formed criminal gangs (as dacoits) in the countryside. In the nineteenth century, armed or concerted resistance broke out, expressing various mixtures of religious, social and economic grievances. Disease, scarcity and famine worsened in rural communities, partly because of the gradual spread of the effect of these changes in property law.

28.3.2 The Temporary Settlements

Very soon after the introduction of the permanent settlement in north east India, it was challenged by Company officials, especially Thomas Munro, who held that it was inappropriate to the areas they knew. In Munro's case this meant parts of the Madras presidency, where (despite a permanent settlement along the Andhra coast) he claimed that either there were no identifiable landlords, or the local chiefs threatened British rule and should be removed not revived. More generally he argued that a *zamindari* settlement was contrary to Indian understandings of landholding and revenue-obligations. A little later, around 1812, these conservative arguments were allied with the reformist and anti-aristocratic tendencies of Utilitarian thinkers and political economists, such as James Mill, who now controlled the London administration of the Company. This alliance ensured that no further settlements would be permanent.

It was argued that landlords did not generally contribute to prosperity, and were not doing so in Bengal; and that production would be best increased by giving property rights to those responsible for tilling the soil. It was claimed that Indians did not understand or were abusing the elaborate legal system that had been set up in Bengal, and that they would be better served by rulers who combined executive and judicial functions.

In future, therefore, most settlements were '*raiyatwari*', that is made with the *raiyats* (those regarded as 'actual cultivators') rather than with landlords. Such settlements were introduced in southern and western India. Similar but modified versions were later devised for 'village communities' (*mahalwari* settlements) based around co-sharers (*pattidari* or *bhaiachara*), in parts of north India, especially the Punjab.

Broadly speaking, these temporary settlements relied on close surveys of the countryside, and on regularly revised records. Revenue-rates for each cultivated plot were set for a limited period, commonly thirty years. Actual payments depended on annual reports on the use of that plot. Temporary settlements therefore implied close and personal rather than distant and legalistic government. They nevertheless standardised the categories of landholding, and replaced systems based on shares or collective liabilities with ones based on individual title.

The surveys were always elaborate, and became more time-consuming and 'scientific' during the nineteenth century, separating measurement and the drawing of plans from the recording of landholders and from economic, social and historical assessments of the conditions in every village and in regions (called *circles*) of similar character. Revenue rates were increasingly set at levels related to the supposed capacity of the soil (not current output), in order to discourage idleness. They were calculated in accordance with the definition of rent by the classical economist, David Ricardo – namely, that it was merely the unearned extra produce from better land, compared with that from the least favourable land, and therefore both measurable and safe to tax. When this (in fact very imprecise) calculation led to overly high revenue demands, these were modified by more subjective assessments of what areas could afford to pay.

The Punjab in particular, in the later nineteenth century, advocated a peasant-proprietary model of agrarian policy, and turned the survey and settlement report into an expensive intellectual exercise, one of the founts of today's anthropology and development studies. By contrast, the United Provinces saw a resurgence of

belief in aristocratic land-control, especially in Awadh following the rebellion of 1857-8. There, a settlement was made with superior landlords (*taluqdars*) in replacement of a village-level settlement introduced immediately after the British annexation. It was debated whether this and other settlements should be made permanent. In the event they remained temporary, even where superior revenue-collectors were again recognised, for example in central India as well as in Awadh.

28.4 SUBSEQUENT ADJUSTMENTS

The systems introduced between 1770 and the 1850s did not remain unchanged. New ideas and perceived problems prompted adjustments, which continued up to and after the end of British rule.

28.4.1 Preserving Property

Many measures were taken to preserve property. On larger estates the British encouraged primogeniture, so as to avoid the risk of subdivision upon inheritance. In the twentieth century too many, though less effectual, efforts were made to halt the fragmentation of plots of cultivation, and to facilitate land-swaps that would consolidate scattered holdings.

Legislation was passed to ease the burden on 'encumbered estates' whose survival was threatened by bad management or misfortune. The Court of Wards, first introduced into Bengal in 1790 and 1793, provided for the temporary administration of an estate by the Board of Revenue, where necessary or requested, in the stead of an 'incapable *zamindar*' (a description often held to include women).

Especially after riots in the Deccan in 1875, a host of more general measures sought to protect landholders in the temporarily-settled areas against moneylenders who, supposedly, were snapping up land-rights and disturbing the time-honoured political and social equilibrium of the countryside. Various laws qualified the advantage given to creditors by the increased security of landed property, including tenancies, and by the operation of the laws of contract. The most extreme of these was the Punjab Alienation of Land Act of 1900, which tried to restrict land transfer (and hence mortgages on rural land) to recognised agriculturists, members of the 'tribes and castes' listed in a schedule to the Act.

28.4.2 Tenancy Reform

Whereas in the first half of the nineteenth century the government sought mainly to ensure that revenue was paid promptly, in the second half it became more concerned with agricultural development. This matched the demands of British industry for raw materials and markets, but also responded to worries about rural unrest and about the condition and vulnerability of the poor. Such concerns had become important to policy and to political debate from the late 1830s onwards. One consequence was an attempt once again to use property rights as a means of securing political and economic goals. Gradually the idea of state-enforced rights was applied further and further down the tenorial and social scale.

Various Tenancy Acts set out both to protect superior land-owning interests and to provide a measure of security to the cultivators. In the second half of the nineteenth century these enactments began to give some rights to those who held land from landlords rather than directly or indirectly from the state.

In Bengal, the Rent Act of 1859, while purporting to help *zamindars* collect rents, also recorded as settled or occupancy tenants those who had held land for twelve years. It placed restrictions on the enhancement of rents. It also sought to improve landlord-tenant relations, and the more effective resolution of agrarian disputes.

Defects in this legislation, and more radical impulses for reform in the aftermath of further famine and rural unrest, led to the Bengal Tenancy Act of 1885, which added two major points. Firstly, there were more elaborate classifications of tenants and gradations of rights, with a presumption of occupancy status in a village for all those holding any land in that village. In many areas this status now applied to large majorities of first-tier tenants (that is, excluding those who were the tenants of other tenants). Secondly, there was provision for survey and settlement, to establish and record rights, holdings and rents, by analogy with the procedures in temporarily-settled areas. These had the effect, as operations proceeded, of establishing tenant rights and familiarising people with them.

Indian legislation was influenced by the ideas of fair and fixed rents and secure tenure that had been popularised during tenancy debates in Ireland, where they took on a populist and nationalist hue. More important, however, was that the 1885 Act extended the Punjab peasant-proprietary model. The occupancy tenants of Bengal and Bihar (the latter region being the immediate focus of attention, in view of the poverty of the region) were being ensured a kind of property in their land-holdings, in order to encourage them to invest in agriculture – to make them, in short, rich peasants.

The trend after 1885 was for the principles of the Bengal Act to be extended elsewhere, such as to the Central Provinces in 1895. But it was overtaken by measures designed to regulate all aspects of agrarian relations. Other regions had also had tenancy legislation, but the needs were different where numerous cultivators rather than landlords were the ostensible revenue-payers. In the twentieth century, too, further measures were taken in Bengal and Bihar (as elsewhere) to afford some legal protection to sub-tenants, share-croppers and labour. None of these, strictly, related to property. Rather they built on arguments about equity (also heard during the debates over the 1885 Act).

The role of government was being extended. It was no longer content merely to frame the agrarian structure (that is, establish and define landed property) in the hope of promoting commercial expansion and securing its revenue. It now placed a new emphasis on investigation and statistics, on agricultural experiments and credit-provision, and even on direct intervention (committees for particular crops, price-fixing, and finally development planning), as part of broader social and economic strategies.

28.5 NEW KINDS OF LAND RIGHTS

Agrarian policy towards land rights, considered in isolation, thus retained an echo of the minimal government favoured in the eighteenth century and by *laissez-faire* doctrines in the nineteenth. This does not mean it was not radically different from what had gone before. Colonial policy introduced new ideas about land use and types of land control. These ideas were common to the different kinds of agrarian policy.

It used to be thought that British laws created land-ownership in India, but it is now plain that this depends on what is meant by the term. In some senses there was private property in land in India from the earliest historical times. Religious notions of renunciation depended on it, as did payments and grants to kings, temples, elites, co-sharers, workers and artisans. Over time, different states found sophisticated ways of measuring and defining land rights, including surveys, records and title-deeds. Land-rights could be sold and inherited; and there were stories and theories about their ultimate origins, and about the proper behaviour of landholders. The holders would enjoy one or more of very many specific kinds of tenure. Of course land-rights were not absolute – they never are – and they could be lost by force or usurpation. They would be qualified by obligations to pay land taxes and/or to supply materials and manpower. They were subject to communal and joint-family obligations, and generally to the rights of others, both superiors and inferiors. All these things also applied to land rights under the British.

What colonial laws and policies did to land rights was more subtle, in theory and also increasingly in practice. They reduced the number of different types of right to those only which the law specified. They made each type's benefits and obligations more definite – by legal definitions, by more precise measurement through scientific surveys, by more exact records, and by the decisions of a hierarchy of courts. They applied uniform concepts to all land: that is, they tried to deny the existence of land of doubtful or shared ownership. There were no sacred groves or shrines that did not belong to a temple or a *mahant*; no forest or flood-plain without owners; no house, well, *ghat* or bazaar without a proprietor. The owner did not need to be an individual, of course. The owner could be a family, a village, a corporation, or the state. But for all that, only one kind of 'ownership' was to be recognised, the kind established in the state's law.

Many local variants and distinctions, and some pragmatic responses to circumstance, were ignored or overridden, for example, between kinds of co-sharers, between resident and non-resident landholders, or between high and low castes. Other pre-existing types were reinforced and generalised, at least in the law, as new categories of landlords, intermediary tenure-holders, tenants and sub-tenants, and later of settled and occupancy tenants or tenants-at-will.

Now, the characteristics or 'incidents' of property were always spelled out. A *zamindar* in Mughal times had any of a range of possible rights, but in particular he had the duty to collect revenue for the state, retaining a proportion for himself (supposedly ten per cent). His revenue-collecting (*malguzari*) right derived from Mughal authority; in regulation districts even the amounts of the collections were theoretically specified by surveys and rules. In addition the *zamindar* might have chiefly powers, derived from his local socio-political standing: his character, caste or lineage, and his command of retainers. These powers carried some obligations to the community, and certainly produced further income, for example through tolls, control over markets, payments for credit, use of forced labour, and further shares of produce. There would have also been others occupying and using *the same land*, who might similarly have had effective rights over it, for example a right to cultivate, or to reside in a village and exploit village resources. Such rights too fell into particular categories and had specific names, and, just like *zamindari* rights, they could be derived from license, or custom, or power. Pre-colonial rights therefore could be of different types and degrees, and could overlap in relation to the same plot of land.

Within British territory (that is, leaving aside the Indian states), all landowning became in one sense identical, as a complete collection of rights to land, unless some legal provision said otherwise. Landlords were given exclusive titles to specified areas, with qualifications made by law reserving certain other rights for the state, for sub-proprietors or for privileged tenants. All these rights derived from the state and its laws, while any unspecified sub-rights derived only from the landlord. The *khudkasht raiyat* – a cultivator with superior, residence rights in a locality – was turned into a ‘tenant’, for example. And if he was not provided for in the state’s regulations, he could legally gain the right to use land only by *contract* – that is, through an agreement he made with the landlord. He might have privileges or he might have no security of tenure; and in theory this was decided by law not force.

Several provisions turned land into a commodity that could be readily bought and sold, firstly because it could not be arbitrarily seized by the powerful, not even by the state itself, and secondly because it was largely free from encumbrances (that is, subordinate rights that would reduce its value).

One consequence was that ‘rent’ and hence ‘*abwabs*’ (illegal cesses) also changed their meaning. Payments of various kinds had always been made to social and political superiors, on different pretexts, sanctioned partly by the state and partly by custom, and according to what was thought fair or affordable, or what could be extorted given the relative power of the parties involved. Now, there was merely ‘rent’, meaning a contractual payment for the use of land. Anything beyond ‘rent’ became illegal. In the absence of formal leases, and given colonial expressions of respect for Indian ‘custom’, it took a long time before this legal distinction meant anything much in reality. But ultimately rents became more regulated, and ‘illegal’ cesses and dues became much harder to exact. These changes placed pressure upon landlords, and forced them to devise new ways of securing their incomes. Some left the land to better-resourced managers (including European planters) or more skilful agriculturists. Others improved their own management, or cultivated more on their own account, or hardened the terms offered to bonded labour and share-croppers.

This leads on to another important point, that the British related ownership to *use*. Like most other states, they favoured settled agriculture over all other modes of land-utilisation, though they also created reserved forests (as the Mughals did hunting tracts). They deliberately set land-revenue rates – and designed the systems and chose the revenue payers – in order to maximise commercial production, though oddly they chose to do this while thinking they were conserving an old order, and while trying to make land tenure more secure.

Moreover, land which was not in regular use the British defined as ‘waste’. Much of such ‘waste’ they denied to landholders and communities who had had informal shared control over it; they resumed it for the state or allocated it to private owners. Moreover, they greatly reduced the areas that were revenue-free (*inam* or *lakhiraj*). Earlier regimes had left vast amounts of land and its produce in the hands of others, to pay for public services and goods (officials, armies, temples, mosques, schools), and had drawn much government income from their own state lands (*khalisa*). The colonial government was not eager to manage lands directly or to look to state land as a major source of income. And they recognised revenue-free lands only where they could not avoid doing so. Because they wanted to ensure the validity of titles to land, they had to respect specific, unimpeachable, written revenue-free rights, whether from before or after British rule. But for their own part, even when they needed to

show particular marks of favour by making land-grants, for example to soldiers in the Punjab, they very seldom awarded them revenue-free. They preferred to encourage marketing and to collect cash into the treasuries, and then to govern through employees who were paid in money.

What all this implies is a particular idea of the purpose of land: above all, it was to be cultivated, to produce crops that could be sold. The land had to pay, to its owner and then to the state. This was not wholly new of course, as all states and for that matter all settled cultivators had always had much the same idea about land. Exploitation of land resources and the human shaping of landscape certainly long preceded colonial rule in India, and one should not imagine that there was some kind of pre-colonial ecological harmony between man and soil.

But the commercial use of land did become, in British rhetoric, almost the only, the hegemonic idea of what land was for, and this undoubtedly reduced the grip of alternative views: for example, of land as a place of ritual, in such activities as ploughing, sowing and harvesting; of land as sacred and as the basis of the political order; of land as patrimony, or a common good for kin or community; of land as a public store of wealth to be drawn on as necessary; of land as a means of expressing and enforcing social customs and distinctions.

28.6 CONSEQUENCES

Did it all matter? We return briefly to a couple of the issues raised at the beginning. Other conclusions would also be possible, in regard to all the issues raised then.

28.6.1 Differentiation

One consequence of all colonial agrarian policy was the firming up of social classes, and the hardening of divisions between them. With regard to landholdings the evidence is unequivocal. There was a tendency for larger holdings to become relatively more profitable, to preserve their integrity (as seen in statistics of average number and size), and to maintain or even increase their share of total cultivated area. There was also a tendency for the number of smaller holdings to increase, and for their size and share to diminish. These related tendencies had different starting-points and took different forms in different places; and there were differences between permanently- and temporarily-settled tracts, and between irrigated and dry lands. But, broadly, these same two features can be seen everywhere, among and between holdings with many different kinds of title, in lands dominated by large land-owners, and in lands under peasant-proprietors.

There had always been many landless in India, and migrant populations of many kinds. Under colonial rule (and since) the pressure increased for people to settle on land and cultivate it, but larger proportions than ever were unable to subsist from the land in their possession. The growing numbers in cities and in factories were too small proportionately to compensate for this change, especially as population and average life-expectancy rose. Micro-holdings – and share-cropping, and food from landlords' home farms – often became devices to lower cash wages. There was an impoverishment of large sections of India's population. Many factors contributed to this, but an important contribution was made by the very large increase in the numbers of people who could not live by their land alone but had to rely on employment by others.

28.6.2 Politics and Civic Character

The property laws and agrarian policies of the colonial state were related to a number of different ideas, of political economy in particular; for example: property rights, landlordism and village community. These ideas were influential, partly because exemplified in real measures of government and law. Thus Mahatma Gandhi had a vision of an India of self-regulating, self-sufficient communities which was in some respects indistinguishable from the ideal advanced by European anti-materialists and moralists, and also by some colonial policy-makers. The latter believed the 'village republic' to be the original Indian way. They tried to recreate it not only in the Punjab but also elsewhere, as a basis for tenancy and commercial production (Bengal in 1885) and even for local policing (the dream of a village watch supported by a local community).

Independent India sought *zamindari* abolition and land ceilings partly because of these colonial debates about the best means of securing economic progress and social equity. This was another victory for the peasant-proprietary school, but also (in the event) for the subterfuge, pragmatism and compromise that had none the less preserved the wealth and power of many landed families.

Many groups identified themselves through class interests that also drew on these debates, and the broader European discourse to which they had been indebted. The *zamindars* came first, with societies defending their political interests and seeking to reduce their liabilities. In Bengal in the 1870s and 1880s both additional local taxation and tenancy laws were resisted as a 'confiscation of property'. On the other hand, as a defence of property, land revenue was repeatedly reduced as a proportion of incomes and of total tax during the colonial period, and rural taxation has remained comparatively low since independence.

Later, each formation of a *kisan sabha* (peasant society), for example, also reflected a complex indigenous and colonial inheritance. Where a society was active, there were usually more successful agriculturists operating within a market economy, and new rivalries as a result of that upward mobility. There were often religious and social movements drawing on older texts and (especially Vaishnava) traditions, and making claims to status within an increasingly generalised *varna* hierarchy. And there were always claims about fair tenancy and enjoyment of property, concepts that had been imbedded in colonial laws, and transmitted through administration, courts, surveys and settlements.

In short, influences from these agrarian policies can be seen in assumptions that nowadays are scarcely questioned. More than that, they may be traced in the very fabric of society. Take the case of Calcutta. It has long been dominated by upper-caste literate service and professional elites, the *bhadralok*. These were not the direct descendants of the mixed bag of landed magnates, merchants, bankers and office-holders that ran the eighteenth-century city. They were the product of a society made in large part by the permanent *zamindari* settlement.

After an upheaval in which some great families were dispossessed, the settlement permitted the emergence of secure and increasingly wealthy landed classes. It allowed them to live away from the land in the city; to build houses, temples, schools and hospitals; and to sponsor societies, printing, and other civic goods. True, it created many smaller and subordinate landed interests that were less

secure, indeed insufficient. But, on the other hand, it demanded a range of lesser employees, the managers, agents, and clerks that worked the system in practice, plus a host of professionals, especially lawyers.

The permanent settlement was based on regulation and then on statute, implying top-heavy and centralised private and public bureaucracies, regulated by the law-courts, rather than dispersed day-to-day hands-on administration by landholder and state. Calcutta's concentration of writers and literate workers was the result, and they in turn required and manned Calcutta's offices, schools, newspapers and associations.

Other kinds of revenue settlement encouraged other kinds of government and society – too many to be detailed here. Colonial Calcutta and Bengal might be contrasted with Bombay (Mumbai) and Madras (Chennai), the administrative, commercial and industrial centres of regions with temporary *raiyatwari* settlements. They might also be compared with colonial Lahore and Punjab. The priorities of military recruitment as reflected in revenue and land policy, the emphasis on peasant proprietorship (of the so-called agricultural castes), the preservation of some great landed families, and in general a paternalist government defending its personalised rule and customary law: these agrarian policies help explain much of the Punjab's twentieth-century political history, before and after partition, and once again remind us of the formative influence of agrarian policies.

28.7 SUMMARY

Agrarian policies were crucial to the consolidation of British power in India. Through their agrarian policies the British sought to establish order in the countryside, create a social basis of support, and develop a system of production that could supply the colonial demand for agrarian commodities. In 1789, a ten-year settlement was introduced. In 1793 this was superseded by a permanent settlement by which the rate of tax was fixed forever. By the early nineteenth century this revenue system was criticized by officials and questioned by zamindars. This chapter looks at the many pressures that shaped these settlements and also analyses the tenancy reforms that were introduced after the mid-nineteenth century. It discusses how these policies led to changes in land rights and transformation of rural society.

28.8 EXERCISES

- 1) Analyse the chief characteristics of British Indian government's land policy.
- 2) Discuss the reasons behind the introduction of the Permanent Settlement. What were its socio-economic impacts?
- 3) What accounts for the shift from Permanent Settlement to the temporary settlements?
- 4) Critically examine the tenancy reforms by the British Indian government.
- 5) To what extent did British agrarian policy deepen the differentiation within the rural society?

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UNIT 29 PATTERNS OF COMMERCIALISATION

Structure

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29.1 INTRODUCTION

Commerce is market exchange, the trading of things with intermediary media called “money.” In the social relations of commercial exchange, the value of money establishes exchange values, or “prices,” for things called “commodities,” which may have other values, based for example, in culture and nutrition, but only their relative market values appear in the calculations that organize commercial transactions where people buy and sell things for money.

Commercialisation is a historical process that turns more things into commodities, brings more people into market exchange, makes more social transactions commercial transactions, and interprets more of the value of things through pricing. Commercialisation pervades societies with commodities, expands the geographical reach of commerce, and makes markets more pervasive in everyday life. Commercialisation transforms human experience by establishing commercial transactions in settings where markets had previously been absent or unimportant.

To study commercialisation, we can imagine a spectrum of social settings, on one end of which, there is no commerce, as for example, in transactions between a nursing mother and her newborn child, and on the other end of which, markets organize all transactions, as on a stock exchange. We can also imagine this spectrum spatially, as being composed of places, like isolated villages, with little commerce, and others, like cities and suburbs, with a lot. Over time, commercialisation increases the proportion of market transactions in social life and social space.

Moving up the scale of commercialisation implicates culture as well as economic life. Creating markets requires making rules to govern the possession, or

ownership, of items held as property and exchanged for money. Commercial actors must also agree about procedures for measuring exchange values. Such shared understandings about the conduct of commerce comprise its cultural content, and we can use “commercialism” to denote any combination of ideas, symbols, values, rules, and institutions that forms the cultural basis of market exchange.

Commercialism often includes people with different cultural identities, defined by ethnicity, language, and religion, because people often share understandings about market exchange despite other differences. Yet each culture also gives commercialism distinctive features, by giving things symbolic values that inform prices, by forming bonds of trust and credit-worthiness, and by legitimating political institutions and social power relations that form effective rules of ownership and legitimate social exchange. Rulers mint money, define property rights, adjudicate disputes, punish violations, and establish official measurements. Cultural elites engage commerce in and across cultural boundaries, using assets acquired through trade, gifts, plunder, theft, tribute, and taxation. People with power and authority make implicit rules as well as explicit laws that govern the possession and exchange of commodities. [Appadurai 1986; Curtin 1984; Gregory 1997; Ludden 1996; Rudner 1994]

Many if not most social transactions operate without recourse to money and markets. How we understand this realm of non-commercial exchange influences how we understand the conditions under which commercialisation occurs and its impact on social environments.

One method is to classify societies according to their dominant form of social exchange. Using this method, Karl Marx, Max Weber, and others depict societies dominated by communal, feudal, and despotic social relations, which allow commerce a marginal role. Theorists thus identify societies that inhabit the low end of the spectrum of commercialisation, and argue that moving such societies up the scale of commercialisation involves a fundamental transformation of a social structure, a dramatic disjuncture, which generates new social structures characterized by increasingly prevalent market exchange. [Hobsbawm 1964]

Another method is to analyze the range of exchange relationships in society. Using this method, Karl Polanyi defined two forms of non-commercial exchange, called “reciprocity” and “redistribution.” In reciprocal exchange, transactions among individuals express feelings of mutual obligation, and in redistributive exchange, people deliver goods and services to a central authority for redistribution according to established rules of entitlement. E.P. Thompson used the phrase “moral economy” to denote cultural rules that express such obligations and entitlements. Societies that include a mix of reciprocal, redistributive, and market exchange inhabit a range of locations on the spectrum of commercialisation; and moving up the scale involves changing the balance and content of social relations to make markets more prevalent. [Chayanov 1966, 1977, Polanyi 1957a, 1957b; Thompson 1971; Scott 1976; Sen 1981]

Theorists thus provide various ways to conceptualize social environments that may contradict, resist, accommodate, and encourage commercialisation. Historians have used and revised these theoretical approaches to study commercialisation in India.

29.2 THE CLASSICAL APPROACH TO INDIAN COMMERCIALISATION

By classifying social structures according to their dominant form of social exchange, many scholars have concluded that though commercialism had spread widely across pre-modern Eurasia, only Western Europe generated the globally expansive commercialisation that became capitalism. All histories of commercialisation are entangled with this idea, which thus requires some historical reflection.

When the English term, “capitalism,” entered our vocabulary, about 1850, it referred to the idea promoted by Adam Smith that national wealth grows in proportion to the productive force of autonomous individuals using privately owned assets for personal gain in market exchange. By 1890, the term was in wide circulation, and for the next century, its usage carried three implications: an economic system based on private property, individual profit, and state enforced market principles emerged uniquely in Western Europe; it defines modern economic development; but it also has rivals, based on socialism, communism, and non-European cultural traditions. After 1990, the last of these implications faded away, as the collapse of communist and socialist regimes gave the idea of capitalism a stronger claim to universality, and a new phrase, “global capitalism,” came into circulation, to indicate a new world order in which capitalism has no rivals. [Barber 1967]

In this classical view, European capitalism generated commercialisation around the world. In India, British imperialism appears to have forced commerce into traditional societies, where the dominant unit of social exchange was an essentially self-sufficient village community, in which families, castes, and sects organized exchange with their indigenous moral economy and with minimal recourse to money or markets. In the social structure of traditional India, commerce operated only on the margins of village society; and merchants moved among villages and urban centers to form exchange relationships embedded in a society that strictly constrained commercial expansion. Traditional state institutions also constrained commerce, because, though states extracted taxes that entered markets, they also subjected social exchange to the dominance of elites who treated markets only as means to enrich themselves. Reciprocal obligations and redistributive systems thus squeezed merchants into strictly confined social roles and gave commercialisation no general indigenous impetus. [Beaud 1983; Habib 1969, 1988; Mukherjee 1957; Wallerstein 1979, 1983]

In this classical perspective, Indian commercialisation began with British imperialism, which introduced capitalism and launched a dramatic transformation of India’s social structure. Scholars differ about the outcome. In general, however, they agree that the combined force of indigenous culture and imperialist exploitation prevented the replication of Western capitalism in India.³ Indian commercialisation thus appears to be a historical process marked by a disjuncture based on the alienation of tradition and modernity, which still coexistence uneasily in India. [Gadgil and Guha 1992]

29.3 REVISING THE HISTORY OF INDIAN COMMERCIALISATION

Historical research indicates that pre-modern India was actually quite open to commercialisation, which expanded steadily over the centuries and more rapidly after 1500. Many isolated societies did subsist without commerce, but many regions

of commercial expansion also developed. Pre-modern India comprised a vast, diverse mixture of societies and modes of social exchange, rather than one traditional structure.

Instead of imagining that British capitalism invaded a traditional India where commerce played a marginal role, many scholars now envision British imperialism emerging inside and feeding itself on the broad circulation of commodities in commercialized Indian regions, and then expanding imperial power to control commercialisation to serve British interests. Indian commercialisation can thus be understood as a hybrid process, combining local and imperial energies, and transforming Indian societies without producing drastic historical disjuncture, despite all the attending violence, conflict, and radical social, cultural, and economic change. [B.B.Chaudhuri 1996; K.N.Chaudhuri 1985; Ludden 1999, 2002; Roy 2000; Subrahmanyam 1990; Subrahmanyam and Bayly 1988]

Such revised understandings of Indian commercialisation now inform scholarly disputes about the uniquely European origins and character of capitalism. Global commercialisation may indeed have had many origins. Culturally distinct forms of capitalism may have emerged in many environments, connected to one another by Western imperialism, which made Western models of capitalism ideologically dominant. Rather than imagining that Europe forced Asia up the scale of commercialisation, many scholars argue that historical capitalism inhabits shifting cultural spaces where diverse peoples have invented diverse capitalisms, in a world of growing inequality, where the idea of the West's unique capacity to modernize the world became an ideological tool that served imperialism, nationalism, and Cold War, but no longer constrains the historical imagination. [Bose 1990; Ludden 2004; Maddison 1983].

29.4 COMMERCIALISATION IN PRE-MODERN INDIA

Structural images of traditional India rest on the geographical premise that India was once a single territory filled with sedentary societies. India was from ancient times, however, a land of vast mobility, open to the mixing and movement of people, goods, ideas, cultures, and technologies, by land, river, and sea. Land was abundant and migrations were constant across lands between the Silk Road and the Indian Ocean, where mobility typified social environments as much as sedentary life, and in many places and times, much more.

The scale of human mobility increased in every century. India was a land of opportunity for all kinds of migrants. Available evidence allows us to speculate that during the two centuries after 1600, almost half the total population of southern Asia may have comprised mobile artisans and workers; peasants colonizing new land; itinerant merchants and nomads; pilgrims; shifting cultivators and hunters; migratory service workers and literati; herders and transporters; people fleeing war, drought, and flood; and soldiers and camp followers supplying troops on the move.

All this mobility entailed widespread conflict and expanding commercial activity, commodity production, and economic interconnections. Mobility spawned market exchange on routes among places with diverse ecological endowments, where people specialized in using local resources and traded products with

other localities, near and far. Borderlands between forest and plain, valleys and uplands, and land and sea were most active commercial spaces.

Caste societies embraced commercialism. Village people active in markets included weavers, oil-pressers, toddy tappers, carpenters, ironsmiths, herders, hunters, and farmers producing tobacco, dyes, spices, cotton, fruits, and vegetables. All variety of cloth, metal, wood, stone, animals, and foodstuffs moved in markets. Elaborate cuisines, arts, and manufactures emerged in sites of commercial accumulation, where social elites stimulated consumer trades, as did rulers and religious institutions. Buddhism and Islam moved along trade routes. Hindu temples became central sites for commercial transactions. Pilgrimage and festivals spawned markets. Many people sold their labour for money, including well diggers, soldiers, and many other service workers.

Cities and towns developed as demographic collections of consumers and specialized occupational groups. Pre-modern urbanism was by no means confined to precincts of walled cities; it rather spread out to envelop settlements in walking or boating distance where mobile people and goods met in dense combinations. State revenues depended especially on regions where people and trade concentrated, where taxes enriched financiers who invested in trade, money exchange, and state taxation. Regions of commercialism developed around such sites, whose influence expanded into hinterlands, creating geographies of commercialisation, anchored in local combinations of state power, religious authority, and social solidarity, connected by trade routes and enriched by networks of mobility with no boundaries whatever.

29.5 POLITICAL TERRITORIES IN COMMERCIAL SPACES

Pre-modern commercialism moved among many sites, routes, and institutions, and was never contained by political or cultural territory. Yet the political geography of the Mughal Empire had significant consequences for commercialisation, because it incorporated commercial centers and routes from Kabul to Dhaka and from Srinagar to Daultabad, and thus produced unprecedented economic integration among regions of commercialism, each operating in its own environment yet connected by Mughal militarism, coinage, elites, entitlements, and taxation.

Urbanism became more prominent along routes inside Mughal territory, which extended across southern Asia to Istanbul and Moscow, and across the Indian Ocean to Europe and America. The empire had political boundaries but no economic boundaries: all imperial borders remained entirely open to mobility that provided commercial assets for people inside Mughal territory. In the eighteenth century, Mughal borderlands became more difficult for Mughals to subdue and control, as commercialisation enriched political competitors, including the Bengal Nawabs and British East India Company, who used Mughal techniques to generate revenues and attract commercial investors inside and outside territories of Mughal authority.

Mughal borderlands of Indian commercialisation became heartlands for a new kind of imperialism that arose in highly commercialised coastal regions around Bombay, Madras, and Calcutta. In these coastal regions, all the cultural mixing that typified pre-modern times made Europeans natives, not of India defined

by inland territorialism, but rather of another India, defined by settler mobility in an Indian Ocean world without borders, where sea routes came ashore on the Indian coast and channelled commerce in and out of Mughal domains.

Eighteenth century land and sea routes of Indian commercialism sustained an expansively commercial militarism that engaged many inland rulers who funded war with cash revenues drawn from commercialised regions, with credit from rural and urban bankers, and with direct state borrowing from urban bankers. To this pool of military funding, the English added funds from speculators in London who banked on profits from British conquest in India. Using this combination of commercial assets, the English acquired military supremacy, first on the Indian coast, then in valleys that channelled wealth to and from the coast, and then in the uplands.

29.6 TRANSITIONS TO CAPITALIST EMPIRE

From its Portuguese beginning, in 1498, European sea trades in Asia had strong military backing. In the eighteenth century, the English East India Company developed an expansive military basis for its Indian commercial operations, which, after 1757, drew commercial capital increasingly from taxation in conquered territory, where British state authority sold property entitlements to local landed elites. In 1785, Warren Hastings defended his military priorities against critics in London by bragging that the Company's military "insured the blessing of peace, security, and abundance to the subjects of its immediate dominion, while it dealt out the terrors of conquest to the remotest enemies of the parent state . . . while every other member of the British Empire was afflicted with the plagues of wars or insurrection." British wars with revolutionary France began soon after Lord Cornwallis became Governor General, and by the 1790s, his boosters in London could brag that England had successfully used its military "to revive its arts, diffuse its manufactured productions, restore its revenue, and once more, to give splendour to its empire."

During British wars against Napoleon, Tipu Sultan, and Marathas (1790-1818), an epochal shift occurred in the historic relationship between commerce and militarism, and thus between geographies of commerce and state territorialism. Previously, rulers had used armies to secure territories where commerce expanded in connected but borderless spaces; now, the English used the military to force regions into commercial territories to benefit the parent state of the British Empire. Militarism became a means to integrate commerce and state authority inside the territorial order of capitalism.

After 1820, British industrialism emerged as a pre-eminent economic and political force, having been boosted financially by war state expenditure and Indian revenues. As English industry took center stage in imperial policy, English industrialists used state power over trade to advance their own interests and thus impoverished weavers in Ireland and India, simultaneously.

In decades from 1820 to 1860, as imperial armies conquered most of what became British India, English investors began to finance railways in the Indian Presidencies, to tighten control over Indian assets, militarily and commercially. Until the 1840s, most Indian revenues were assigned to meet the cost of conquest, administration, and remittance, as trade policies shifted onto *laissez faire* lines to support Britain's global interests. In 1833, the Company became an agency serving British global

enterprise, and thus, soon after the abolition of slavery, in 1833, the Company arranged to send shiploads of indentured workers from Calcutta to replace slaves on English plantations in the West Indies. By 1860, state-managed indentured labour migration sustained British plantations in north-eastern British Indian territories, conquered after 1820. [Jha 1996; Siddique 1990; Tinker 1974]

From 1823 to 1854, the exchange value of the Indian Rupee declined, which increased the real value of India taxation and made it more cost effective for government to invest Indian taxes in India. At the same time, London sought outlets for British industrial capital and new supply systems for industrial raw materials. British state investments in India ensued, to cheapen imports, exports, and military operations and to increase revenue by extending British capital investments in plantations, railways, cities, roads, ports, shipping, irrigation, and other ventures.

In the 1840s, a commission of Parliament met to consider ways to improve supplies of raw cotton to Lancashire mills. Bombay Presidency attracted special attention, along with Egypt, as potential sources of raw cotton. The goal was to expand cotton exports from these regions to counter-balance England's dependence on cotton from the American South. When the US Civil War broke out, in 1860, Egypt and India filled a void in cotton supplies created by the Union blockade of Confederate ports in America.

After 1870, state investments produced foundations for India's modern development regime. In 1871, the Indian Government obtained authority to raise loans for productive purposes, and large irrigation projects began, following earlier success raising revenues from smaller projects. Imperial institutions then provided the technical, ideological, and political basis for a modern system of economic development. Government projects focused sharply on the most commercially profitable agricultural crops. State investments employed native contractors and benefited landowners producing commodities for domestic and export markets. This pattern of trickle-down development patronage, which linked local commercial environments to imperial circuits of capital accumulation through the everyday practice of the state's productive investments, remained in state development operations after 1947. [Ludden 1992, 1994]

29.7 SPATIAL PATTERNS OF MODERN COMMERCIALISATION

From 1880 to 1920, Europe's High Imperialism organized global commercialism on a larger scale than ever before. Statistical evidence also emerged by which to measure global patterns of economic inequality, which have remained remarkably resilient since then. South Asia and all other subordinate imperial territories became increasingly poor compared to Europe and America. Between 1870 and 1985, ratios of per capita income between the world's richest and poorest countries increased more than six-fold. Today, economic inequality among rich and poor national economies is still increasing.

By 1880, new spatial patterns of commercialisation had emerged in British India. Like Ceylon and Malaya, Assam became a quintessential plantation economy, where British investors drove out peasant producers and controlled markets in land, labour, and all other commodities. Indentured migrants from British territories worked plantation land, which had been taken away by the state from indigenous mountain

people. The state organized indentured labour migrations by landless workers, for instance, from southern Tamil districts to Ceylon and Malaya, and from north India, Bihar, and Bengal to Assam.

British East Africa and British Burma also developed circuits of capital accumulation anchored in India. In East and South Africa, merchants from Gujarat and emigrant workers from Bombay, Calcutta, and Madras built railways and urban centers. Between 1896 and 1928, seventy-five percent of emigrants from Indian ports went to Ceylon and Malaya; ten percent, to Africa; nine percent, to the Caribbean; and the remaining six percent, to Fiji and Mauritius, which became island plantation economies. In Burma, Tamil Chettiyars financed new rice farms in the Irrawaddy River delta, which generated huge exports of rice for world markets, including India, where urbanization increased demand for imported rice. The food crisis that generated the 1943 Bengal famine began when Japan conquered Burma and cut off rice supplies to Calcutta.

Specialized regions of farm production developed in British India along railways that led to major port cities. One major example is the Deccan, which became cotton country, where commercial investments entangled almost all farmers, poor and rich alike. In 1876, Deccan Riots were the first major clash between local farmers and immigrant Indian financiers, and gave birth to official anxiety about village stability during capitalist development. This anxiety became a major impetus for imperial theories of traditional village harmony, which needed support by state patronage for local landed elites.

The responsiveness of Indian farmers to price incentives spawned many commercially specialized regions with an export orientation, producing cotton, wheat, rice, coal, coke, jute, hides and skins, tea, ores, and wool. Data from 1914 show that most Indian cotton left Bombay and came from Maharashtra. All tea came to Calcutta and Colombo from British plantations in Assam, Darjeeling, and hills around Kandy. Most export rice came to Rangoon. Wheat came primarily from fields under state irrigation in Punjab and western United Provinces (Uttar Pradesh). Oilseeds came to Bombay from Hyderabad territory (Andhra Pradesh), the Central Provinces (Madhya Pradesh), and Bombay Presidency (Maharashtra). Coal, coke, and ores came from Jharkhand to Calcutta and Bombay. Eastern Bengal (Bangladesh) produced almost all the world's jute, which went to Scotland but also increasingly to jute mills around Calcutta.

Indian industrialism emerged in this context and accelerated commercialisation around major cities. After 1880, two decades of low prices in Europe and America and rising prices in South Asia encouraged investments in India by firms producing for Indian as well as world markets. Commodity prices in India rose rapidly after 1880, along with export commodity production, until the crash in 1929. These were decades of the most rapid expansion of commercial farm production to that time.

Early Indian industrialization was so impressive that the imperial Factory Act (1881) imposed rules on Indian factories to reduce their comparative advantage in virtue of low local labour costs and cheap access to raw materials in India. In 1887, J.N. Tata's Empress Mill arose at Nagpur, in the heart of cotton country. Tata Iron and Steel Works at Jamshedpur consumed increasing supplies of ore and coal, which by the 1920s rivaled exports from Calcutta. In 1914, India was the world's fourth largest industrial cotton textile producer. Coal, iron, steel, jute and other industries generated

specialized regions of heavy industry around Bombay, Ahmedabad, Nagpur, Kanpur, Calcutta, Jamshedpur, and Madras.

World War One stimulated imperial policies to enhance India's industrialization to make India less dependent on imports; and the Great Depression, 1929-1933, again boosted industrial growth by reducing prices for farm output compared to manufactures. As a result, industrial output in British India grew steadily from 1913 to 1938 and was 58% higher at the end of the Depression than at the start of World War One; compared to slower and more uneven rates of growth in the UK and Germany. [Morris D. Morris in Kumar, 1983]

By 1920, India had a complex national economy, dominated by agriculture but including a large public sector, major centres of large-scale industrial production, and countless small-scale industrial concerns producing cloth, leather, and metal goods. In 1913, manufactures comprised twenty percent of Indian exports, valued at ten percent of national income, figures never since surpassed. In 1914, the US Consul at Bombay called India "one of the few large countries of the world where there is an 'open door' for the trade of all countries." England was still India's dominant trading partner, but losing ground. In 1914, the UK sent 63% of British India's imports and received 25% of its exports; and by 1926, these figures stood at 51% and 21%, respectively. By 1926, total trade with the UK averaged 32% for the five major ports (Calcutta, Bombay, Madras, Karachi, and Rangoon). Bombay and Rangoon did 43% of overseas business with Asia and the Middle East. Calcutta did a quarter of its business with America. [Roy 1999, 2000]

Migration data also indicate the growing complexity of India as a region of the world economy. In 1911, the British numbered only 62% of resident Europeans in British India. Four times more immigrants arrived in India from Asia than from Europe, and seven of ten came from Nepal and Afghanistan. In 1911, Nepalis entering India outnumbered resident Britons by fifty percent; total Asian immigrants numbered three times as many. By 1921, Indian emigration far exceeded immigration. Between 1896 and 1928, 83% of 1,206,000 emigrants left British India from Madras (which accounted for only 10% of overseas trade), where most went to Ceylon and Malaya. Bombay emigrants went mostly to East and South Africa, and Calcutta emigrants, to Fiji and the West Indies. By 1921, India's modern diaspora was well underway.

29.8 GEOGRAPHICAL CONTINUITIES IN INDIAN COMMERCIALISATION

The British began their Indian empire on the coast. Their power then extended up river valleys into the interior, and finally, into highlands and mountains. These coasts, river valleys, highlands, and mountains had been distinctive commercial environments before 1800, and though increasingly forged into a unified imperial pattern, remained distinctive in 1947. Since then, national development has not erased their distinctiveness.

Before 1800, coastal environs had been most open to direct local involvements with overseas commercialism, and after 1800, imperial capitalism concentrated first around ports. The imperial economic order then spread along railways inland from Calcutta, Madras, and Bombay. Coastal ports became cosmopolitan sites for the mixing of inland and overseas cultures and interests. Indications of this distinction appear in the 1911 census, which shows that English literates numbered less than

1% of the population of British India, but 12% of the population of Calcutta. Madras and Bombay shared with Calcutta very high figures for the percent of literate people who were literate in English. The mixing of old and new social elites was most intense along the coast. Brahmans were about 6% of the total 1911 Indian population, with very high rates of English literacy, especially near the coast. More than 25% of literate Brahmans were literate in English in Madras and Bengal Presidencies, and about 20% in Bombay Presidency.

British imperialism moved inland along river valleys into uplands and regions, where the Mughals and their competitors, allies, and subordinates had held much more power than along the coast. In these regions, commercialisation after 1800 continued to include noticeably higher doses of state coercion, violence, and rebellion. Strategic alliances between imperial and local military force anchored the colonial regime. Cantonments and security installations marked the spatial and social organization of commercialisation.

Post-1857 grants of huge Talukdar estates to old Zamindars in Western UP represent a broad accommodation of old military elites. In Punjab, military recruitment and establishments grew alongside state investment in irrigation canals that benefited military-peasant-landlords. In Bombay Presidency, Maratha jagirdars, sardars, inamdars, deshmukhs, and deshpandes kept old estates under new property laws.

Imperial expansion into highlands and mountains combined the force of Indian and British lowland interests, which both moved into areas of shifting cultivation inhabited by groups who became known as “tribals” in British India. Before 1947, many mountain territories were still not conquered sufficiently to allow full incorporation into the lowland economy, but many were. Coffee and tea planters took mountains around Assam and Mysore. Mountain forests everywhere became sites for commercial timber extraction.

Most highlands remote from centres of Mughal power in 1700 remained remote from centres of political and economic power in 1950, but commercialisation of the highlands increased with the expansion of lowland agrarian populations into the mountains, which steadily displaced tribal inhabitants, causing numerous clashes; and with the incorporation of tribal people into circuits of labour migration in the plains, which, for example, brought countless Nepalis into India, and incorporated tribals into agrarian economies in Berar and Gujarat. [Bates 1981, 1985, 1988; Breman 1985, 1989; Jha 1996]

As India became a unified commercial economy, old regions of commercialism retained distinctive characteristics and acquired new ones. The Mughal heartland became a corridor of British imperial investments that steadily increased the wealth of western regions compared to the east. This unequal development continues today. Madras and Bombay hinterlands retained independent economic identities, as did commercial regions around Trivandrum, Bangalore, and Hyderabad. Mountain domains became increasingly marked by subordination to the plains, which disadvantaged local populations compared to lowland immigrants. Highlands and dry lands became the modern frontier for agricultural expansion. From 1880 to 1980, the highest rates of increase in the ratio of total farmland to total land area (from 903% to 206%) appear in Tripura, Sikkim, Nagaland, Assam, Rajasthan, Mizoram, Arunachal Pradesh, and Orissa. The lowest figures (from 122% to 103%) appear in the old agrarian lowlands of Tamil Nadu, West Bengal, Uttar Pradesh, Maharashtra, and Kerala. [J.F.Richards]

29.9 THE IMPACT OF INDIAN COMMERCIALISATION

Today, historians focus research on geographical regions in which patterns of change indicate commercialisation had different meanings for different people and in different places and times. Some patterns emerge across regions and comprise national patterns in contemporary India. Regional conditions are significant everywhere: they continue today to inform prices, bonds of trust and credit, and social power relations that set effective rules of ownership and social exchange. One good example is commercial sugar cultivation, which has operated in eastern UP under the impress of local landed elite domination and in Maharashtra under the control of staunchly independent landed entrepreneurs. [Amin 1984; Attwood 1992]

Commercialisation progressed along with other changes that influenced its impact. Most importantly, the quantitative proportion of land and population shifted. India became a densely populated region of the world for the first time after 1850. Social competition for land and other natural resources increased accordingly. The relative market value of land and labour shifted: land became more valuable compared to labour. The imperial state made landed property a strictly defined object of legal possession. Landed property rights thus became a modern institutional basis for commercialisation. In this context, capital investments in land, above all, irrigation, commercial agriculture, and urban development, increase the value of privileged land most rapidly and differentiated the landscape into sites defined by their respective attractiveness for investors. Technological change, above all, in industry, transportation, and communication, enhanced the differential impact of commercialisation, by making some sites especially valuable for commercial investment, particularly around cities and towns. Urbanization advanced rapidly after 1900 and accelerated after 1947. The percent of India's population living in urban centres increased by just over *one* percent (from 11% to 12%) during the first three decades after 1900, by *six* percent during the next three (1931-1961), and by *eight* percent in the next three decades (1961-1991). Ecological change accelerated similarly. In *three* decades *after* 1950, livestock, net cultivation, and built-up land increased as much they had during *seven* previous decades, while forest cover declined at the same rate and population grew about fifteen percent *faster*. [J.F.Richards]

Commercialisation is thus impossible to disentangle from other historical processes that have also changed the composition of social environments. Political change is important in this context. Imperialism has structured commercialisation to serve Western interests. Nationalism has produced new state territories where politics structures commercialisation to serve national interests. New state borders broke old routes of commercial transit in some parts of South Asia, which had, for instance, carried land rents and jute from eastern Bengal to enrich the Calcutta *bhadralok* and to sustain Calcutta jute mills for many decades. The partition of Punjab caused massive disruptions and severed many old commercial connections. India, Bangladesh, Pakistan, and Burma emerged as entirely new territories for commercialisation under national regimes whose respective histories have structured its impact ever since.

In India, regional state regimes emerged after 1956, which enhanced the regionalism of Indian commercialisation and continuities with regional patterns

that developed in pre-modern times and under British rule. In all Indian states, local and regional elites now engage commerce using power and authority to make rules that effectively govern the possession and exchange of most commodities. India's integration as a national economy and its economic governance in New Delhi increased under a regime of national development planning, which made the Indian bureaucracy and intelligentsia increasingly influential. The politics of commercialism in India today thus involves local, regional, and national institutions, whose combined impact continues to differentiate the meanings of commercialisation. [Bardhan 1984, 1986; Rudra 1984, 1989; Rudra and Bardhan 1978]

In a long-term perspective, commercialisation has comprised a process that began long before 1800 and accelerated thereafter to shift the balance and content of exchange relationships everywhere in India. Two commodities, land and labour, indicate most clearly how that alteration defines Indian capitalism as a distinctive formation operating inside India's national borders. State laws pertain more forcefully to land and labour than to other items of exchange, and the historical process of defining land and labour as commodities is still, in fact, underway. Land reform laws eliminated Zamindar property rights and produced a profusion of small private holdings. Social movements continue to demand legal redefinitions of property rights. Labour laws pertain primarily to heavy industry and workers' rights in the informal and agricultural sectors remain subjects of on-going contestation and legal revision. Rural markets for land and labour are today, as they were a century ago, bound up tightly with the local power of landed elites and high status social groups, whose role in law making is most visible inside Indian states but increasingly visible at the national level as well. The lowest status social groups have little landed property and mostly work for higher status employers, as the market value of their labour continues to decline compared to the value of land, as poor land becomes poorer compared to rich land, and as finance capital exerts increasing control over land and labour. [Harriss-White 1996; Yanagisawa 1996; Atchi Reddy 1996]

In this light, it seems that Indian commercialisation evolved into Indian capitalism without causing a drastic disjuncture in the composition of the social structure, allowing many old elite groups to retain substantial control over commodity production and exchange. Political disjunctures, which mark the history of British imperialism and Indian independence, also mark this evolution, as Indian commercialism changed over time in a changing Indian landscape as well as in commercial spaces that escape the confines of Indian national territory. The long period of British rule composed a long transition from pre-modern Indian commercialism to contemporary Indian capitalism, during which modern institutions came into existence that continue to exert substantial influence on social relations of economic development. [Dirks 2001; Ludden 1993; Metcalf 1995; Washbrook 1981, 1989, 1994]

Commercialisation transforms human experience by establishing commercial transactions in settings where markets had previously been absent or unimportant, most notably in villages where the privatisation of land eliminated customary rights to sustenance for landless families, who depended increasingly on informal contracts, indenture, and various forms of bondage and trafficking. One dramatic example of this dilemma appeared in 1981, when researchers found over four lakh low caste labourers from poor villages in northern Bihar

working on rich farms in Ludhiana and Hoshiarpur districts of Punjab, where recruiters also brought Chhotanagpur tribals for employers who bid for them at auction. Though this illegal trade had ceased by 1991, Punjab farmers were still advancing huge sums to bring Biharis to work in their fields, and officials who found workers held in bondage had them released to local authorities. [Singh 1995]

Commercialisation has included enrichment and destitution, for families, localities, and regions. Though some progress in reducing the aggregate burden of poverty occurred before 1990, most rural Indians still hover near the poverty line, most precariously in poor regions where capital investments are meagre, as in dry farm regions from eastern Maharashtra south to Rayalaseema, where the limitation of the green revolution to irrigated land is apparent and the contrast with prosperous Punjab could not be greater, and where, in 1997-8, two hundred poor farmers, burdened with huge debts to plant cash crops (mostly cotton, but also *tur dal* and other pulses), committed suicide when faced with crop failure, foreclosure, and destitution. When crop prices crashed in 1997, farmers mortgaged their land to moneylenders, and then drought, floods, and pests killed their crops. Farmers killed themselves by drinking pesticide, a symbol of the green revolution that left them behind.

Social disparities amidst commercialisation have appeared more clearly as scholars have more often applied a gender lens to the study of change. Land ownership remains a male preserve in South Asia, and even more so, the management of land as commercial property. The same privatisation of property that made village workers dependents of landed families turned even women in landed families labourers working for men inside patriarchal legal systems where the market value of female labour as children, wives, mothers, care givers, and wage workers increasingly defined their position in society. This entailed profound social change, which occurred over many decades and variously in different locations, but always operated inside gender ideologies that evoke traditional values and social norms to regulate change within parameters that hold patriarchal power in place. Thus, commercialisation also appears in the gendered lens of social research as one dynamic process among many others that comprise historical trajectories of Indian capitalism today. [Agarwal 1992, 1994; Banerjee 1989, Borthwick 1984; Clark 1993; Krishnamurthy 1989; Mitra 1981; Omvedt 1980; Prasad 1988; Sangari and Vaid 1989; Sharma 1985; Shiva 1989; Thomas 1988]

29.10 SUMMARY

We began by defining commercialisation and its impact over the existing culture, society and commerce. The history of commercialisation can be traced back to the pre-colonial period. A high degree of commercialisation was achieved in the Mughal period. During the eighteenth century, with fading Mughal boundaries, we see the emergence of highly commercialised coastal regions – Bombay, Madras, Calcutta. At the same time we also see the growth of a ‘commercial capitalism’ in which European Companies became equal partners, particularly the Portuguese, English and the Dutch. Introduction of railways and the emphasis on plantation economy led to the emergence of new spatial patterns of commercialisation. With British Imperialism commercialisation spread – moving up the hills, into river valleys, across forest areas. This chapter looks at the nature and implication of this expansion.

29.11 EXERCISES

- 1) What is commercialisation? Do you agree that Indian commercialisation began with British imperialism?
- 2) What role did militarism play in commercialisation during the colonial period?
- 3) Analyse the spatial patterns of commercialisation in the first half of the 20th century.
- 4) Critically examine the socio-economic impact of commercialisation during the colonial period.

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UNIT 30 FOREST ECONOMIES IN COLONIAL INDIA

Structure

- 30.1 Introduction
- 30.2 Forests and Livelihoods
 - 30.2.1 Forests and Agriculture
 - 30.2.2 Forests as Pasture Lands
 - 30.2.3 Forests and Household Industry
- 30.3 Forestry and the Colonialism
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 - 30.3.3 Reordering Customary Rights in Forests and the Commons
- 30.4 Summary
- 30.5 Exercises
- 30.6 Suggested Readings

30.1 INTRODUCTION

The writings of the 1970s and early 1980s on rural economies in India largely concentrated on systems of permanent cultivation. But from the mid 1980s onwards this trend began to change and was signified by the publication of Ramachandra Guha's *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalayas*. Guha showed that the relationship between forests and the state changed when the British began looking for sources of timber to build the railways. Guha and the other scholars writing on the forests in the 1980s and early 1990s made three main propositions. First, scientific forestry offered a universal framework of conservation geared to modern capitalism and imposed on local tribal societies. Thus it responded more to global demands rather than local demands. Second monocultures and conversion of natural forests into timber plantations was the cornerstone of scientific forestry and adversely affected biodiversity in forests. Third: state monopoly over forests and the growth of scientific forestry led to displacement of local people from forest lands and the alienation of their forest rights. So, argued Guha, the introduction of scientific forestry was a "colonial watershed" that resulted in the commercialization of forest use and brought about unprecedented destruction in forested areas.

The idea that colonial control over forests was initially prompted more by commercial rather than conservation needs was discussed by many scholars following Guha. However this argument was also strongly contested. Richard Grove argued in his book *Green Imperialism*, that British Imperialism in Africa and Asia was in fact conscious of the need for conservation, and it was driven by a desire to look for pristine environments in the third world. Other historians acknowledged that Grove had dug up valuable material on the subject, but suggested that his understanding of the nature of British Imperialism was inadequate and flawed. For example Ravi Rajan stated that Imperialism was conservation conscious because conservation

was necessary for capitalism: it helped mobilize revenue and natural resources. However, we must remember that the use of conservation to maximize revenue for industrial capitalism was not merely confined to colonial countries but was in fact even prevalent in the European countries where internal colonization by state forestry was a common practice. It can not be therefore considered a “colonial watershed”. Within this debate about colonial forestry as a “watershed” some historians have also attempted to explore the more complex relationships between local forest economies and scientific forestry. (Sivaramakrishnan, Delhi, 1999)

Since the early histories of forests focused primarily on the systems of state forestry and their impact, they often did not analyze how forest economies worked. This meant that in most cases, forests were not seen as integral parts of the larger local and regional economy. The relationship between colonialism and forestry was also seen in a rather narrow way: there was no attempt to look at the way it was determined by the larger agrarian policies of the colonial government. This Unit explores the working of the forest economies and their relationship with the wider political economy. It also discusses the transformation and development of the forest economy, the various faces of colonial forest management, and, the complex relationship between local resource use patterns and scientific forestry.

30.2 FORESTS AND LIVELIHOODS

Most literature on forestry tells us that the forests of India were an abode of the tribal people who were primarily dependent on forests for their subsistence. This was true to a certain extent. But, forests provided crucial inputs not only for the survival of tribal groups, but also of peasants, craftsmen and pastoral communities. In this sense forests provided a space for the play of competing interests. This Section will look at the interface between forests and different forms of resource use, different patterns of livelihood. We will not focus on tribals since Unit 32 deals with tribal economies.

30.2.1 Forests and Agriculture

The relationship between forests and agricultural societies was often an antagonistic one. An expansion of cultivation often meant deforestation. But peasant settlers also depended on the forests for some of their daily needs like firewood and fodder. The complex and contradictory relationship between forests and agriculture was mediated by a string of relationships of exchange and production. In the case of the UP Hills Dangwal has shown how common lands and forests provided tuber, fuel, vegetable, water, slate and silt. These products augmented the resources of the peasants, and many of them were crucial for maintaining the ecological balance and soil fertility of the agrarian economy. (Dangwal, 1998, 349-72) Similarly in the Central Indian plains the forests formed an important part of the common resources of the village. Village settlements and the *Wajib-ul arz* (a village level revenue document) defined peasant rights on forests and commons. It was here that peasants came into contact with the tribal communities and often also employed them to graze cattle and collect firewood from the forests. In Central India, as in the UP Hills, expansion of cultivation led to deforestation, and this at times affected climatic changes and aggravated the impact of drought, thus forcing the poorer cultivators to depend on gathering forest fruits for consumption. In the case of cropping patterns it is evident that some of the practices of shifting agriculture were adopted in peasant cultivation. The Gond cultivator's cycle was modified to exclude the practices of burning and cutting trees.

Yet the fallows remained almost the same affecting productivity levels. (Prasad, Delhi, 1998) This was not only evident in the Central Provinces but also the UP Hills where peasants combined cultivation on higher altitude dry tracts with that on fertile lands in the valley. (Dangwal, pp.358-60) Thus the expansion of cultivation into forestlands led to the transformation of the livelihood of peasants, tribals and all associated in the larger agricultural system.

30.2.2 Forests as Pasture Lands

The interface between forests, agricultural economies and other common lands was also reflected in the seasonal use of forests and common lands for grazing. For example in Himachal Pradesh herders had access to forest lands for seasonal grazing, but these grazing rights were leased out to them by local villagers. (Saberwal, Delhi, 1998, p.34) Before the colonial period the contribution of forests to the local economy was considered important in the grant of land rights by the rulers of Chamba. (Singh, Delhi, 1995, p.38) Similarly Alpine grazing in Central Punjab was regulated by collective rights of herders in commons and forest lands, and thus grazing in the forests formed an important part of the annual pastoral cycle. (Bhattacharya, Delhi, 1995)

In the Central Provinces peasants, forest dwellers shared forestlands on the fringes of *ryotwari* (revenue settlement made by the British with individual peasants; it recognized individual rights of the peasants on land) villages, and specialist herdsmen like the Ahirs, Gowaries and the Banjaras. The Ahirs took the cattle for grazing into the forests and got wages from individual peasant households for doing the task. Their intimate relationships with the Gonds and others living in the forest were a result of these daily excursions. Russell notes that in Chanda, the Ahirs had developed intimate links with the Gonds. They not only employed Gonds to graze cattle but also admitted them within the Ahir caste. In fact, the origins of the Gowarie community of Chanda were traced to inter-marriage between Gonds Ahirs. In Mandla (Vidarbha region), villagers thought that Ahirs were not part of the Hindu community as they lived with the Gonds. (Prasad, 1994, Chapter-5)

The relationships of the Banjaras with the peasant and forest communities followed a different pattern. Edward Balfour, writing in the 1840s, described the Banjaras of Central India as grain merchants who carried their wares on pack oxen. They moved over long distances, traversing difficult terrain to get supplies that they took into districts where scarcity prevailed. Later, they also began supplying grain to the army camps acquired an important status in the political economy of the Central Provinces. (Balfour, Calcutta: 1844, p.2-3) The Banjaras made their living from the sale of salt and oil to forest dwellers and by transporting goods. Ethnographers have given instances of the Charans (bards) and the Banjaras carrying loads for the Rajput and the Maratha armies. (Cumberledge 1882; Col. Mackenzie, 1881; Russell and Hiralal, Vol. 2, pp.163-192). Their ability to negotiate thick forests and 'rugged' terrain made them indispensable to the rulers who relied on them to carry messages and arms. The British therefore often condemned them as robbers and bandits. They also regularly grazed in the forests and their nomadic tract spanned from Mirzapur in East Uttar Pradesh to Andhra Pradesh, with Central Provinces falling in between. Their utility to the peasant economy was minimal. Though they sold a few milk products to the peasants, they never grazed peasant cattle. This was done by the more "trusted" graziers and residents of the village, like the Ahirs and Gowaries, who were seen as members of low castes, but included in the system of exchanges within the village community.

30.2.3 Forests and Household Industry

While the movements of the pastoralists mediated the relationship between different local economies, the links between forests and urban centers were maintained by the mobility of the artisans. They ensured the development of wider linkages of forests with other economies. Let us consider those who made lac jewellery and toys. The craftsmen who worked with lac did not necessarily live inside the forest because upper caste peasants and craftsmen regarded lac propagation with superstitious repugnance. Therefore these craftsmen bought lac sticks from the Gonds, Korkus and Baigas. (Russell and Hiralal, Vol.3, p.122) The lac seed swarmed twice a year, in December and June. Labour for its collection was necessary in June-July for the *baisakh* crop and in October-November for the *kartik* crop. Thereafter lac was taken to the markets where the forest dwellers sold it to the craftsmen. The main lac market near Mandla was in Seoni where lac was in great demand. (Lac 1875, pp.85-86; Lac 1919, p.3.) After collection, stick lac was picked off the wood, and then the encrusted twigs and barks were placed in long cotton bags. These bags were heated and the lacquer gum squeezed from the sticks and mixed with clay and other materials to make toys and bangles. Since the best business for the Lakheras (artisans who made lac toys and jewellery) was during times of festival, so their income was seasonal. While their main markets were in small towns like Mandla and Seoni in Madhya Pradesh, they also sold bangles in the villages. The presence of lac artisans in the suburbs of towns and the mobility of the Korkus, Gonds and the Baigas to sell the lac, established complex linkages between the urban, agricultural and forest societies. The tribes found themselves at the lower end of these networks. They had to walk long distances to get to the markets and had to sell their lac at prices that the artisans were willing to pay. Within the social hierarchy the Lakheras – the artisans who moulded lac – were superior to the tribal Baigas. (Russell and Hiralal, Vol.3: 106)

Similar linkages between urban centres and forests were evident in the case of the dyers. The main dyers of the province were the Koshtis, Chippas, Nillars, Rangaris and Rangrez. They dyed threads and cloths in traditional colours, mainly reds and yellow got from the roots of trees like *al*, *kusum* and *rohun*. Resin was extracted by tree tapping, and in some cases, by pounding roots. James Forsyth (*The Highlands of Central India*, London, 1871) does not record whether resin or gum was extracted by the dyer or bought from the forest dweller. Rangrez and Rangaris wove silk-bordered cloths and dyed their own thread with lac or *palas* flowers. Since they abhorred manual labour, it is likely that they bought stick lac, and *palas* flowers from forest people. Apart from this, the *tussar* silk industry and the silk weavers were dependent on the collection of silk cocoons by Gonds. Silk weavers, like Koshtis bought cocoons from the forest communities and boiled them, and wound the tread on reels. Dyers used myrabolans flowers to produce blue or black colours, while red dye was extracted from lac. Other cotton weavers like Chippas, Nillars and the Rangrez also bought flowers of a similar kind to make dyes for cloths. These dyers did not necessarily develop close social relations with the forest communities. Those like the Koshtis lived in towns, enjoyed a good income, and exercised power in their relations with forest communities. But the reluctance of these artisans to go into the forest to collect their own resins also made them dependent on mobile forest dwellers. (Russell and Hiralal, Vols. 2&3) A similar inter-linkage between household industry and peasant economies could be seen in the area of iron smithy and rural engineering. Local iron ore smelters and craftsmen, especially the Agarias, mined iron ore (Central Provinces) in the forested areas, and

repaired the implements of both the tribal people and the peasants. They were also grain traders who supplied grains to tribal people in times of stress. (Elwin, 1944)

Thus we see that the forest economy was not a closed economy, nor was it an economy that revolved only around trees. Rather forests were part of a larger agrarian system that provided support services to peasants, pastoralists and artisans. Therefore changes in forest management had implications for all such groups in different localities and regions. Colonial interventions in forest and agrarian societies ought to be seen in this context.

30.3 FORESTRY AND THE COLONIALISM

From the middle of nineteenth century ‘scientific forestry’ was introduced in most parts of the country. One of the main aims of scientific forestry was to exert control over forests and ensure that forests were used for larger imperial interests. An expansion of railways meant a demand for timber for sleepers; and the forests had to feed this demand. The impact of this was particularly felt in the North Western Provinces, the Garhwal region with *deodar* and *chir* trees and Central Provinces with *sal* trees. The forested areas in Central Provinces were contracted out for felling of *sal* even before the formation of the forest department in 1864. During this period the colonial government successfully negotiated the lease of *deodar* and *chir* forests of the Tehri Garhwal kingdom and the annual profit from these forests increased over the years, and was about Rs. 1.6 lakh between 1910-1925. Similar deals were made with the rulers of Himachal Pradesh, Sikkim and the Central Indian states. The strategic value of India’s forests was enhanced in the inter-war period with 228,076 tonnes of timber being supplied to the specially created ‘timber branch’ of the munitions board, and 50,000 tonnes of fodder were supplied for military operations in Egypt and Iraq. Between 1914 and 1919 about 1.7 million cubic meters of timber was exported annually for military operations. Along with this the resin industry in Central India was a boon to the gun powder factories of France and America. (Guha and Gadgil, 1992, p.138) This vast scale of operations was not possible without the setting up of an extensive system of control and systematic exploitation of forest resources. In this Section we consider some of the principles of scientific forestry and the mechanisms by which they were implemented.

30.3.1 State Monopoly Versus Community Control

After the establishment of state monopoly over the forest areas under the Indian Forest Act 1865, the colonial state was in search of a more stringent piece of legislation to regulate the local use of forested areas. This need was fulfilled by the Indian Forest Act 1878, but there was a serious debate over the kind of control that should be exercised over the forests. Officials like B.H. Baden Powell argued that the state had an irrevocable authority on forest resources and any right granted to the people would only be a ‘privilege’ received at the ‘pleasure of the state’. This position refused to recognize the fact that the forest dwellers, pastoralists and agricultural communities enjoyed some customary rights in the forests and were therefore entitled to use these resources. This position, termed as the ‘annexationist’ position (Guha, *IESHR*, 27, 1, 1990) was based on the theory that all land which was not under cultivation belonged to the state and that all customary use was exercised at the mercy of the monarch. However this position was contested by the Madras government. The Commissioner of Madras argued that village woodlands were not village ‘privilege’ but village property, thereby inadvertently admitting that

the state had no absolute control over forests. The first Inspector General of Forests, Dietrich Brandis, tried to mediate between these two ends of the spectrum. While Brandis himself believed in the critical role of the 'village forests', and agreed with the Madras government that local people in India should have rights similar to the rights of a user in Europe. But he proposed an in-between position to reconcile the opposed arguments, suggesting that the rights in village forests should be exercised under the overall control of the state. So he advocated a restricted take over of forests by the State. (For greater details of the debate see Guha, *IESHR*, 27, 1, 1990, pp.65-84) However this position gave way to a centralized 1878 Forest Act.

30.3.2 Global Industrial Capitalism and Forest Diversity

It is true that the framework of forestry described above recognised timber and mono-cultures as one of the crucial elements of early-nineteenth century scientific forestry. (Rangarajan, Delhi, 1998; and Guha, Delhi, 1989) However by the late 1880s changing priorities of imperial forestry showed that this was no longer true. The importance of different types of forest produce in different periods reflects the nature of the changing forest management practices and their relationship with local people. In the mid-nineteenth century, especially after the formation of the forest department in 1865, forest produce was classified into major and minor forest produce. At that time the criteria of classification were based on the method of extraction of the product and its commercial value. Its commercial value was in turn established through demand in the world market. This was also reflected in the scientific interest of the foresters themselves in some of the medicinal plants, herbs and economically important products like *katha* and bamboo. This point was especially noted by Richard Tucker in the case of the Western Himalayas, where he showed that though the foresters of the region, had an intellectual curiosity for documenting non-timber forest produce, but had left its management to the market through the system of imposition of a low license fee for *katha* collection by the contractors, who in turn made big profits. However this whole system remained on the periphery of forest management till at least the 1920s. (Tucker, p. 478)

In contrast a much more proactive role of industrial capitalism and the market was seen in the forests of the Central Provinces. The first evidence of rising international demand for minor forest produce was seen in the rising prices of lac that had many industrial uses in America, England and Germany and the exported lac was often converted into shellac in these countries in the nineteenth century. (Prasad, 2003b) The initial attempts to modify the ways in which lac was propagated and new varieties of lac introduced, failed in the Central Provinces. The government noted that since the province was not capable of yielding lac of real value it was not worthwhile for the government to take up lac cultivation on its own. Therefore it was considered better if private agencies and contractors were given the right to propagate lac. (Prasad, 2003b) Thus the European managing agencies like Messrs. Jardine and Skinner were given the first contracts for forests of Sambalpur (presently in Orissa). The District Commissioner of Sambalpur, Bowie reasoned that, the "propagation of lac is only carried on by Gonds, Binjiwars and other jungle tribes who are poor and always require advances to survive. While they propagate lac the government can only give advances if it has the lease of the jungle. By taking a royalty, the interests of the government and the firm will be kept identical". (Prasad, 2003b) This official assertion of the compatibility of the Gond, official and industrial interests was one of the first steps towards the inclusion of Binjiwars into the world market. The royalty and advance were indicative of the presence of the European agencies in the forest

economy. The managing agency used their knowledge and technique to propagate lac and reap huge profits.

By 1919 the colonial government claimed that the methods used by the forest communities were inefficient for mass propagation. R.S. Troup contended that the methods of local lac propagation were inadequate in at least two ways: the expenses involved in searching for the lac bearing shoots and large quantities of lac are wasted due to the time taken to collect lac. (Troup, 1919, 225) The Forest Research Institute, where Troup worked, carried out lac experiments to see the extent to which these disadvantages could be minimised. But as Troup pointed out the experiments led to no conclusive results in the techniques for propagating lac. The ambivalent results, Troup felt, were a result of the fact that the experiments were carried out in the lower Shivaliks, a region distinctly unsuitable for lac cultivation. However he suggested some conditions under which lac cultivation could be carried out more effectively. The annual pollarding of lac trees, the growth of trees in an open position, and the need for thinning trees more regularly, were identified as some of the desirable steps to be undertaken. Troup and his team carried out experiments over ten years. They divided the forested tracts with trees of different girth and ages into strips and applied the lac worm at different times. At each time they recorded the amount of lac that they got from the tree. In this way they determined the ideal conditions for the harvest of lac. While these experiments were being carried out the Chief Commissioner of the Central Provinces proposed the introduction of machinery in lac cultivation. He felt that by introducing technological innovations in forests the production of lac could increase and the production process become more efficient. This would save the effort of watching the lac throughout the season, and confine the use of labour to the collecting process. He refuted the proposition that the employment opportunities of the Binjiwars and Gonds would be affected if this happened and instead stated that the measure would help tribal lac collectors to strike a better bargain with the representatives of managing agencies. In order to maximise production and assess the value of lac, several government sponsored experiments were carried out in the early 20th century. A number of techniques were tried to improve the quality of the seeds, minimize labour required and reduce the injury to trees. But the reported failure of all efforts, (according to the special lac officer), proved that the methods used by forest dwellers and the peasants were more effective especially in terms of their cost efficiency. (Madhya Pradesh Secretariat Records Bhopal (Hereafter MPSR), file No: 114, September 1920) Thus the European managers continued to incorporate local techniques for lac propagation within its system of collection and production.

One of the main reasons for this was the need for the continuous and rapid supply of lac and shellac to the European industry in the inter-war period. This period also saw a significant change in the nature of trade. While in the nineteenth century significant amounts of shellac was being produced outside the country, in the pre and inter war period some shellac producing units came up in urban areas on the hinterland. For example the Divisional Forest Officer of Bilaspur Division noted that a button and shellac company had been established in Champa by a European firm to reduce the charges of the middleman and save on freight carriage to Europe. (Best, *Indian Forester* 1912, 514) By the 1940s there were 35 shellac factories in Chhattisgarh that produced 16 per cent of the lac in the entire country. (*Provincial Industries Committee Report*, 1946, Nagpur, 1947, 67)

The influx of European capital in lac provided the forest communities with seasonal employment in the forest areas. The expansion of lac production created labour opportunities for the Bhumias and Gonds who started working for managing agencies like Jardine and Skinner. These opportunities were important for their survival in the wake of restrictions over forest use especially after the reservation of forests in 1878. The first adverse impact of this was seen on the inter-linkages between the artisan and the forest dwellers. The forest dweller started supplying lac to the agents of the European firm instead of the artisan. The leasing system created monopolies of managing firms over forests and labour, pushing out smaller lac artisans from the market. It also put tribal lac collectors at the mercy of European capitalist firms whose main interest lay in using cheap labour to propagate and export lac.

From the discussion above it is clear that non-timber forest produce was used as an entry point for initiating a process of selective integration of local society into the global capitalist system guided by imperial imperatives. And it was the same constraints that also unleashed two other trends in the Central Provinces. The first was the one where substitution of forest produce took place in industrial processes. The most prominent example of this was the dyeing industry of the Province where many natural dyeing methods were replaced by chemical dyes for foreign cotton and synthetic cloths. This led to a certain amount of 'deindustrialisation' within the local economy as pointed out by Tirthankar Roy. Another trend was the incorporation of local artisans into the Imperial system of taxation and production as seen in the case of the Agarias of the Central Provinces. These variegated trends however underlined one common tendency, i.e., the manipulation of local conditions to meet the needs of the world capitalist system through the colonial machinery. And it was this objective that ensured that not only timber trees but also the trees important for some of the so called 'minor forest produce' were preserved by the state conservation system.

30.3.3 Reordering Customary Rights in Forests and the Commons

Despite the valiant effort of the people like Brandis at the decentralization of forest management, it is possible to argue that such arguments for local institutional control over forests did not tamper with the basic structure of British Imperial forestry. In fact they created the basis for the restructuring of the local economy of forest use and its integration into the larger colonial economy. The case of the unique *nistar* or customary use rights in the Central Provinces proves the point adequately. The system of commutation used here made the state an active participant in the management of forest use. Under this system the unit of assessment would be the household. Each household was to make a small annual contribution to the government and in return earned the right to pick firewood and grass, but purely for household needs. Of course, the officials termed even this as a privilege, thus denying the household all its customary rights. (Prasad, 2003a) In this sense the provincial forest policy followed Baden-Powell's conventional position that recognised custom as a privilege and not a right that the local people could demand. At the same time Brandis' recognising that local demands were crucial to the survival of colonial control over forested areas was also acknowledged under the commutation system. Historians like Guha have often argued that Brandis was the father of current day participatory forestry that has characterised Joint Forest Management. (Guha, 1996) But the issues raised by the commutation system related to the definition of 'household needs'. In Chanda the district administration held that every village would be assessed at two *annas*

per household. This fixed rate would apply to the extraction of firewood and charcoal. In other words the people were allowed to take firewood, fuel and charcoal worth two *annas*. Other produce like *mahua*, lac and *harra* were fixed at a rate of three *annas* and an equivalent amount of this produce could be collected by households who chose to pay this sum. (Prasad, 2003a) Only firewood and fuel were considered essential for household needs and therefore the charges on them were fixed at a lower rate than other minor forest produce. This meant that a range of other produce for instance, ritual food such as liquor, *harra* and *mahua* - was considered a luxury. Within this limited view, the officials assumed that the needs of every household were similar and that the consumption followed a uniform pattern – both in terms of quantity and the kind of produce consumed. Whether the household contained 4 or 8 people, they were only entitled to 2 *annas* worth of fuel and firewood. By defining needs in this manner the state sought to regulate local practice by using the considerations of demand and supply and balancing them against the working and regeneration of forest produce so that long-term advantages could be drawn out of it.

Similar redefinition was done for the rights of the pastoralists whose movements were also controlled. The animals were to be divided into two classes: cattle belonging to agriculturists and grazing for agricultural purposes; and cattle belonging to professional graziers and traders. The first category was further divided into local privileged graziers and cattle coming from other localities. The cattle of professional graziers were classified as follows: agricultural cattle of peasants including milk cows for private use; milk cattle used for profits and other cattle used for profits by pastoral people. (Prasad, 2003a) A sharp separation was drawn between commercial and subsistence forms. However in actuality the creation of the grazing commons show that the nature of the grazing and milking activities was such that it was difficult to distinguish between commercial and subsistence needs. Such a divorce between the pastoralists and the agrarian society was also seen in the case of Punjab where officials clearly stated that cattle could only be grazed for domestic and agricultural purposes. (Bhattacharya, 1995) This type of restructuring was done to maximise revenue and suit the long-term colonial ends of controlling the entire agrarian economy and the forest laws were a crucial part of this game plan.

30.4 SUMMARY

This Unit has shown that the forests formed an integral part of the entire agrarian economy in nineteenth century India. They supported a large number of occupations to different degrees and the parameters of local forest economies overlapped with larger pastoral, artisanal and agricultural economies. We have seen that while the forests may have been the primary livelihood base of the tribal people, they provided important inputs to tanners, dyers, lac processors and even cattle breeders and pastoralists. In the process the forest dwellers came in contact with the fringe communities and developed relationships of co-operation and conflict with them. Thus the Binjiwars and Gonds sold silk and lac cocoons to the artisans and the Gonds were often hired by the Ahirs to graze some of their cattle. Similarly there was an exchange relationship between the Agarias and Baiga, the former receiving grains in return for the repair of Baiga sickles and axes. These types of relationships in fact signified a system that was inter-connected and open-ended in its nature. And it was the very mobility between different ecosystems and forms of resource use that allowed the survival of multiple forms of subsistence.

Scientific forestry as a “colonial watershed” has to be seen in the context of this open-ended and multi-occupational structure. It created a monopoly right of the state over forest land and resources, displaced the rights of the local people; and, restructured the local economy. The main aim of this restructuring was to alter the relationship between the local forest economy and global industrial capitalism in a way that yielded long term advantage to the colonial power. This aim was achieved by using at least three distinctive mechanisms that have been described in this chapter. The first was the institutionalisation of state ownership over forests despite some strong resistance from within the colonial regime. In fact, in practice, the plank of resistance offered by people like Brandis soon facilitated the incorporation of local skill, knowledge, and households into the project of global capitalism. The second was the modification of customary use practices according to colonial needs. This had a particularly adverse impact on the life of the pastoralists. And finally this Unit has shown that the selective integration of the local forest economy along with the skills and local knowledge base of the forest produce collectors into global industrial capitalist system led to an adverse impact on the local artisanal economies from the late nineteenth century onwards. The introduction of these three factors, however, also meant that the application of scientific forestry was conditioned not only by Imperial imperatives, but also by local and regional factors, the interplay of which determined the variegated nature and impact of colonial interventions in India.

30.5 EXERCISES

- 1) ‘Early colonial policy was governed by commercial rather than conservation needs.’ Comment.
- 2) In what sense were the forests critical for the survival of peasants and artisans?
- 3) What is ‘scientific forestry’? Examine the impact of scientific forestry during the colonial period.
- 4) Discuss the customary rights of forest dwellers. In what ways were these modified as a result of colonial intervention?

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UNIT 31 DEMOGRAPHIC CHANGE AND AGRARIAN SOCIETY IN COLONIAL INDIA

Structure

- 31.1 Introduction
- 31.2 Sources
 - 31.2.1 Early Census
 - 31.2.2 Limitations
- 31.3 Question of Population Growth
 - 31.3.1 Mortality and Fertility Trends
 - 31.3.2 Age Structure of the Population
 - 31.3.3 Sex Composition of the Population
- 31.4 Regional Variations
- 31.5 Demography-Society Interrelations
- 31.6 Summary
- 31.7 Glossary
- 31.8 Exercises
- 31.9 Suggested Readings

31.1 INTRODUCTION

The population of India according to the latest census in 2001 has been estimated at more than one billion. Indians today account for 16.5 per cent of the world's population and this is expected to increase for the next five decades before a period of population decline begins. This Unit attempts to study the history of demographic change in modern India to understand the changing trends in population size, the determinants of population change and finally its relation to the country's economy.

Population change can be explained by three basic demographic factors: births, deaths and migration. Expressed as an equation (called the Balancing Equation in demography) this may be written as:

$$P_t = P_0 + B - D + I - E$$

Where P_0 is the initial size of the population

P_t is the terminal size of the population

B, D, I and E denote the number of births, deaths and in-migrants and out-migrants between the two dates.

An excess of births over deaths will increase population whereas the reverse will result in population decrease, assuming migration to be constant. In the Indian context the proportion of migrants to the total population of the country was very small and therefore of little demographic significance for the country as a whole. Thus we

need to look at mortality and fertility trends to understand the changing trends in modern india's population size.

31.2 SOURCES

The English East India Company and then the British Crown, generated unprecedented quantities of information in the course of their efforts to conquer and rule India. In this study of long term demographic changes in India we will base our reconstruction primarily on colonial government sources as they constitute the only set of sources that are even approximately comparable over a long period of time.

Numbers have commanded respect for possessing certain inherent putative attributes- objectivity, comparability and very importantly, a promise of accuracy. Historians have (or should have) a healthy suspicion of sources. The need is to take the supplied official sources as partial statements of reality and then deploy clearly stated and transparent methods to correct them. This chapter therefore describes and corrects the demographic and economic data that are used for telling the story of Indian fertility in past times.

31.2.1 Early Census

The two main sources that provide us with demographic information for the colonial period are the decennial censuses and the annual vital registration reports. Maligned and overused in equal measure, the Census has been the most definitive and widely used source for demographic studies of the sub-continent. The first census of the entire country was conducted by the British in 1871-72. This has been followed by subsequent enumerations every ten years – even Britain cannot boast of this unbroken record, having had to skip the 1941 census. Historians of India and elsewhere have produced a fairly large corpus of literature contextualising colonial sources of information in terms of the changing ideology and mechanics of imperial domination. One of the best and early critical discussions of the Indian census was by Bernard Cohn. Cohn pointed out that the Indian census was not merely a neutral tool for information gathering. The classificatory logic and form of the census in turn created conditions for new strategies of caste and status mobility and electoral contests. Numeric information was an ideal form of expression for the colonial state. It elided differences of language, history, economy and society. At once it allowed the maddening complexity of India to be made comprehensible through numbers. That the colonial state felt was relevant at that particular point in time. In a similar vein Appadurai argues that the census allowed the “The huge diversity of castes, sects, tribes, and other practical groupings of the Indian landscape ... [to be] rendered into a vast categorical landscape untethered to the specificities of the agrarian landscape.” (Appadurai, 1997, p.327) He goes on to claim that “This unyoking occurs in two major steps, one associated with the period before 1870, in which issues of land settlement and taxation are dominant colonial projects, and the other with the period from 1870 to 1931, the period of the great All-India census, in which the enumeration of human populations is the dominant project. The period from about 1840 to 1870 is the period of transition from one major orientation to the other.” (Appadurai, 1997, p.327) The purpose here is not to discuss at length the processes that went into the construction of colonial categories for social analysis and ordering but merely to emphasise that the tools of colonial social and economic information gathering need to be located in the context of changing colonial perceptions, which in turn were related, though not always in clearly straightforward ways, to the varying demands of the colonial enterprise of imperialism.

The need for a census of India was felt by the English rulers much before the first census of India that was finally conducted in 1871 and 1872. A number of provinces had conducted population enumerations in the first half the nineteenth century but these were not planned in tandem with other English administered territories. Probably the first census in India to classify the enumerated population by sex, age, caste and dwelling units was Henry Walter's 1830 census of Dacca city. Though a number of provincial and local enumerations were carried out in different parts of the country in the second half of the century before 1871, the census of the North West Provinces taken on the night of 31 December 1852 with a reference date of 1 January 1853 was the first census conducted on modern lines. In 1849 the Government of India directed provincial governments to conduct quinquennial population enumerations on the lines of those carried out in the North West Provinces by revenue officials. The Board of Revenue in a circular to all collectors, asked them to follow the North West Provinces' pattern with due attention to local specificities while conducting the proposed quinquennial censuses. Madras was the only Presidency to have implemented this directive in full.

Following the Board of Revenue order Madras carried out four enumerations in 1851-52, 1856-57, 1861-62 and 1866-67. The fifth quinquennial census was merged with the Imperial all India census of 1871-72. The quinquennial enumerations and the subsequent census figures suggest plausible and comparable rates of growth. The first all India census was planned to be conducted in 1861 but had to be postponed to 1871 owing to the Rebellion of 1857 in the north and straitened financial circumstances for the government. The aggregate population figures from 1871 appear quite consistent and reliable.

The first census of India was not carried out simultaneously in all places. While it was conducted in November 1871 in Madras, Mysore and Coorg and Burma, it could be carried out only in 1872 in the Central Provinces, Bombay, North West Provinces and Bengal.

Since then the census has been conducted every ten years. Political problems have in certain years forced the government to either abbreviate the scope of the census (1941) or omit certain areas (eg. Assam and Kashmir in 1981 and 1991, respectively).

This study uses the colonial censuses from 1871-72 and the vital registration statistics to reconstruct colonial India's demographic history. A brief note on the strengths and limitations of each of these sources will be in order.

31.2.2 Limitations

All the post 1871-72 censuses were synchronous – i.e. carried out simultaneously everywhere – population enumerations. Table 3 below gives a tabular view of the subjects enumerated in each of the censuses between 1881 and 1981. Two censuses of the colonial period require special mention. The 1931 census was the last census for which caste or more accurately *jati* data was published. It has gained notoriety for its changed method of recording age and smoothed age distributions, which has made the published age figures non-comparable with earlier and later census, age distributions. In this census in contrast to earlier practise, the “age at next birthday” was recorded in place of the earlier “completed years”. Nationalist agitation was another factor that militated against this enumeration. Further, the Sarda Act (1929) also led to inaccuracies in the age returns of unmarried girls: since child marriage became illegal, women's age was overstated during marriage to avoid possible penalty.

However this problem attracted many a demographer to unsmooth the smoothed distribution though none can claim complete success.

One important development in the context of the 1931 census was the Indian Fertility Enquiry of 1931. This enquiry “was not a part of the general census enquiry and was not covered by legislative enactment. It depended largely on how far district, Municipal and Local Board officers were prepared to assist.”¹ This incomplete but most useful survey suggests significant class and caste specific fertility patterns.

The financial exigencies of the Second World War forced the government to drastically abbreviate the published report and tables in 1941. The straitened circumstances also led to a change from household enumeration schedules to individual slips. However, the individual slips were retained and this enabled a subsequent 2 per cent sample, often referred to as the Y-Sample after the Census Commissioner Yeatts, providing detailed age specific information on nuptial status and occupation and industry. Caste data for all individuals was recorded for the last time in 1941.

After independence the recording of caste except in cases of Scheduled Castes and Scheduled Tribes was stopped. A provisional list of Backward Classes was also prepared by this census. Since 1951 post-enumeration checks were made regularly after each enumeration to check for accuracy. Changes were effected in economic classification.

One important administrative change was that with the passing of the Census Act in 1948, the census was recognised as a single permanent organisation under the Ministry of Home Affairs under a Registrar General who was also the *ex-officio* Census Commissioner for India.

Indian census data has been plagued by the problems not so much of under-enumeration but age-sex selective undercounting and the poor quality of age reporting.

In many parts of India unmarried girls of marriageable age were not counted. Again, we find that most Indians reported their age wrongly and the reported age data suffered from serious problems of digit-preference and age-heaping. The unreliability of Indian age data has been corrected by using a variety of smoothing techniques, but this further reduces the robustness of indirect estimates of mortality and fertility based on Indian census age-distributions.

The second basic demographic data base for this study is the annual series on births and deaths published by the government. This report was known as the *Report of the Sanitary Commissioner*. Subsequently its nomenclature changed to *The Report of the Director of Public Health*. In the post independence years, these statistics at the district level were published in the annual series known as the *Vital Statistics of India* which became available from 1958.

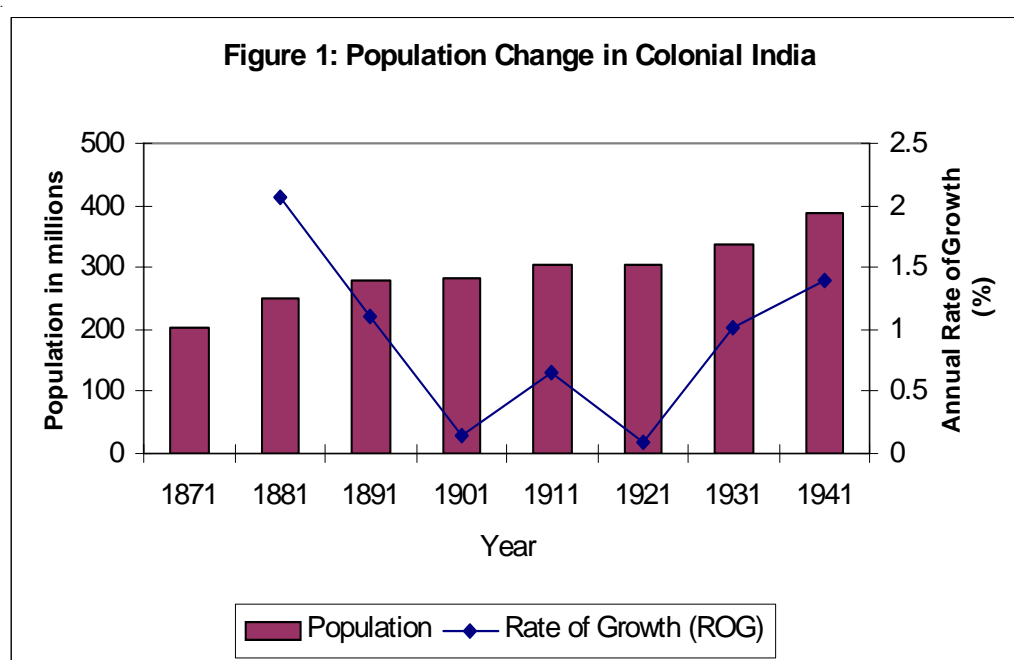
After suitable corrections are made in the level of the reported vital statistics they provide an invaluable source not in making precise demographic projections but in charting the changing trends of annual fertility and mortality movements.

¹ Census of India, 1931, vol. Xiv, Madras, Part I p.146 cited in Dwarkanath Ghosh, “The Indian fertility enquiry, 1931” (paper presented at the 2nd All-India Population and 1st Family Hygiene Conference, 1938).

31.3 QUESTION OF POPULATION GROWTH

Let us look at the decennial trend of population growth. Figure 1 charts the trends in population size and the growth rate of the population from 1871 to 1941. In absolute terms, population grew steadily over the period, increasing from 203 million in 1871 to 389 million in 1941. But the rate of growth shows a different picture. The highest rate of growth is registered for the decade between 1871 and 1881 despite severe famine mortality in Mysore (1877), Madras (1878) and Bombay (1876-77). The growth rate for this period has been spuriously inflated by the better coverage in 1881 relative to 1871-72. Central India, Rajasthan and Punjab which accounted for 3 million people in 1881 were not counted. Further, even in areas that were covered by census enumeration an estimated 12 million people escaped counting.

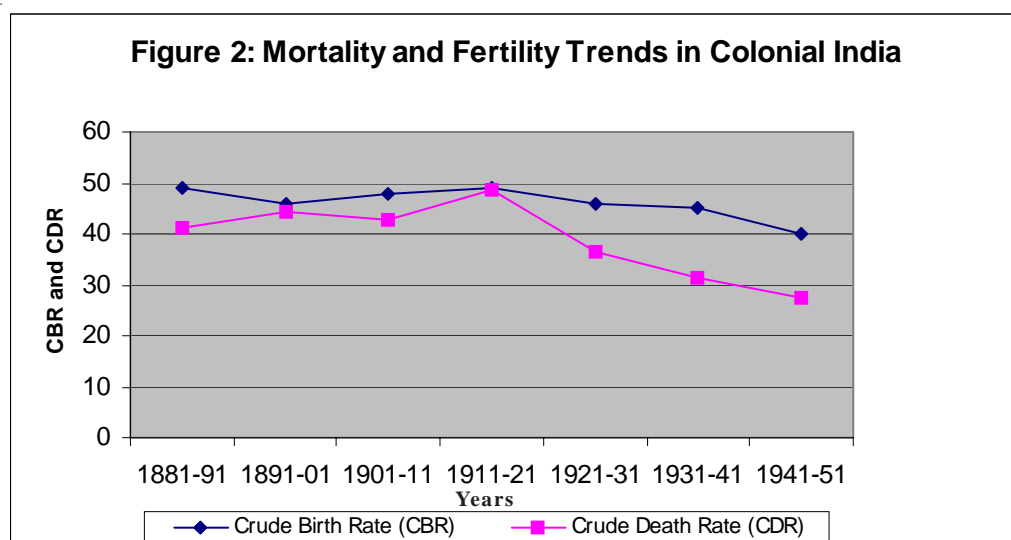
From 1881 we find that the absolute size of the population increased slowly till 1921, but the annual rate of growth (ROG) showed a clearly declining trend till 1921. After 1921, the growth rate exhibited a rapid upward trend.



This brings us to the question of why population growth in India showed a marked increase after 1921. To answer this question we look at two sets of determinants: demographic and non-demographic. Going back to the Balancing Equation on page 1 we know that population change is the result of changes in births, deaths and migration. The proportion of migrants to the country's total population was as small as 3 per cent? And showed little change across time. This very small proportion of migrants permits us to discount migration as a substantive factor in population change and treat colonial India as a closed population. On taking migration out of the Balancing Equation we are left with births and deaths as the most important variables explaining the course of India's population history. A sustained excess of births over deaths will lead to population increase whereas continued excess deaths or frequent incidence of large excess mortality will result in population decline or stagnation. These demographic variables (fertility and mortality), it must be kept in mind, influence one another and are closely related to a variety of non-demographic influences. Let us first describe the trends in mortality and fertility and then try to explain their varying levels and direction.

31.3.1 Mortality and Fertility Trends

Ideally annual mortality and fertility data should be taken from the vital registration series. The high degree of incompleteness in Indian historical vital registration data does not permit this, forcing us to depend on indirect census based estimates of mortality and fertility. However, the incomplete registration data, indirect census based estimates as well as intercensal growth rates all confirm high mortality till 1921 followed by a marked secular decline. The above mortality and fertility curves show that the fertility-mortality differential sharply increased in the post-1921 decades. A continued excess of births over deaths thus clearly explain the rapid growth in India's population after 1921. Figure 2 shows that fertility continued to be high throughout the period of the colonial censuses whereas mortality declined sharply after 1921. Infant deaths formed a large part of total deaths. The infant mortality trend moved in consonance with the CDR (Crude Death Rate) trend.



Mortality

What explains this marked mortality transition in India? The more popular explanations highlight the reduced incidence of famines, epidemics and lethality of endemic diseases due to improved communications, irrigation, public sanitation and health care in the post 1921 years. These explanations can be found in the works of Kingsley Davis (1951), S.N. Agarwala (1973) and Leela and Pravin Visaria (1983).

Davis suggested that famines were controlled through development of roads, railways and irrigation by the British, and Modern medical advances checked epidemic diseases. To explain the reduction of famine mortality and intensity in terms of irrigation is questionable. In the first forty three years of the twentieth century the country did remain free of any major famine. However, the percentage of irrigated area to total cultivated area increased only marginally from 20 per cent in 1901 to 23 per cent in 1930. Improvement in communications is also an inadequate explanation for controlling famines. Better communications can reduce the risk and intensity of famine by ensuring more stable food supplies. This in turn will get reflected in the variation of food prices in the country. However, famines recurred repeatedly in the years up to 1900. For the period 1865 to 1900 the coefficient of variation in the prices of wheat and rice fall from more than 40 per cent to nearly 20 per cent. If this massive decrease in price variation could not prevent famines it is difficult to argue that a subsequent fall in this index by about five percent could stop famines. (Guha, 2001)

Leela and Pravin Visaria ascribe the slow rate of population increase up to 1921 to high mortality that was “primarily related to waves of epidemics.” It is true that epidemic and endemic diseases were major killers in colonial India, but what remains unexplained is why these diseases suddenly lose their lethal power in the 1920s.

It is true that famine and epidemic mortality greatly reduced in the post 1921 period. If this cannot be ascribed to economic improvement or improved health care, then how is this conundrum of India’s mortality transition to be explained?

Ira Klein explains the falling trend in mortality in terms of a change in the host-parasite relations that invested the Indian population with greater immunity to diseases. This interesting thesis, in turn, has been refuted by Sumit Guha on the basis of an examination of age-specific death rates. If the immunological explanation is correct then we should see differential improvement in mortality by age-group, but this is not so. (Guha, 2001)

Guha, then goes on to explain the mortality decline in terms of reduced fluctuations of foodgrain output after the second decade of the twentieth century which is explained by more stable rainfall in the 1925 to 1950 period relative to the years between 1900 to 1925. Guha associates this reduction in the marked volatility of food production with the human host’s increased ability to resist potentially lethal diseases. It may be pointed out here that volatility in monsoon precipitation once again showed an increasing trend in the post independence years. This increase not being accompanied by worsening mortality may be explained by increased state intervention. The colonial mortality transition can be ascribed to the blessings of the rain gods only if we hold constant the minimalist intervention of the colonial state in matters of agriculture and food security. Shiela Zurbrigg, also emphasises the close interrelationship between nutrition and disease exposure. (Delhi, 2001)

From 1921 or after the influenza pandemic of 1918 the crude birth death rate began on a course of secular decrease.

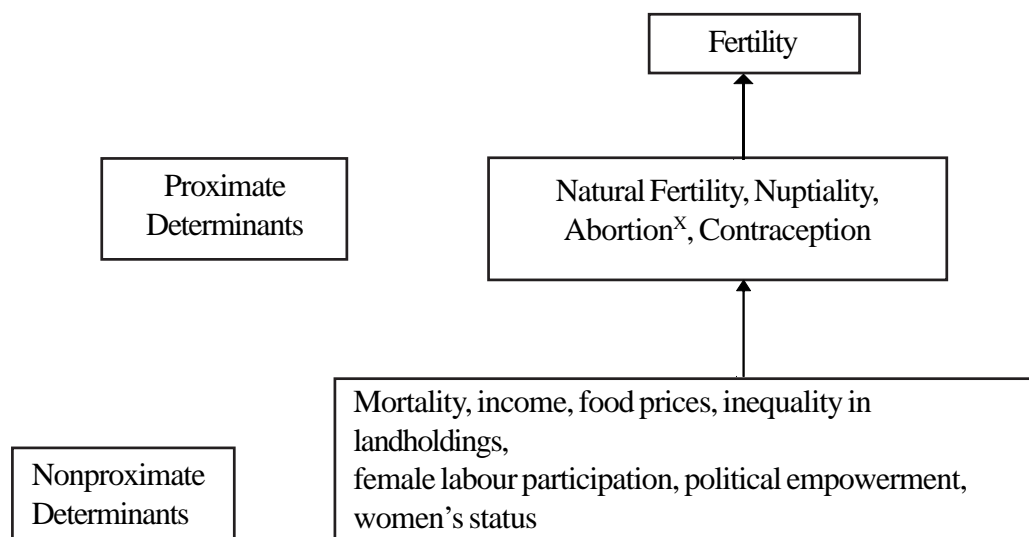
Fertility

This brings us to the other main determinant of population size – fertility. In demography fertility refers to the number of live births expressed as a proportion of the total population (Crude Birth Rate), population of women (GFR), per woman (TFR) etc. There is general consensus that India has had high fertility, though the recorded levels are much below the biological maximum of human population. Drawing upon Bongaarts’ useful model, fertility is seen as the outcome of proximate and nonproximate determinants. The proximate determinants for which time series data are available for the entire period of the study, are natural fertility and nuptiality¹. Even for nuptiality, the data are not annual but available only at the time of the decennial census. The second group of variables, that Bongaarts categorised as nonproximate determinants of fertility are those that affected fertility *via* the proximate determinants, such as mortality, income, food prices, inequality in landholdings, female labour participation, political empowerment, women’s status.

The chart below provides a schematic view of the determinants of fertility that are studied here.

¹Nuptiality literally means – relating to marriage. When nuptiality (proportion of married women in a population) is high population increases.

Figure 3: Determinants of Fertility



^x Abortion has not been analysed for lack of quantitative information.

Demographers had in earlier discussions viewed pre-transitional populations as characterised by uncontrolled high fertility. Louis Henry presented his concept of ‘natural fertility’ based on his family reconstitution of Crulai in Normandy in 1953. Henry initially defined natural fertility as legitimate or marital fertility that was unchecked by either contraception or induced abortion. Henry defined ‘natural fertility’ as “fertility of a human population that makes no deliberate effort to limit births.” (Louis, 1953). Subsequently (1961), he refined it to “fertility in the absence of parity-dependent birth control....”

There has been a large amount of work on the biological aspects of human fertility and the biological maximum is supposed to be fifteen live births per woman. However, even ‘natural fertility’ societies have experienced fertility levels much below this maximum. The difference between total fertility and total fecundity in ‘natural fertility’ regimes can be explained largely by the ‘exposure to risk’ which is governed primarily by the length of sexual partnership, eg. marriage and lactational infecundability.

Studies of natural fertility in India have estimated the natural fertility to be low in the pre-transitional period at six births per woman in the 1930s increasing to seven and nine in the 1970s and 1980s with improvements in healthcare. Sriya Iyer includes widowhood as a one of the depressants of natural fertility in India. However, Henry’s two definitions and subsequent use of the term seems to exclude widowhood as a determinant of natural fertility; the latter being more related to the broad category of nuptiality. (2002)

Estimating the level of natural fertility in india for the historical period in terms of lactational infecundity, post partum amenohrrea, coital frequency, etc. Is simply not possible in the absence of data. We next come to the other proximate determinant of fertility that is nuptiality. Although the annual vital registration series did not collect data on marriage, the decennial census does provide us with data on marital status by age. This permits estimation of the proportion married by age and the mean age at marriage.

Figure 4: Proportion of Married per thousand Females and Mean Age at Marriage

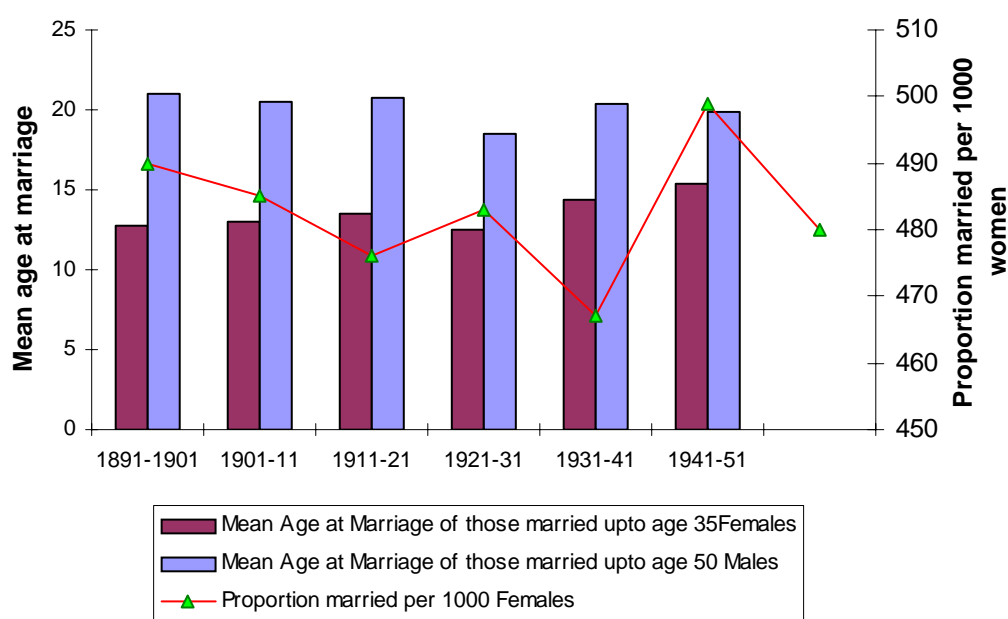


Figure 4 above shows the mean age at marriage increasing marginally from around 13 years to 15 years for girls between 1891 and 1951. This marginal change in the age at marriage at the all-India level can be safely assumed to have had no great affect on fertility. Similarly, the mean age at marriage showed a small downward trend between 1891 and 1941 with a spike in 1931, that was probably caused by increased marriages to circumvent the Sarada Act.

Thus despite nuptiality showing a small decrease, fertility continued to increase possibly due to the increase in natural fertility. Small increases in the age at first marriage for very young women do not alter fertility significantly. Widowhood also contributed to keeping the fertility level much below biological limits. At the all-India level the near universal incidence of marriage, absence of contraception and the low age at first marriage contributed to high fertility. According to Thomas Malthus, population is regulated by two kinds of checks – the “preventive” and the “positive”. The preventive check which mainly operated through delayed marriages and celibacy was of small significance for India as a whole whereas the “positive” check operating through increased mortality and diseases was much more significant.

Mortality apart from periodically lowering population size also worked in tandem with fertility. Fertility responded to mortality in two ways: First by “replacement” and secondly by “hoarding”. Replacement refers to a process by which a live birth replaces a dead child. Hoarding, on the other hand implies having more births than needed in order to attain an expected family size, given the expectation that some children would die. Thus, in the course of demographic change over time, we find that high and volatile mortality pushed up fertility often after the period of crisis ended. After mortality began on its course of decline, fertility continued to remain at pre-mortality transition levels resulting in steep population increases as was witnessed in India till the 1980s.

31.3.2 Age Structure of the Population

Next, we come to the age-structure of the population. The age-distribution of a population is primarily determined by fertility and secondarily by mortality. The Indian age pyramid unlike that of advanced industrial countries has a very broad base and a very narrow top suggesting that a large proportion of the population is young.

Figures 5a and b clearly show that the age distribution remained remarkably stable with

Figure 4a: Summary Age Distribution-Males

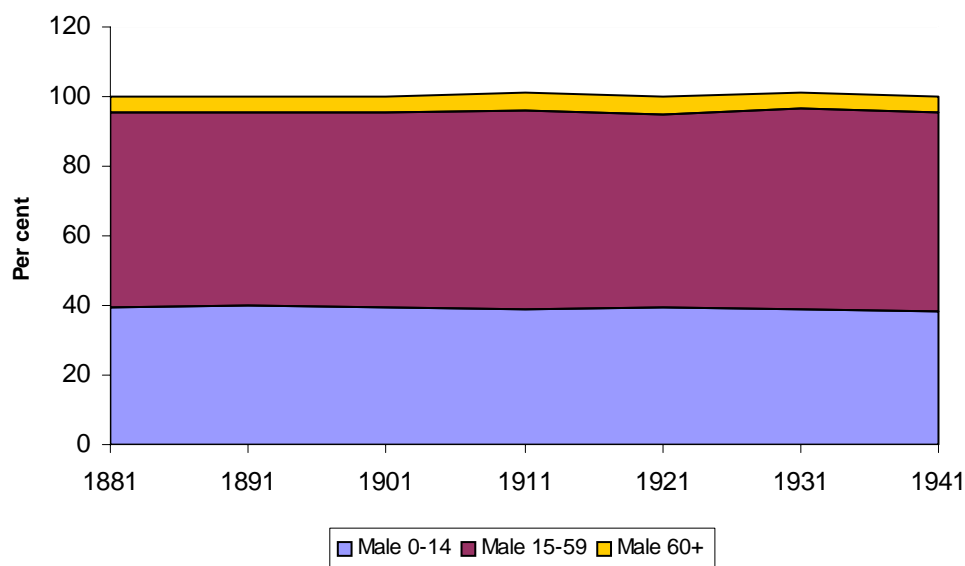
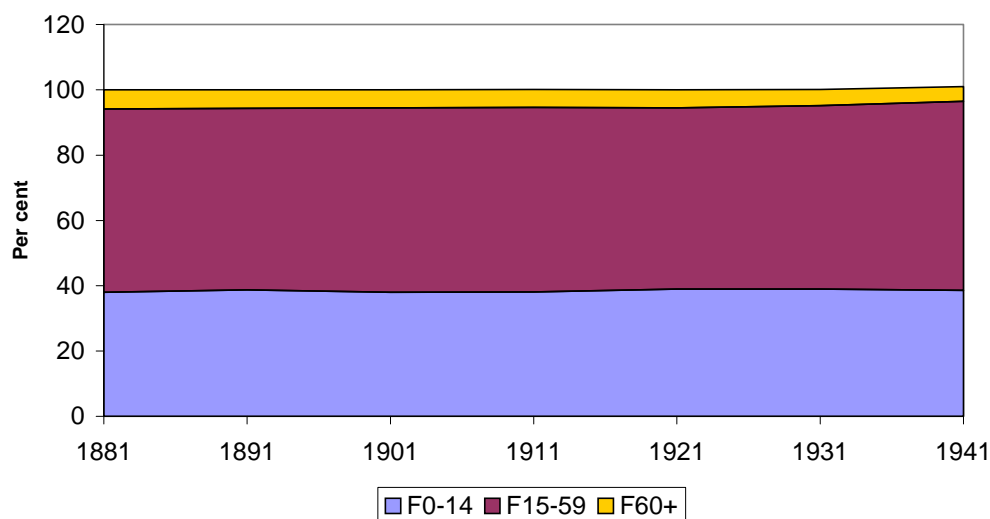


Figure 5b: Summary Age Distribution-Females



a large and virtually constant proportion of young people. In a closed population as that of India's, the large proportion of children points to high levels of fertility. The age distribution also suggests a high dependency ratio. Further, the youthfulness of the population also ensured a continued population momentum that would last beyond the onset of fertility decline.

31.3.3 Sex Composition of the Population

We now come to sex-composition of the population. The sex ratio at birth usually falls between 1040 to 1070, internationally. In other words 104 to 107 male babies are born for every 100 female babies. On the other hand male mortality is also generally higher than female mortality in the older age groups. Despite this, India has exhibited a continuous

decrease in the proportion of women. This is explained by lower life expectancy at birth for females. This all-India trend however does not hold good for many parts of India as we shall see in our discussion of regional trends.

Table 1: Sex Ratio, Life Expectation at Birth and Dependency Ratio

	1871-1881	1881-91	1891-1901	1901-11	1911-21	1921-31	1931-41
Sex Ratio	1040	1042	1037	1047	1056	1062	1069
Dependency Ratio	79.1	79.8	77.6	77.4	80.1	76.1	75.1
e0 Males/e0 Females	0.93	0.96	0.98	0.97	0.93	1.01	1.02

Notes: Sex Ratio-Male population per 1000 females; Dependency Ratio: Population aged 0 to 14 years and above 60 years per 100 people between ages 15-59, e₀ males/e₀ females: Life expectation at birth for males divided by life expectation at birth for females.

In terms of demographic variables we can conclude with confidence that the population of India grew slowly from 1871 to 1921 largely because of the mortality check despite high fertility. In the post 1921 years up to the 1980s fertility remained high but mortality declined leading to rapid population growth and resulting in a very young age population. Women fared badly in terms of mortality relative to men throughout our period.

This fairly simple story of colonial indian demographic history becomes very much more complex when we study demographic variables in relation to social institutions and economic change. Demographic variables such as mortality, morbidity, nuptiality, sex ratios and fertility are not exogenously determined variables. They are predicated on a host of institutions and conditions that are influenced by context specific patterns of social and economic change. To study these linkages we are compelled to look at smaller and more homogenous regions for otherwise we lose sense specifics at levels of aggregation as large as india.

31.4 REGIONAL VARIATIONS

British india was a creation of the colonial state premised on political and administrative considerations. Stretching from the himalayyas in the north to the tropics in the south, and from the deserts in the west to the deltas of the east, british india was formed by the differential incorporation of pre-existing peoples, polities and institutions into a new colonial state. Generalisations for an area as varied as india with its many constituent regions and sub-regions conceal a number of regional and sub-regional particularities. This necessarily compels us to disaggregate the various component regions and zones within colonial india to get a more nuanced picture.

Population increased in the pre-mortality transition period (1871-1921) at an average annual growth rate of 0.37 per cent for india as a whole.

Table 2: Population Increase, CDR, CBR and Sex Ratio

	1871-1921	1921-1941	1871-1921	1921-1941	1891-1921	1881-1941
	Annual ROG (%)		Average CDR		Average CBR SR	
East Zone	0.52	1.37	46.7	46.65	53.4	1025
West Zone	0.14	1.3	42.1	46.45	54.5	1077
Central Zone*	0.47	1.29	31.3	46.35	53.7	1031
North Zone	0.19	1.25	47	42.95	47.3	1122
South Zone	0.47	0.92	33.65	33.95	41.3	985
All India	0.37	1.22	45.85	43.25	49.4	1050

Source: Based on Visaria and Visaria (1983).

* Data suspect, ROG, CDR, CBR and SR refer to rate of growth, Crude Death Rate, Crude Birth Rate and population Sex Ratio respectively

In the next period (1921-1941) the growth rate sharply increased to 1.22 per cent for the country. On disaggregating the country into five geographical zones: East, west, central, north and south, we see that the first period the central and south zones exhibited the highest growth rates. However in the subsequent period, a marked reversal took place. The south zone now showed the lowest rate of population increase.

The fertility and mortality estimates in table 3 should be taken as best as indicative and in no way can they claim any accuracy. What the figures do suggest is that mortality acted as a major check on population increase. South india fared much better in the pre 1921 period with relatively high growth and a lower level of mortality. There again seems to be a clear connection between high mortality and high fertility. In terms of the sex composition of the population, except for the south zone, and the east zone (in 1881 and 1891) the country as a whole registered an excess of men over women. Further, as the experience of the south zone points to, regions with a longer history of relatively lower fertility and mortality, appear to have attained fertility transition earlier than those that experienced longer periods of high mortality and fertility.

31.5 DEMOGRAPHY-SOCIETY INTERRELATIONS

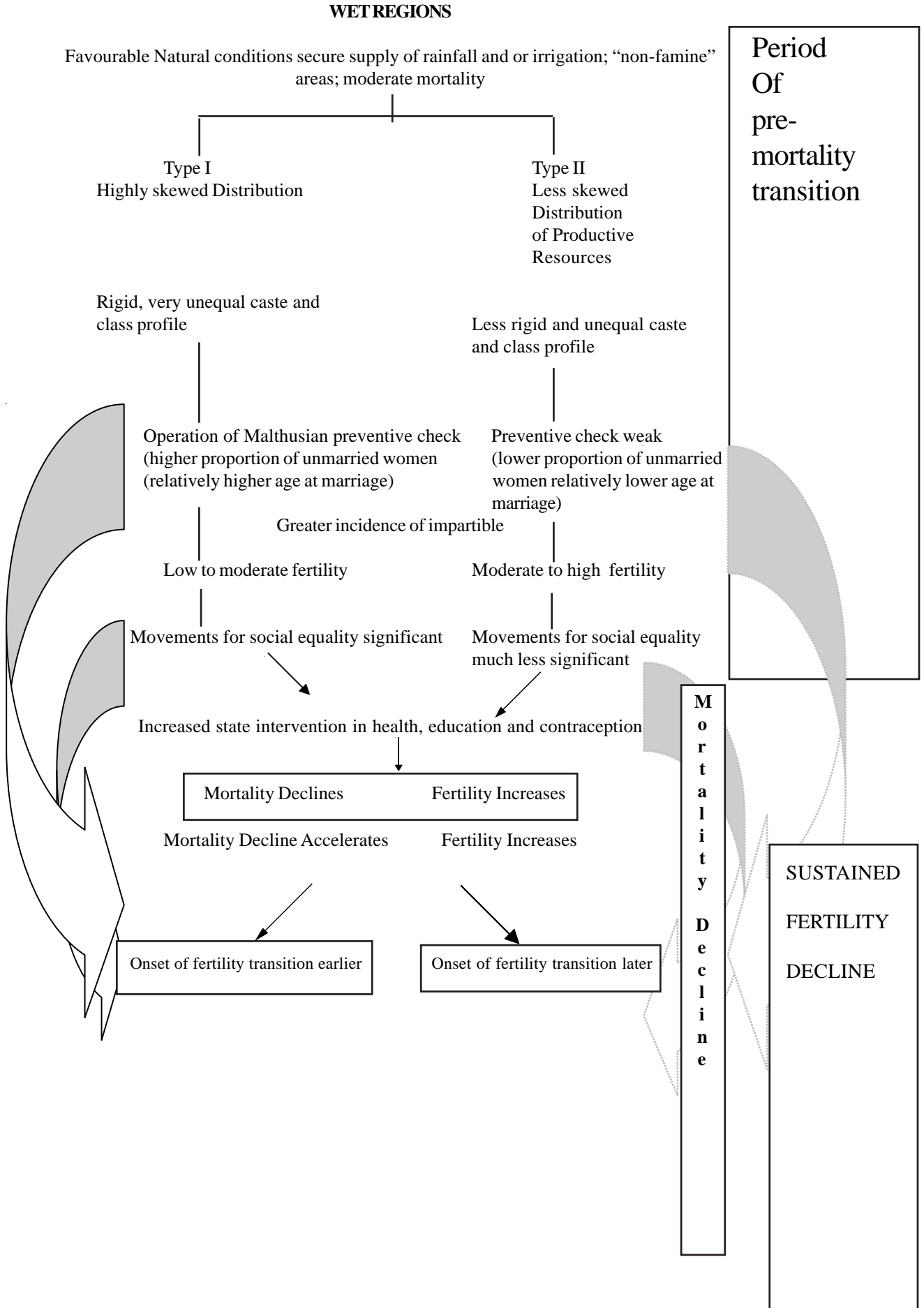
When confronted by questions such as why did the south zone have more women, or why did mortality increase till 1921 to fall subsequently or why did the age at marriage vary across regions, we have to look to changing social institution and economy for explaining the observed demographic phenomena.

While many social scientists initially conceptualised population as an exogenous factor in social change, demographers have increasingly come to recognise the close interrelationship between demographic and social variables.

In the indian case there have been some works on demography that have used data from the past. However, when resort is made to social structures of historical vintage, such as kinship systems, female autonomy in explaining fertility outcomes, these determining structures are seen as static systems. Recognition of historical contingency requires the viewing of these systems or structures as being subject to change at different rates through time. Social scientists try to explain a variety of phenomena in terms of a dependent variable that can be understood by resort to a set of explanatory variables. In the context of demographic change, extant research has argued for determinants ranging from cultural practices, to women's participation rates in the labour force to literacy. The problem with this approach is that when it is applied to a data set comprising socially and historically diverse component groups, the assumption being made is that the same relationship should hold good for each of the constituent groups. In the process contextual specificity is given short shrift.

Let us take two different demographic regimes to illustrate the varied ways in which demography and society and ecology relate to each other. Most regions of india in the colonial period can be described as high mortality-high fertility regimes. The exception to this was the moderate mortality-moderate fertility regime. While "dry" regions were characterised by the first type of demographic regime, the "wet" regions registered a greater incidence of the second type of regime. This division into dry and wet ecotypes is entirely schematic.

Figure 5a: schematic of Representation of Demography- Society Interaction



DRY REGIONS

Unfavourable Natural conditions- insecure supply of rainfall and or irrigation; “famine” areas;
high mortality; significant variation in mortality

Less skewed Distribution of Land
Less rigid and unequal caste and class profile
Geographically restricted boundary of labour circulation and commodity circulation.

Preventive check weak
Operation of positive check
(lower proportion of unmarried women
relatively lower age at marriage)
Weak influence of high Hinduism

High fertility

Movements for social equality much less significant

Increased state intervention in health, education and contraception

Mortality Declines Fertility Increases

Onset of fertility transition later

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The schematic diagram above tries to capture the differences in the structures, processes and demographic outcomes in the wet and dry regions. Demography in a sense is the most basic of social processes – the very process of biological reproduction on which is premised social reproduction. The extant social relations in the form of institutions based on prevailing configurations of economic, political and cultural power crucially impact upon the significance of the demographic variable. Thus, for locating the significance of the demographic variable and its determinants and outcomes, both trends and conjunctures need to be examined closely.

Agriculture was the key variable in the political economy of the India. Trend rates of change in all crop yields continuously stayed ahead of population between 1891 and 1946 except for the years 1936-1946. However, foodgrain output failed to keep pace with population increase from the decade 1911-1921 up to 1946, ironically the period when famines largely disappeared. The severity and the frequency of malevolent famines sharply fell. There were no major famines during the first half of the twentieth century. However this is not to say that these were years of great prosperity. Scarcities, associated price hikes, endemic diseases and epidemics continued to take their human toll. Further, the economic growth of these years benefited regions and classes very unequally. In areas with high levels of agricultural commercialisation and a large section of the population (landless wage labour or poor peasants) dependent on the market for their food supplies, a sharp price hike usually resulted in heightened mortality. This section of the population was most vulnerable to 'slump' famines where a failure of entitlement was caused by shrinking employment, which occurred during years of lowered rainfall. High and volatile mortality led to short-run falls in conception rates followed by increased fertility. Generally, in such insecure agro-economic zones high fertility accompanied high mortality. Risk insuring social institutions were also not significant. Further, in the absence of high levels of inequality in landholdings and a small landless labour force coupled with a near absence of non-agrarian employment, access to education and migration, and movements for egalitarian change were not significant. In this context when mortality started declining fertility continued to remain high. Access to new technologies of health and contraception and ideologies of development failed to spread among the bulk of the rural population, making the reach of increased state intervention in the years after independence very limited.

Wet regions, on the other hand behaved very differently. In the pre-transition mortality phase, though they were largely safe from monsoon failure and ensuing famines, the steep social incline made the economically weaker agricultural workers and marginal peasants vulnerable to price hikes. However, the population of these areas were not ravaged by the repeated general famines. In many of these wet regions sharp social and economic contradictions resulted in powerful movements for class and caste equality in the 1920s and 30s. Though these movements *per se* did not have demographic outcomes, by raising popular empowerment and strengthening popular institutions at the village level, the population of the wet regions were in a better position to demand and utilise the increased intervention of the post colonial state in the field of health and education. This greatly contributed to the continued mortality fall and the somewhat earlier onset of fertility decline.

The lower mortality, greater agricultural security, lower sex-ratios and somewhat lower fertility and higher age at marriage in colonial southern India in relation to the country as a whole, are features of long duration. These traits have been recently rediscovered as determinants of the accelerated fertility decline in parts of India; however, they seem to stem from a social and economic structure specific to many

regions in South India that was already manifest during the colonial period. The contemporary differentials in the spatial distribution of fertility and nuptiality largely continue to follow earlier patterns. States and districts that have made major reductions in fertility in the contemporary period also happen to have been areas of relatively lower fertility in the past with distinct social and economic structures. By highlighting these trends and characteristics we hope to emphasise that the demographic transformations have to be studied over time paying attention to both historically conditioned and regionally varying structures and agency.

31.6 SUMMARY

On the basis of the decennial censuses conducted by the British we can reconstruct the demographic history of the colonial period. The figures in the census have problems, but if we interpret them with care and correct some of their biases, they give us a broad picture of changes within the population. If we look at these figures, the long-term trend becomes fairly clear. Seen in absolute terms, the population grew steadily from the late nineteenth century. The rate of growth (ROG) however fell between 1881 and 1921 and increased after that. It is clear that fertility rates did not go up, but mortality rates declined, leading to population growth. This chapter considers all the possible determinants of this increase. If we shift our focus from the general all India trends to the regional patterns, we discover interesting variations. This chapter looks into some of these contrasts, and suggests a broad difference between the demographic regimes of wet and dry zones.

31.7 GLOSSARY

Age Heaping	Age heaping occurs because many people round their age up or down to the nearest number that ends in 0 or 5. When the ages are graphed, the distribution is not smooth; instead, there are heaps over the ages ending in 0 and 5.
Age-Specific Fertility Rate	The number of births per woman within a specific age interval during a specified time.
Crude Birth Rate	Crude Birth Rate is the number of births per 1000 of population
Crude Death Rate	Crude Death Rate is the number of deaths per 1000 of population.
Digit Preference	Demographers have shown that people exhibit preferences for ages having certain terminal digits. This is referred to as digit heaping. For example, single-year-of-age data shows a strong preference for ages ending in "0," with somewhat lesser preferences for ages ending in "5," "2," and "8." Conversely, these data show negative preferences for ages ending in "9," and "1" (Shryock et al. 1971, p. 204).
e_0 males & e_0 females	Life expectancy at Birth is denoted by the e and subscript 0 = e_0
GFR (Gross Fertility Rate)	Number of births of women per 1000.

Lactational Infecundity	When the woman is breast-feeding her fecundity goes down.
Smoothed Age Distributions	Age fluctuations reduced by using statistical techniques.
Total Fecundity	Biological ability to produce.
Total Fertility Rate (TFR)	The total number of live births a woman would have on average, if she were to live to the maximum age.

31.8 EXERCISES

- 1) What were the limitations of the data in colonial censuses?
- 2) Discuss the changing pattern of mortality-fertility curves during the colonial period.
- 3) Examine the question of population growth in the colonial period.
- 4) To what extent famines affected the population growth in the colonial period?
- 5) Why did fertility growth behave differently in dry and wet regions?

31.9 SUGGESTED READINGS

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UNIT 32 TRIBAL SOCIETY AND COLONIAL ECONOMY

Structure

- 32.1 Introduction
- 32.2 Defining the Pre-Colonial Tribal Economy
- 32.3 Nature and Patterns of Colonial Domination in Tribal India
- 32.4 Tribal Economies in State Owned Agricultural and Forest Lands
- 32.5 The Colonial Impact and Tribal Response
 - 32.5.1 From Producers to Labourers
 - 32.5.2 Modes of Protest and Identity Formation
- 32.6 Summary
- 32.7 Exercises
- 32.8 Suggested Readings

32.1 INTRODUCTION

Marshall Sahlins, the famous American anthropologist, once called the tribal society, which he said was characterised by hunting and gathering, as “the original affluent society” or the society of plenty. By this he meant that the people practising this form of subsistence could live a prosperous lifestyle from the bounty of nature and accumulate wealth in the form of gifts, grains and livestock to build and expand their economies and societies. This image has also been replicated in Indian historiography, which has often used the trope of happy, prosperous, stable and harmonious tribal society in pre-colonial India in its work. In this broad historiographical context, the study of the encounter of the tribal society with the colonial economy is ridden with examples of devastation and destitution of tribal people with the advent of the British. Generally speaking, there has also been a tendency to regard colonialism as both, an economic and ecological watershed in the history of tribal economies. While this is true at a very general level, historians differ on the nature of the colonial impact.

In this Unit we discuss the nature and different dimensions of the colonial impact on the tribal economy. Though the term ‘tribal’ is a highly contested one, in this Unit it is used to refer to people who were dependent, for a large measure, on the forest economy, for their subsistence from the early 19th century onwards. This means that even if they possessed land and were engaged in cultivation, a large part of their seasonal income was from forests either in terms of the sale of non-timber forest produce, or labour for the forest department. Many of these tribal people lived inside or on the fringes of the forest and their dependence on forests is also a result of a long term historical process which we consider in this Unit.

32.2 DEFINING THE PRE-COLONIAL TRIBAL ECONOMY

It has often been assumed that tribal people and their societies lived in insulated and secluded enclaves before the advent of the British in India. This means that their economies and culture was relatively untouched by outside markets and

therefore were relatively closed, egalitarian and prosperous communities. These economies were free of exploitation because they had no private property and need rather than the profit motive necessitated their relationships of exchange. In one sense the tribal economy was characterised as being quite the opposite of peasant agriculture under the colonial rule where the peasants held individual titles to land, depended mostly on settled cultivation for their livelihoods and also sold a good part of their produce in the commercial market. But the historical evidence from many of the areas show that such a notion of the tribal economy in the anthropological writings of the 1930s was steeped in ecological romanticism.

In pre-colonial central and northern India one of the main factors that had an impact on both identity and subsistence was the military conflict between ruling elite in both the Maratha and Mughal periods. The chieftain societies of different tribes like the Gonds or the Khakkars or Jats also participated in these conflicts. At the same time the tribals who were peasants and or gatherers in the forests were forced to support their own chieftains and therefore formed bands in forests and formed an important part of the chieftains mercenary army. In this context it is important to remember that the term “tribes” has been used very loosely for communities which existed in a “pre-class society”. The definition of tribes as “a pre-class society was implied in the work of D.D. Kosambi *An Introduction to the Study of Indian History* who stated that band and hunting gathering societies were characterised by relations that were determined by birth and marriage and not necessarily economic activity. However Kosambi was also quick to point out that these relations were open-ended and changed according the situation. In keeping with this definition many communities that were later described as peasants by Britishers were termed tribes by the accounts of the medieval period. Chetan Singh’s early article (1988) on the role of tribal chieftains in Mughal administration clearly identified warrior and ruling classes of indigenous kingdoms as superior tribal linkages. Amongst these were the Jats, the Khakhars, Baluchis and Afghans. In this vein, the chief feature of their society was not only their blood and kinship line of descent but also their pastoral and non-sedentary occupational characteristics. In a later article (1995) Singh is however more categorical about the mention of hunters and gatherers as primitive people. For example he writes of their references in Abul Fazl’s *Akbarnama* where tribal people were described as ‘men who go naked living in the wilds, and subsist by their bows and arrows and the game they kill’. He also argues that the medieval texts show that in the case of tribals like the Gonds ‘that people of India despise them and regard them outside the pale of their realm and religion’. Such an identification of tribals as outside the realm of the sedentary cultivation was contingent upon the development of a system of land administration which was an important characteristic of the Mughal 16th and 17th centuries and British regimes of the 19th century. Before that the British perceptions of tribes were conditioned by their own contingencies. For example the Anglo-Maratha conflicts of the 18th century led to descriptions of the Gond chieftains as the ‘lords of the rugged hills’ and their subjects as people who were prone to anarchic behaviour and ‘habitual depredations’. Some of these depredations were described as ‘ravages of lawless tribes’ who assisted the errant and ‘chaotic’ rulers. We see similar perceptions of the tribes on the northeast frontiers of the British Rule. Writing about the eastern Naga tribes in the early 19th century Captain Michelle (1826) said that the Nagas carried on the most profitable trade in slaves and suppressed all *ryots* in their

neighbourhood. The greed of gain caused endless feuds between villages and tribes. Similarly K.S Singh's account of the Jharkhand tribes also shows the wide ranging changes within the tribal society and economy in the pre-colonial period. There was a spate of migrations and cultural influences in the early medieval period and this resulted in several conflicts between the tribal and non-tribal people in the region. Similar trends were also noticed in Orissa where the migrations by caste Hindu communities led to an increase in their conflict with tribal people. However, in both these areas it is also mentioned in studies of pre-colonial tribal polities that the tribals enjoyed a special place within the larger structure of governance.

On the economic front, tribal polities were, open-ended in that they had relationships with the larger political economy. Perhaps the most striking example of this is from Jharkhand where *zamindars* tied up with traders from Bengal for sale of lac and silk cocoons, one of the main forest produces of the time. There were state-owned forests which were the property of the *zamindars* and where the tribals gave free labour in return for their rights to forests. K.S. Singh's account of the Chhotanagpur Raj shows that the role of the tribal *zamindars* and rajas in ordering and structuring the economy was an important one. Even while the tribal aristocracy gave the local residents the rights to use the forest for their needs, the commercial appropriation of forestlands continued and strengthened the hold of the traders over non-timber forest produce.

In this context the examples that I give below show how land grants and rights and the nature of forest cover influenced forest rights and use patterns in the late pre-colonial and early colonial period. In *zamindari* and *jagirdari* tracts sub-feudation formed the basis of relative autonomy of control over forest and land resources by local institutions like tribal *panchayats* or headmen. However there were emerging relations of dependence between the local traders and tribal gatherers of forest produce. The value chains that emerged out of Hunter's descriptions (*Statistical Account of Bengal*, volume xvi-xvii of forest for Singhbhum, Manbhum and Hazaribagh districts) show that these were of three kinds. First, there was the use of the non-timber forest produce for household purposes. The jungles of the Chhotanagpur plateau were dominated by the sal, asan, palas, mhowa and amla trees, of which sal was the most prominent specie. The main produce in mid 19th century was recorded as lac, silk, bee wax, dhaura or sal resin, leaves and roots. Of these flowers, leaves and roots were also used to supplement the diet of marginal and small cultivators. They also proved to be the sole food that people had in times of famine. Apart from this mhowa was used for making toddy and for ritualistic purposes. Both commercially and culturally important trees and produce were often owned by the *zamindar* and the most prominent amongst these was the mhowa tree. Mhowa flowers were used by tribal people to make their liquor and also in marriage and other ceremonies. The *zamindar* collected rent for collection of mhowa seeds and flowers from these trees even if they stood on the lands of the tribal farmers. In Hazaribagh 2 or 3 small mhowa trees came for a rupee where as in Manbhum one large tree cost the same amount of rent. The nature of rent in Manbhum depended on the kind of trees and ranged from 4 *annas* to 2 or 3 rupees per tree. The saved crop could also vary much in price and fetched from 2 to 8 maunds of mhowa per rupee, but the exchange with the mahajans was mostly in kind. They usually gave 3-4 *ser* of rice and some salt for one maund of mhowa. The *mahajani* system was also dominant in the trading

of lac and silk cocoons, and the profits in this trading were quite high even though the propagation of their cocoons required a high degree of knowledge and competence. The tussar silk cocoon of Hazaribagh, Manbhum and Lohardaga was reared on the asan tree and its eggs were collected from the jungle and hatched either in the growers house or in specially erected huts in the jungle. The system of taxes on the silk propagators differed from region to region. In Manbhum every silk cocoon rearer paid Rs. 2 or 3 to the landlord. It is estimated that the landlord collected 300 pounds a year from such rent and the annual estimated produce was about 750 maunds from 1000 acres of land. In Lohardaga, the silk growers paid three types of taxes. In Hazaribagh on the other hand the silk growers paid 6-8 *annas* to the *zamindar* and the area on which silk was reared was not more than 30 square miles with not more than 5 to 6 asan trees in an acre. This system of rent ensured that the tribals became dependent of traders for advance payments so that they could pay their rents. In Hazaribagh the middlemen supported the silk growers who were mostly Santhals, Kurmis or Goalas while they were watching the cocoons in the forest. Consequently the growers were obliged to sell their cocoons to these middlemen at abysmally low rates. The value addition to the cocoons was mostly at the level of small towns and urban cities. There was hardly any export of silk cloth from the region and most of the weavers sold their cloth in urban areas or in local *haats* (periodic markets) through the *mahajans*. (Tirthankar Roy, 1999)

As in the case of forests, the domination of tribal aristocracy over the peasants continued even in the case of agriculture. For example in the Ahom kingdoms of Assam the Raja considered plough cultivation as the path to progress and facilitated the immigration of Tai-Ahoms who used the plough as opposed to the *jhum* cultivation (shifting cultivation; an age old traditional practice based on 'slash and burn' method of cultivation) of the Chutiya and Kachari tribes. But the structure of taxation was different, instead of monetary taxes the tribals gave slave labour to their rulers. Much of this labour was used to cultivate 'good land' and *kheda* operation (literally pens or stockades; an enclosure constructed to capture wild elephants for domestication) for elephant capture. These tribals did not plough their lands, instead they had developed an indigenous bunding technology, and used hoe to cultivate local coarse rice. But the system of land management and cultivation was such that it required the maintenance of community assets. (Amalendu Guha, 1987) But not all tribals practised *jhum* and some like the Jaintia practised a combination of *jhum* and plough cultivation depending on whether they lived on marginal areas or not. Though there are many examples of such land revenue extraction from Northeast India, the forms of tribal landholdings varied from one region to the other. An example of this can be seen in the constitution of agricultural co-operatives and guilds in Cachar where tribals and non-tribals co-operated with each other in production processes and the land was under the control of these guilds. The rest of the land, not under these guilds belonged to the king and the state and was given out as land grants to the tribal and non-tribal aristocracy. (J.B. Bhattacharjee, 1987)

In the eastern region of Orissa the situation was slightly different where the ex-tribal Chieftains and Rajas of areas like Bonai and Keonjhar had brought caste Hindu cultivators to settle on better lands. The immigrants were taxed more heavily than the tribal people because tribals were considered the original inhabitants of the region. (L.K. Mahapatra, 1987) The situation was similar in

the territories of the Bhonsale Raja in Nagpur State where the Gonds were not tenants or people with land grants like the Brahmins and other castes. They were people who cultivated land at the pleasure of their chieftain as is reflected in the piece of iron given to him every year. Access to land and forest was thus, a result of a privilege granted in return for assistance whenever the ruler required it. Serving in the Gond Rajah's army or providing labour as farm or domestic servants were forms of this assistance. (Archana Prasad, 1999) In the neighbouring areas of the Kondmals, the Konds lived in the highlands while the Oriyas lived in the plains. But the Oriya Rajas left the Konds to their own devices and Kond institutions and resource use patterns co-existed with Oriya ones. (F.G. Bailey, 1960)

What is clear from the examples that I have related above is the fact that the tribal economy was not *closed* nor was it *isolated* from the rest of the pre-colonial political economy in almost all regions of the country. The idea that it was prosperous and egalitarian is also not true, rather the tribal economies of the pre-colonial era were deeply differentiated and depended on the expropriation of the labour of poor tribals for their labour. This differentiation was a result of waves of immigration and consolidation of fiefdoms from the late ancient and early medieval period onwards. The agro-pastoral systems that emerged were subjected to wide-ranging changes where tribal people were continuously marginalised into lands with low productivity. The impact of this process was however conditioned by a certain amount of autonomy for local institutions as well as a mobility between different eco-zones. These two crucial factors allowed the tribal people survive the turmoil of the late pre-colonial period. This autonomy and mobility was constrained in the colonial period.

32.3 NATURE AND PATTERNS OF COLONIAL DOMINATION IN TRIBAL INDIA

Given the vast expanse of the Indian subcontinent, the penetration and impact of colonialism variegated in nature. The first area to face British annexation was undivided Bengal and this was followed by Madras, Punjab, Assam and the Central Provinces. Different land tenures were introduced in these areas, and these tenure systems also had a differential impact on rights to forests and other common lands. For most part the British government declared most common resources and lands to be under the exclusive ownership of the state especially with the coming of the Indian Forest Act 1865. Similarly the late 19th century saw the enactment of the Private Forests Acts and Rules in several states where forests lay in *zamindari* estates. In these the nature of forest rights granted to tribal people was different and its implication for the integration of tribal economies into the colonial system was different from one where the government had direct control over land and natural resources. These differences led to diverse types of impacts on and protests from tribal people. They also had a variegated impact on the identity politics of the regions. In this Section we consider some of the processes and impacts from different regions of the country.

Permanent Settlement and the Tribal Economy

Many of the tribals of Eastern and Central India resided in the princely and zamindari estates in the period preceding the annexation of these areas by the British. The first permanent settlement of *zaminidaris* in tribal areas was done

in 1793 after the annexation of Bengal. Of the permanent settlement areas, Midnapur, Santhal Parganas and Chhotanagpur plateau had the largest tribal populations. Apart from this there were the areas of Orissa where a bulk of the *zamindaris* and princely states were settled after annexation in 1803. Most of these *zamindaris* were under forests that were slated for land reclamation in the early 19th century after the establishment of the Company Raj. (K. Sivaramakrishnan, 1999) Ranchi, Manbhum and Singhbhum experiencing vigorous expansion in the *zamindari* areas where as Hazaribagh and Palamu had reached a stagnation point. It is significant to note that the only British territories lay in the districts of Hazaribagh and Palamu and most of the forest and mineral wealth of these regions was in private hands. (P.P. Mohapatra, 1990) Two types of trends could be noted within the *zamindari* systems of these areas. On the one hand there were the landlord villages where the *zamindar* enjoyed all rights over wastelands and jungles, and on the other hand there were the *khutkutti* villages, or villages where agricultural lands were held jointly by the founders of the villages. These founders paid nominal tributes to the *zamindars* and they also enjoyed exclusive rights over jungles and wastelands. There was also another system of rights over jungles called *Korkar* where ordinary rent paying tenants also had some customary usufruct rights in forests and the exclusive rights to reclaim wastelands. Thus the forests, on which a major portion of the tribal subsistence was dependent by the early 19th century, were in private hands with 79% of the village commons being under private control in undivided Bengal. Similar trends were also found in other areas of Permanent Settlements like Orissa. Here 66,000 square miles was permanently settled and 5000 square miles was directly under British control. Here tribals were largely concentrated in the States of Jeypore, Bonai, and Keonjhar. Some of the only major tribal areas under British control were the Kondmals and Sambalpur after the 1830s. But unlike Jharkhand most of these areas were under a single Oriya or tribal Raja who did not follow a system of sub-feudation. Rather they gave land grants to a number of Kshatriya and Brahmin people and the tribals were mostly landless labours in these princely states. With the coming of the British these states were reduced to status of *zamindaris* that owed a tribute or had to pay rent to the British. The settlement procedures were prescribed by the Britishers and created a land market in the tribal *zamindaris*. There was thus the emergence of a rich peasant class of Bengalis who exploited the tribal people for labour. (Biswamoy Pati, 1993) Similar patterns were also found in the tribal *zamindaris* and princely states of Bastar, Central Provinces and Western India. (Nandini Sundar, 1997, Sumit Guha, 1999)

Land settlements were only one mode of resource control in tribal *zamindaris*, the second was management of forests and nonarable land. Tribal *zamindaris* were mostly situated on foothills or highlands of thickly forested areas. While it is true that a large portion of this area was demarcated for cultivation before the mid-19th century, most of the jungles were privately controlled in most of these regions. This meant that even while the British government prescribed the rules by which forests were to be worked, the primary benefit from these forests accrued to the *zamindars*. In some cases the value of these forests was quite high and the produce such as honey, silk, lac, and timber had the potential of yielding good revenue. The exploitation and trade in forest resources increased rapidly especially after the coming of the Railways. In Chhotanagpur for example Hunter records that trade of sal timber was controlled by the local

mahajans who sold them to the forest department for a large profit. Officials often noted that the Government derived virtually no benefit from the forest sector, the major portion of which was appropriated by the *mahajan* who only paid a small royalty to the *zamindar* for the use of his land.

But it was in the case of non-timber forest produce that the tribals were most exploited. In Manbhum middlemen paid Santhals, Bhumijis, Kharias, Paharias and other lower caste people advances to rear cocoons. These cocoons were sold at the price of 213 cocoons to a rupee and were then exported to Bengal. In 1871 the silk exports were estimated at 10,000 pounds. In Lohardaga district the cocoons were sold to the traders for Rs. 5 to 7 per maund and exported to Mirzapur, Benaras, and Patna. In Hazaribagh the middlemen support the silk growers who are mostly Santhals, Kurmis or Goalas while they were watching the cocoons in the forest. Consequently the growers were obliged to sell their cocoons to these middlemen at the rate of Rs. 5 or 6 for 1680 cocoons. The *baniyas* in turn sold these cocoons to the *mahajans* for Rs 5 for 1330 cocoons. Then these cocoons were exported to Burdwan or Gaya at the price of Rs. 15 per 1000, if the cocoons were sold to the Tanti *baniyas* then the rate was Rs. 5 for 80 cocoons. The Tanti *baniyas* are basically weavers who take out the thread from the cocoons and weave them into small pieces of silk that they sold to the *mahajans* at Rs. 8 and 8 *annas*. The value addition to the cocoons was mostly at the level of small towns and urban cities. There was hardly any export of silk cloth from the region and most of the weavers sold their cloth in urban areas or in local *haats* through the *mahajans*. (Tirthankar Roy, 1999) In the case of lac the system was a little different as the lac was not only collected from Jharkhand but also brought from the Central Provinces to Ranchi (till the late 19th century) by the *mahajans*. It was then processed in the Ranchi Lac Factory before stick lac was exported out of the region. But whatever the variations in the system of exchange and value chains, the *mahajani* system occupied a central position in the tribal areas of colonial Bihar and Orissa. Further it was not only confined to the non-timber forest produce trade, but was also evident in agriculture and other spheres of life. The sharp contradictions and differentiation between the local tribals and outsiders underlined the class contradictions in the permanent settlement regions. (Prabhu Mohapatra, 1990 K.S. Singh, 1985) This conflict took the form of various uprisings that have also been well documented in the past by several scholars. (K.S. Singh, 1985, Susan Devalle, 1992)

Apart from the growing impoverishment of tribal people there was one other feature of the colonial *zamindari* economy vis-à-vis its relationship with the Empire. The British often used the forests as a site of exercising their power and control. In forestry too, attempts were made to acquire private forests and enact a Private Forest Bill but these attempts failed quite badly. At best the *zamindari* forests could be administered under Section 38 of the Indian Forest Act. (B.B. Sinha, 1979) In Central Provinces too, Rules were framed for controlling private forests and Forest mahals were constituted for doing this. All private forests were to ban shifting cultivation and carry out felling in accordance with the Indian Forest Act. In Bengal too, the 1890s saw the direct control of the forest tracts in the permanent settlement areas where the British forest department started working the forests instead of giving them on contract. The process of reservation to be followed was the same as that of government forest tracts and shifting cultivation was to be banned. By the turn of the century, the British Forest Department had also imposed its writ over princely states

like Bastar. (K. Sivaramakrishnan, 1999, Nandini Sundar, 1997) These measures cut off the only source of subsistence for the poor tribal people, many of whom had migrated from government forests into the zamindari areas because the zamindars allowed them to do shifting cultivation. Thus by the 20th century the difference between Government owned lands and the permanent settlement areas declined considerably and the impact of this on tribal life and subsistence was disastrous.

32.4 TRIBAL ECONOMIES IN STATE OWNED AGRICULTURAL AND FOREST LANDS

Perhaps there is no better example than the Central Provinces for describing the sorts of changes that affected the tribal areas on agricultural and forest lands that were directly controlled by the British Government. The annexation of the State of Nagpur in 1854 saw direct intervention in the agrarian system by the colonial regime. This meant that the principals behind both settlements and forest rights were guided by concerns of revenue maximisation and administrative convenience. The debate on the settlement question in the 1830s reviewed the permanent settlement experience of Bengal and Orissa and decided that Munro's *ryotwari* settlements were more appropriate. The thirty-year settlement was thus seen as a good substitute for Permanent Settlement. It would induce a feeling of security amongst proprietors without giving them a permanent control over their holdings. Thus individual land rights were given to cultivators whose revenue was assessed every 3 years so that the government would be able to get the maximum revenue for itself. The rights of local households over grazing and forests lands were also defined by the land settlements that initially based themselves on Maratha land records. This naturally meant that most tribal people with the exception of Gonds hardly got any land or forest rights since their rights were never recorded in the late pre-colonial times. Coupled with this, the state declared itself the owner of all forests under the Indian Forest Act 1865 and made a stringent classification of forestlands under the Indian Forest Act 1878.

In this context there were broadly three processes of colonial expansion that impacted on the tribal people. The first was the process of reclamation of lands for cultivation that led to severe land alienation amongst the tribal people of the Central Provinces and Kondmals of Orissa. However patterns differed in both these areas. In the Central Provinces tribal people were pushed into more and more marginal lands. This had a direct impact on the status of the aboriginal tenants in the districts like Chanda, Mandla and Bhandara where 80% of the Gond tenants were classed as peasants with some form of debt or the other. One third were categorised as very poor where as only 20 per cent of the Gond peasants were free from debts. The Baigas had no land at all and faced indebtedness and hunger. The settlements of the 1920s had shown that the average size of tribal holdings was declining more and more. This made the tribals more and more dependent on labour, as they could not pursue any other occupations because they were 'educationally and politically backward'. (W.V. Grigson, 1944) By the first quarter of the 20th century the government was forced to enact the Central Provinces Tenancy Act to prevent the alienation of tribal lands. In the Kondmals the situation was different as shortages in land led to migration of Konds in order to search for labour to meet their daily

needs. Many of them went of to work in mines, tea gardens and other places. (Bailey, 1960)

The second major factor influencing the patterns of tribal livelihood was the complete ban on shifting cultivation in government forests. It is well known that the poorest tribal people depended on different forms of shifting cultivation for a large part of their nutritional needs. But with the government take over of forests and the ban over this form of cultivation the tribals were once again forced to depend on labour for their livelihood. In some areas like the Central Provinces, they migrated to *zamindari* areas where they were allowed to practise this cultivation form till the late 19th century. (Archana Prasad, 1998) However it is important to remember that this ban was dictated by the strategic needs of the colonial Empire. Thus in Assam the shifting cultivators in the border areas were not disturbed. However in the inland area there were tribals who provided important labour opportunities to the forest department, the *taungya* system was introduced where tribals were allowed to practise *jhum* in a limited way. But this modified the *jhum* cycle irreparably and led to the further pauperisation of tribal people. (Bela Malik, 2002) At a different level the labour shortages due to migration also led to the colonists giving some limited rights for shifting cultivation in Central India. (Archana Prasad, 1998)

The third major process affecting tribal economies was the penetration of industrial capitalism in forested areas. Here the focus was not only on felling of timber but more importantly on the non-timber forest produce which formed an important supplementary part of tribal income. The rise in the world demand for minor forest produce led to the influx of European capital into forested areas and changed the very nature of production relations. The case studies of lac and tan show that the supply of raw materials to the artisans got curtailed because tribals started selling forest produce to the foreign firms. This was especially the case in the case of lac and dyes in Central India. The collection of lac sticks and flowers for dyeing was an important seasonal occupation where tribals had established links with artisans. The interference of the managing agencies in these sectors not only weakened this link but also facilitated the incorporation of local production processes in a colonial division of labour. Scientific experiments were carried out to either test the social and technical validity of local knowledge and techniques (as in the case of iron) or to justify the colonial domination of markets (as in the case of dyes). This was accompanied by the lack of initiative to invest in the upgradation of local techniques. The incorporation of local methods of extraction of minor forest produce was conditioned by the logic of colonial industrial capitalism. Tribal and artisan communities were now providing cheap labour and raw materials to the European industry. (Archana Prasad, 2002) The process of channelling this labour was systematised through the creation of forest villages in the late 19th century. These developments laid the basis for the underdevelopment of the productive forces in the tribal economies.

32.5 THE COLONIAL IMPACT AND TRIBAL RESPONSE

By the 1940s it was sufficiently clear that tribals in most parts of the country had lost their access and control over all productive resources [land and forests] and village-based infrastructure that could support their survival. The growing

landlessness of tribal people coupled with their lack of access to forest resources led to the complete breakdown of the tribal production system and the incorporation of the tribal economy into the larger colonial and capitalist economy. This incorporation was mainly in terms of different forms of labour that naturally incorporated the local knowledge and techniques in harnessing both land and forest resources. The second major impact of the colonial interventions was on identity formation and the nature of tribal polity. In this Section we consider both these processes.

32.5.1 From Producers to Labourers

The changing forms of labour employment and the swelling of the tribal labour force was something that was common to both permanent settlement and government owned areas. However the forms of labour varied from region to region. In the *zamindari* areas of Chhotanagpur, Santhal Parganas, Eastern Uttar Pradesh and Orissa migration became a way of life. The loss of land coupled with the lack of income or exploitation induced migration to mining areas as well as tea gardens in Assam. In upper Assam, labour was procured through an indentured system for the tea gardens whereby labour was recruited from Chotanagpur, Santhal Parganas, Bihar and eastern United Provinces often by deceptive and coercive methods involving contractors. Where available without the system, it was later drawn into the higher-paying petroleum and coal operations. (Bela Malik, 2002, Prabhu Prasad Mohapatra, 1985)

In other areas where such migration did not exist, tribals worked in the forest department and on the fields of caste-Hindu peasants. However the seasonal nature of on farm labour ensured that most of the tribals were forced to work primarily for the forest department in order to earn their livelihood. For example in the Central Provinces the formation of forest villages in the late 19th century were aimed at providing a continuous flow of labour to the forest department. The first forest village regulations were issued in 1890. Under these laws forest villages could be established within the limits of any 'reserved' forest with the prior consent of the Conservator. The District Commissioner and the Divisional Forest Officer (D.F.O) would decide their location. Forest villages were to be designed solely for the permanent supply of labour and were not to be made with the intention of extension of cultivation. Lastly forest villages were to be made up of those communities that were 'habituated to the extraction of forest produce'. In areas where there were managing agencies for the extraction of non-timber forest produce the tribals were employed as labourers to produce lac and silk by cheap and efficient methods. In most cases local techniques for such propagation were integrated into these colonial systems of extraction. (Archana Prasad, 1998)

Similar processes were also seen in Assam where the *taungya* system was in force. Under this system, the tribals were forced to plant seedlings of teak on forest lands where *jhum* was done previously. The tribals would be allowed to sow their *jhum* crops between the rows of trees in order to meet their food needs. Tribals were employed in other labour operations. Reserves and experimental plantations needed extensive labour for clearing, sawing, transportation, weeding, fire protection and regeneration. This was partly supplied by seasonal immigration of the tribals (Nagas, Miris, Khamptis, Garos, and others) who came down in winter between the months of December and

March, a relatively slack period for *jhum* or shifting cultivation. In Assam, sawyers came from either the Surma valley or from Nepal in the dry season. The supply of the latter was stalled during the second world war with an increase in military recruitment of 'Gorkhas' and a diversion of sawyers to other parts of the country. Much of this work would be *begar* or forced labour. (Bela Malik, 2002)

The conditions of work of tribal people, especially on forestlands were inhuman. In an enquiry into the condition of forest labourers in Central Provinces Wylie, the Governor of Bombay, questioned the scale of wages paid to labour for felling and carting and demanded an early report on the subject. He also spoke of the problem of piece-work when he said that tribals were made to labour on roads till they were physically in a most unsatisfactory shape. Thus he concluded that the conditions under which they worked affected their health adversely. Lastly, the Baigas were exploited by the forest department, as the department extracted 'illegal and forced labour' during harvest and sowing time. The forest department made the labourers work more than 8 hours a day without paying them extra money. According to Wylie this was equivalent to the practice of *begar*. The department forcefully extracted supplies for visiting forest officials in the forest reserves. (Archana Prasad, 2002) The situation in Assam was similar where Garos were forced to perform *begar* in road building and live in forest villages. (Bela Malik, 2002) Thus we find that almost throughout the country tribals were converted from producers to providers of cheap labour and raw materials as a result of colonial interventions.

32.5.2 Modes of Protest and Identity Formation

It is not as if the tribal people of the country were mute spectators to colonial interventions. The earliest tribal revolts can be traced to mid 19th century with the Kol rebellion. Thereafter the *zamindari* areas of Chhotanagpur faced several other rebellions amongst which was Birsa Munda's rebellion against the *dikus* or outsiders in the region. In response to this movement the British were forced to enact the Chhotanagpur Tenancy Act in 1885. (K.S. Singh, 1985) Several princely states also saw tribal movements in response to adverse changes in land and forest management. Prominent amongst these was the Maria rebellion in Bastar in 1876 and 1910 which was meant to be against police repression and forest laws. Here too, the slogan was 'Bastar for Bastaris' against outsiders. (Nandini Sundar, 1997) In all these cases there was a perception that the Rajas had begun to deprive the tribal people of their customary rights especially after the advent of the British. It is because of this that tribal elites led the revolts against the Rajas.

These revolts had a tenuous relationship with the Congress nationalists and often flouted the norms and values espoused by the dominant tribal elite. One such revolt was the Forest Satyagraha of the 1930s in the Central Provinces where the Gonds flouted the forest laws in more than a symbolic way. They also turned violent and so the Congress leadership was forced to disown the movement. (David Baker, 1984) Another movement with tenuous relationship with Congress Nationalism was the Tana Bhagat Movement of the Oraons in the 1930s that played an important part in altering the tribal identity in the Chhotanagpur region. The movement not only impacted upon the process of identity formation of the Oraons but also led to a process of larger differentiation

amongst tribals in the Chhotanagpur agrarian society. (Sangeeta Dasgupta, 1999) Such assertion of tribal identity, religion and symbolism sometimes led to movements for separate states from the late 1930s onwards. Tribal leaderships argued that they would not ensure the balanced development of their area if tribal areas were not given the status of separate tribal states. Prominent amongst these movements was the one led by the Adibasi Sabha for a separate Santhal State as well as the movements for independence in Nagaland and some other parts of the Northeast.

Whereas these organised tribal movements reflected processes of underdevelopment and unequal exchange, regions with no organised tribal movements also faced another form of resistance. For example the Baiga of the Central Provinces started migrating from state owned areas to *zamindari* areas once their shifting cultivation was banned. They thus forced the government to form the Baiga Chak in which the government conceded to them some livelihood rights. However this was only possible because the Baigas presented themselves as shifting cultivators with ancient rights and customs that did not allow them to plough land. In reality such a representation was in fact just a way of negotiating with the British Government. (Archana Prasad, 1998) The Garos refused to put in the requisite number of days, usually as a part of the settlement, in lieu of 'privileges and concessions' in the forests, after being issued a permit. In 1899, some *raiya*s of Goalpara refused to render labour in protest against forced labour. (Bela Malik, 2002) Such forms of every-day protests led to the crystallisation and assertion of tribal identities in a plurality of ways. But whether organised, or unorganised, the tribal movements and forms of protest had one thing in common: they reflected the growing unequal exchange between the tribal economies and the wider regional and national political economy, and the consequent underdevelopments of these regions. It is this factor that made colonial interventions 'a watershed' in the life and development of tribal people.

32.6 SUMMARY

Studies on pre-colonial tribal societies often romanticize the past. These societies are referred to as relatively 'closed and isolated' but egalitarian. This Unit shows the problems with such ideas. It shows that tribal societies were not closed and isolated structures. They were part of a wider economic and political network. Colonial interventions created a drastic imbalance within the existing tribal structures. Permanent settlement led to the penetration of rich Bengali peasants into the tribal areas who exploited the tribals to their advantage. The *mahajani* system produced further contradictions. The Indian Forest Act of 1865, restricted tribal access to forests. All this led to clashes, conflicts and even armed uprisings – Kol, Birsa Munda, Maria, etc. The growing demands of forest produce across borders encouraged foreign capital to make inroads into tribal areas. Over the long term, these changes altered the existing production relations and resulted in loss of tribal control over productive resources to a large extent.

32.7 EXERCISES

- 1) What was the nature and pattern of tribal economy in the pre-colonial period?
- 2) Pre-colonial economy was 'closed and isolated'. Comment
- 3) Analyze the impact of colonial interventions on tribal economy.

- 4) Examine the nature of tribal protests and conflicts during the colonial period.
- 5) What was the implication of the transformation of the tribals from producers to labourers?

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UNIT 33 THE QUESTION OF AGRARIAN GROWTH AND STAGNATION

Structure

- 33.1 Introduction
- 33.2 Agricultural Production in Colonial India: A Framework for Analysis
- 33.3 Agricultural Production: 1890-1947
- 33.4 Individual Crop Production Trends
- 33.5 Regional Crop Production Trends
- 33.6 Debates Over Agricultural Statistics
- 33.7 The 19th Century Trends?
- 33.8 Summary
- 33.9 Exercises
- 33.10 Suggested Readings

33.1 INTRODUCTION

This Unit aims to familiarise the reader with the main trends in agricultural production during the period 1850-1947. It specifically addresses the question of growth rates of acreage, yield and agricultural output. It also provides an overview of the main debates surrounding the issue of agricultural production. The Unit is structured as follows. The first section discusses the main issues in and the framework for understanding trends in agricultural production. The second section discusses the results of comprehensive agricultural production estimates at the macro level for the three key indicators : acreage, yield and output of both food grain and non food grain crops. Section III and Section IV analyse the production trends at the individual crop and regional level respectively. Section V examines the debate around agricultural production statistics of the period 1890-1946 and provides a brief discussion of 19th century production trends. Section VI provides the summary and conclusion to this Unit.

33.2 AGRICULTURAL PRODUCTION IN COLONIAL INDIA: A FRAMEWORK FOR ANALYSIS

The question of agricultural growth lies at the heart of the debate about the impact of colonialism in India. The issue of growing poverty, low rates of industrialisation and the destruction of handicrafts and traditional industry – the staple of the nationalist critique of colonialism hinged on the issue of agricultural growth. Did agricultural output grow fast enough under colonial rule to mitigate the consequences of population growth? Or in other words did food supply outstrip population growth during the colonial period? Then there is the question of commercialisation of agriculture. The colonial character of the economy was evident in the transformation of India from a manufacture exporting economy to an agricultural raw material exporting one. Did increasing production of cash crops for exports happen at the expense of food grains? Given that more than half the national income is estimated to have originated from agriculture and also because of the overwhelmingly agricultural character of

the workforce in India throughout the colonial period the centrality of agricultural output and its level and trend over time is crucial for understanding how the bulk of the Indian population fared under colonial rule. Apart from temporal changes in agricultural output, variations over space i.e. regional performance of agriculture is a significant issue. Did some regions grow while others stagnated or declined? If there were significant regional patterns discernible – what explains these variations?

Nationalist critiques of colonial rule and its impact on the standard of living of the people of India emerged in the middle of the 19th century. Dadabhai Naoroji's *Poverty of India and Un-British Rule* highlighted the utter poverty of Indian people by calculating the per- capita income in 1868-69 at Rs. 20. William Digby's provocative book 'Prosperous British India' (1901) castigated colonial rule for progressive impoverishment of the Indian population . While Naoroji's estimation of agricultural production was a single point estimate, Digby used three point estimates (1850, 1882, 1900) of agricultural production and national income. These estimations of poverty and low agricultural production gained credence due to the devastating series of famines of the late 19th century. There were several rebuttals of nationalist claims indicating low agricultural production and increasing impoverishment of population by the British Officials, the most notable being Lord Curzon's rebuttal of R. C. Dutt as also F.T Atkinson's (1902) systematic critique of Digby. (1902)¹

The trend and level of agricultural production has been the subject of intense debate since the late 19th century and has animated Indian historiography on the subject.² The nationalist school of historiography takes a substantially pessimist position, arguing that throughout the colonial period agrarian production was stymied: in the 19th century it barely kept pace with population increase while in the twentieth century, definitely lagged behind growing population. The nationalists blamed Colonial State policy of non –development, free trade, land revenue system, forced nature of commercialisation for the poor performance of agricultural production and saw the devastating series of famines in the late 19th century and early twentieth century as a direct consequence of such policies. Apart from the official challenge mentioned above, a revisionist view, most notably represented in the work of M.D. Morris and A.Heston (1963), asserted that there was substantial expansion in agricultural output throughout the 19th and the first half of the twentieth century, stronger in case of commercial crops and relatively slower for food grains, reflected in the slow but positive growth in the per capita national income. In the revisionist accounts colonial state policies were assessed positively. More recently, there has been a revival of the revisionist position specially in the work of Tirthankar Roy (2000), which has shifted attention away from the colonial state policy to focus on the process of commercialisation of agriculture. Increasing integration of Indian economy with the global market in the period 1860 – 1920s and the spur given by exports to commercialisation led to rising per capita income and sharp growth in production and productivity in agriculture. Cash crop production led growth was fuelled by productivity growth and rising income through out the period. This period of relatively open economy and growth was disrupted by the great depression of the 1930s . The 'malign' state of the nationalists is replaced by benign market in the neo revisionist account as the driver of agricultural growth.

¹ Bipan Chandra *The Rise and Growth of Economic Nationalism*(New Delhi, 1966) pp28-40 provides a synoptic account of the late 19th century debate on poverty and agricultural production between nationalist leadership and the colonial officials.

² See for instance *Indian Economy in the 19th century : A Symposium*(Delhi, 1969)

Since the debate over agricultural output growth and its various components has critically hinged on interpretation of agricultural statistics of production and productivity, it is useful to examine the sources and coverage of such statistics. Agricultural statistics became available at the all India level following the recommendation of the Indian Famine Commission (1880). Stray statistics especially of commercial crops were available from the 1860s during the cotton boom. Comprehensive, though imperfect, statistics became available from the end of 1880s. The main source of the agricultural statistics at the All India level were the *Season and Crop Reports* published by the Provincial Directorate of Agriculture which provided district level statistics of cropped area, area under individual crops and estimates of output of each crop. Valuable information on harvest prices of crops and rainfall data was also published in these reports. The information thus generated was collated into two annual publications at the All India level – *Agricultural Statistics and Estimates of Area and Yields of Principal Crops in India*. The former provided data only on area under cultivation while the latter gave figures of area and output of eighteen crop forecasts, which occupied more than 95 per cent of total cropped area of the country. The *Season and Crop Reports*, which formed the basis of the agricultural statistics, was issued mainly for British Indian provinces while the national level statistics also included figures for some Princely States.

The *Season and Crop Report* estimated the total output for each (major crop) of the district by a simple formula $Y = A \times SY \times CF$, where $Y =$ Total output, $A =$ Area under the crop, $SY =$ Standard or Normal Yield, $CF =$ Seasonal Condition Factor. The Standard Yield was defined as a 'figure which in existing circumstances might be expected to be attained in the year if the rainfall and the season were of a character ordinary for the tract under consideration, that is, neither very favourable nor the reverse... the average yield on an average soil in an average year'³ Standard yield was usually derived by a series of crop cutting experiments of yields in the district and was subject to periodic revision (five years). Yet as is evident from the official definition with its emphasis on 'averageness', statistical accuracy or randomness of sample were hardly the criterion for choosing a particular figure. Seasonal condition factor (SCF), on the other hand, was a purely subjective estimation of the condition of the crop usually denoted in annas (1/16 of a rupee or 16 annas) which was then converted into a per centage of the normal or standard yield. Thus an 8 anna crop yielded a SCF of 50 per cent. The agency which was charged with reporting the condition factor as well as acreage under particular crop in a village in temporarily settled area (ryotwari or mahalwari) was the village *patwari*. His estimation was then subsequently corrected by a series of supervising officers and finally by the Director of Agriculture at the provincial level. In the Permanently settled areas it was the village chowkidar who was the primary reporting agency. Acreage figures in temporary revenue settlement areas were drawn with reference to the village records, but in the permanently settled areas, since the village records for revenue purposes were non-existent, the acreage figures were more of an 'eye estimation' successively corrected by the district level officers. Acreage figures were thus notoriously deficient for the permanently settled provinces such as Bengal, Bihar and Orissa except in districts where cadastral surveys and settlement operation had been carried out.⁴

³ *Estimates of the Area and Yield of the Principal Crops of India* Appendix 1, 1938 citing an 1897 circular.

⁴ Cadastral Survey and settlement operations were carried out in Bengal and Bihar districts beginning in the 1880s and most districts were covered by the end of 1920s. R revision surveys and settlement were carried out in fewer districts.

33.3 AGRICULTURAL PRODUCTION: 1890-1947

George Blyn's monumental work on the agricultural production in British India carried out in the late 1940s and published in 1966 remains to date the most important account of the trends in crop production in India. Blyn utilised the Official series published in the *Estimates* and corrected it for discrepancies due to non reporting of crop figures for certain years in some Provinces. He produced three series that of output, acreage and yield of eighteen principal crops, eight food grain crops and ten non food grain crops for the years 1891/92- 1946/47. For aggregation of different crops the out turn and series was converted into value terms at constant prices of each individual crop based on average prices the period 1924-29. For the purpose of regional analysis, Blyn grouped together the provinces into six groups. Crops and regions for which Blyn produced production estimates are summarised in Table 1.

Table 1

Foodgrain	Non Foodgrain	Regions
Rice, Wheat, Bajra, Jowar, Maize, Barley, Gram, Ragi.	Cotton, Sugarcane, Linseed, Rape and Mustard, Sesame, Jute, Tea, Indigo, Tobacco	Greater Bengal, United Provinces, Greater Punjab, Bombay-Sind, Central Provinces, Madras

The all India production figures are presented in Table 2 which provides the five yearly average figures for acreage, yield and output

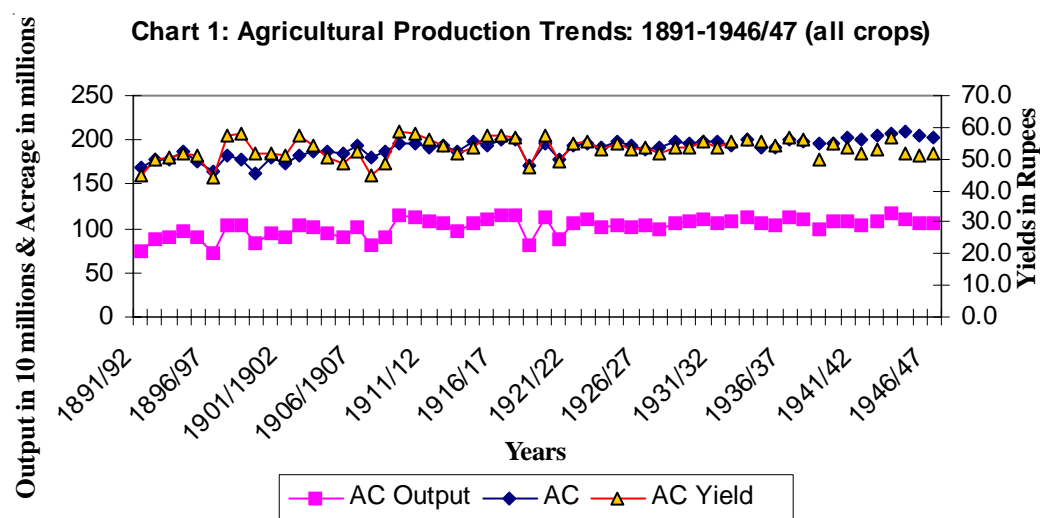
Table 2: Annual Average Agricultural Production : 1891-1946

Year	All Crops (AC)			Food Grain (FG)			Non Food-Grain (NFG)		
	Output	Acreage	Yield	Output	Acreage	Yield	Output	Acreage	Yield
1891-1895	8798	177	50	6911	147	47	1899	30	63
1896-1900	9167	174	53	7129	146	49	2038	28	72
1901-1905	9578	183	52	7308	151	49	2271	32	71
1906-1910	10017	190	53	7573	155	49	2444	35	70
1911-1915	10526	193	55	7801	156	50	2724	36	75
1916-1920	10243	189	54	7580	154	49	2657	35	75
1921-1925	10454	195	54	7649	158	48	2805	37	76
1926-1930	10530	195	54	7274	156	47	3256	39	83
1931-1935	10716	195	55	7353	158	46	3363	47	92
1936-1940	10804	199	54	7062	158	45	3742	51	91
1941-1946	10819	205	53	7347	169	43	3472	36	96

Note: Output in million Rs, Acreage in Millions, Yield in Rs.

Source: George Blyn (1966).

The absolute figures and the trends can be visualised from Chart I. But for an analysis of the trends it is important to examine the trend growth rate. The trend growth rate is computed such that the annual fluctuations are eliminated and an average growth rate for a specified period can be estimated. Blyn computed the trend growth rates by averaging the growth rates of ten overlapping decades beginning from 1891. The growth rate is denoted in per cent per year. Most of the analysis in this and subsequent sections will focus on trend growth rather than absolute figures.



AC Output = all crops output
 AC = all crops acreage
 AC Yield = all crops yield

Table 3: Agricultural Production: Trend Growth Rate 1891-1946 (per cent per year)

	Output			Acreage			Yield		
	1891-1946	1891-1916	1921-1946	1891-1946	1891-1916	1921-1946	1891-1946	1891-1916	1921-1946
All Crops	0.37	0.84	0.35	0.40	0.67	0.35	0.01	0.47	-0.02
Food grains	0.11	0.61	0.03	0.31	0.35	0.39	-0.18	0.29	-0.44
Non food grains	1.31	1.66	1.08	0.42	0.86	0.03	0.86	0.81	1.15
Population	0.67	0.44	1.12						

George Blyn (1966).

From Table 2 and 3 the following conclusions can be drawn:

- 1) Between 1891 and 1947, the annual growth rate of output of all crops was low (0.37 per cent) reinforcing the picture of near stagnation of agrarian production over the whole period. Viewed alongside the annual growth rate of population (0.67 per cent) it is quite clear that agricultural production lagged behind population growth measured over the whole period.
- 2) Practically the whole of the growth of agricultural production came from the expansion of acreage under crops –thus there was in fact near complete stagnation in agricultural productivity. Low quantitative growth was accompanied by the absence of qualitative growth in agrarian production.
- 3) However this dismal picture of low output growth and stagnation of productivity needs to be analysed by disaggregating the trend over time and separating out the trends for different crops. Thus in terms of temporal span, all three measures of agrarian production present a more favourable picture in the first half (1891-1921) of our period compared to the later half (1921-47). In the first half agricultural growth manages to keep ahead of population growth. It is mainly due to the drastic deceleration of growth of crop production in the second half that the overall growth rate for the whole period is pulled down. Since population growth accelerates during the second phase, at nearly two and half times the rate of the earlier period , per capita output plunges down by nearly 30 per cent .

- 4) Non Food Grain(NFG) production during the whole period displayed sufficient dynamism with growth rate of output, acreage and yield being substantially higher than that of Food Grain (FG) crops and above the growth rate of population. An interesting aspect of the performance of NFGs is that the most of the growth of output of these crops was not from acreage expansion but from productivity growth. Thus between 1921 and 1947, while acreage under NFG crops stagnated, output grew by a healthy 1.08 per cent per annum and the resultant productivity growth was 1.15 per cent per annum.
- 5) In contrast to this food grain (FG) output growth was a near stagnant 0.11 per cent while productivity actually declined over the whole period at 0.18 per cent. FG output growth in the first period was above the population growth rate but after 1921 FG output stagnated at 0.03 per cent while population growth soared to 1.12 per cent (leading to a sharp decline in per capita food grain production.).

Blyn's agricultural production figures based on official statistics show two phenomena that need explanation: a) The lag between population growth and yields per acre intensified in the last quarter of British rule and b) the contrast in the performance of the NFG or cash crops against that of FG. We can begin explaining these macro trends if we further disaggregate these trends for different crops and regions.

33.4 INDIVIDUAL CROP PRODUCTION TRENDS

We first examine the broad changes in the composition of crop acreage over the period 1891-1946.

Table 4: Crop Composition : 1891-1946

Crops	1891-95 million acres	Per cent of allcrops	1941-46 in million acres	Per cent of all crops
Rice	66	37.3	74.1	36.0
Wheat	21.9	12.4	26.4	12.8
Jowar	20.9	11.8	22.1	10.7
Gram	11.1	6.3	15.1	7.3
Bajra	11.7	6.6	15.1	7.3
Barley	5.2	2.9	6.7	3.3
Maize	5.1	2.9	6.3	3.2
Ragi	4.4	2.5	3.4	1.7
Total Food grains	146	82.5	169	82
Cotton	9.6	5.6	11.6	5.6
Sugarcane	2.9	1.6	3.6	1.7
Jute	2.2	1.1	2.5	1.2
Groundnut	0.4	0.0	5.6	2.7
Oilseeds	12.5	7.0	11.1	5.4
Indigo	1.4	0.8	0.0	0.0
Total Non Foodgrain	30.4	17.2	536.5	17.7
All Crops	176.4	100	205.5	100

Source: George Blyn (1966).

What is remarkable is that there was hardly any change in the relative acreages under food grain and non-food grain crops. But there were fairly significant changes in the case of individual crops. To take up FG crops first. Acreage under rice and wheat expanded absolutely but there was no significant change in their relative weight in all crop acreage. Amongst the NFG crops, the only significant change was the rapid rise of groundnut as a major crop. From a completely insignificant crop at the beginning of our period 5 million acres were added in the next fifty years. This expansion of acreage was the maximum in Madras Presidency and to an extent in Bombay. During the same period total cropped area under oil seeds declined by nearly one and half million acres. This period also witnessed the total eclipse of indigo as an important cash crop – accentuating the trend beginning in the second half of the 19th century. Cotton acreage grew but most of the growth occurred in the first half of the period. In contrast, acreage of sugar cane expanded almost exclusively in the post 1921 phase and more spectacularly after 1931 when a protective duty imposed on imported sugar stimulated expansion. (Blyn 1966, pp.146-7)

Now as to the output of individual crops Table 5 shows the different trajectories of individual crops .

Table 5: Trend Growth Rates of Output and Yield : 1891-1946

Crops	1891-1946	1891-1916	1921-1946
Rice	-0.09 (-0.24)	0.35 (0.39)	-0.02 (-0.47)
Wheat	0.84 (0.38)	1.89 (1.25)	0.57 (0.02)
Jowar	0.05 (0.00)	0.50 (0.64)	-0.34 (-0.63)
Gram	0.26 (-0.26)	1.73 (0.52)	-1.15 (-0.88)
Bajra	0.72 (0.06)	1.86 (0.35)	-0.59 (-0.24)
Barley	0.02 (-0.12)	2.03 (0.71)	-1.34 (-1.11)
Maize	0.51 (0.21)	1.55 (0.88)	0.44 (0.10)
Ragi	-0.37 (0.12)	0.24 (0.29)	-0.98 (-0.10)
All Foodgrains	0.11 (-0.18)	0.61 (0.29)	0.03 (-0.44)
Sugar cane	1.30 (0.73)	0.22 (1.03)	3.00 (1.20)
Cotton	1.30 (0.95)	2.84 (0.98)	-0.01 (1.27)
Jute	0.27 (0.14)	2.13 (0.86)	-0.72 (-0.30)
Tea	2.74 (1.43)	4.24 (2.22)	2.08 (1.59)
Tobacco	0.03 (0.17)	-0.29 (0.72)	0.32 (-0.24)
Groundnut	6.26 (0.23)	8.74 (0.73)	3.24 (-0.61)
Rape and Mustard	0.07 (0.19)	0.59 (0.48)	0.03 (0.31)
Sesamum	0.09 (0.29)	1.22 (0.58)	-0.38 (-0.08)
Linseed	-0.47 (-0.10)	0.52 (1.05)	-1.27 (-0.80)
Indigo	-6.19 (0.47)	-6.02 (1.28)	-6.27 (-0.89)
AllNFG	1.31 (0.86)	1.66 (0.81)	1.08 (1.15)
ALL CROPS	0.37 (0.01)	0.84 (0.47)	0.35 (-0.02)

Note: The figures in brackets represent the yield trend growth rates.

Source: George Blyn (1966).

Among food grain crops, rice was the predominant crop and the trend in the yield of the crop influenced the overall trends in food grains. Thus the decline in rice yield was the most important reason for the overall low performance of food grain crops generally. The decline was most pronounced in the second half (1921-1946). This must be contrasted with the trends in yield of the other major cereal crop – wheat, which experienced significant growth. But even in the case of wheat the rate of growth of output was more than three times faster in the first half of the period compared to the latter half. The yield of wheat rose by 1.25 per cent per year in the first half and fell in the second half to a near zero rate. Thus while all food grain crops except rice and ragi witnessed some growth in output during the whole period, all crops except wheat and maize experienced negative rate of growth during the second half of the period (1921-1946). Yield was positive for all crops in the first half (including rice) and negative for all crops in the second half (except wheat and maize which too saw a significant retardation in growth).

As we have seen, non food grains, as a whole performed better than food grain crops, but there were significant differences between individual crops. Production of tea remained buoyant throughout though, given the nature of its production (plantations managed by foreign companies), complete export orientation and low backward linkages, its impact on the general welfare of the population was minimal. Cotton, on the other hand, was an important cash crop grown in large parts of the Deccan, Central Provinces and in the canal colonies of Punjab by mainly peasant producers. Sugarcane was an important cash crop in United Provinces, Bombay and Bihar and was produced by small peasants. Jute was the main cash crop grown by small peasants in Eastern Bengal and supplied both domestic and export markets. Groundnut, which was an insignificant crop at the beginning of the period, became the dominant cash crop in Madras where it grew on relatively infertile soil unsuitable for cultivation of other crops. All these crops (excepting sugarcane) saw sharp increases in production between 1891-1916, stimulated largely by increasing exports. Except tea, where India had a strong market dominance, rest of the agricultural crop exports declined after 1921 which in turn slowed down the production growth of these crops.

Table 6: Value of Exports of Selected Agricultural Products, 1881-1941 (Rs Million)

	Raw Jute	Jute	Cotton	Cotton goods	Tea	Wheat
1881	43.7	12.0	111.5	21.7	30.7	11.2
1891	76.0	24.8	165.3	94.9	55	60.4
1901	108.7	78.6	101.3	123.1	96.8	0.3
1911	154.9	170	360.5	116.1	124.6	129.5
1921	163.6	530	416.7	156.4	121.5	41
1931	128.8	319	464.1	48.4	260	2.1
1941	78.4	244	—	147.2	278.8	4.9

Source: K.N Chaudhuri 'Foreign Trade and Balance of Payments (1757-1947)' in Dharma Kumar (ed) (1983), *The Cambridge Economic History of India*, Vol II, Delhi.

The stimulus of export markets as fillip to cash crop production can be seen also in the case of wheat- rapid growth till 1911 and relative decline afterwards. Production of wheat and cotton, were both stimulated by the massive expansion of canal irrigation in Punjab. Irrigation expansion seemed to have stopped by 1921 and that accounted for the retardation and relative decline of cash crop growth after 1921. Nearly 20 million acres of canal-irrigated area were added in the 40 years between 1885-1925.

33.5 REGIONAL CROP PRODUCTION TRENDS

Now let us look at the regional variations in the rates of growth. Apart from the crop wise growth differential there were regional variations too.

Table 7: Regional Trend Growth Rates of Agricultural Output, 1891-1946

(per cent per year)

	Food grain 1891-1946	Non food grain 1891-1946	All Crop 1891-1946	All Crop 1891-1916	All Crop 1921-1946
Greater Bengal	-0.73	0.23	-0.45 (0.65)	-0.40 (0.56)	-0.23 (0.95)
United Provinces	0.35	0.92	0.42 (0.40)	1.02 (0.00)	0.27 (1.07)
Madras	0.42	2.37	0.98 (0.80)	1.71 (0.75)	0.42 (1.08)
Greater Punjab	1.10	2.40	1.57 (0.93)	2.17 (0.20)	1.30 (1.41)
Bombay Sind	0.27	1.44	0.66 (0.71)	0.70 (0.30)	0.79 (1.45)
Central Provinces	0.29	0.97	0.48 (0.58)	1.73 (0.61)	-.56 (0.96)
British India	0.11	1.31	0.37 (0.67)	0.84 (0.44)	0.35 (1.12)

Note: The figures in bracket are trend growth rates of population.

Source: George Blyn (1966).

The regional trends show that the All India figures of low growth in crop output was largely a result of the negative growth rate in Greater Bengal. Rest of the five regions show on an average a slightly better growth of output over the whole period (0.80 per cent per year) which is ahead of the population growth rate by a very small margin . If by including Greater Bengal, the All India story of agricultural production presents a dismal picture of very low output growth and declining per capita production, by excluding it we have a picture of low output growth and stagnating per capita production. Yet here again the inter temporal variation is different between regions. In the first half the output growth is positive in all regions except Bengal but in the second half Central Provinces also shows a negative growth. In the first half of the period, all regions (excepting Bengal) have higher output growth rate compared to population. But in the second half, output growth rate of all regions are below the population growth rate. It is interesting to note that Greater Bengal and Rest of India display contrasting trends between the first and second half of our period. In Greater Bengal the rate of decline of output is reduced in the second half by nearly fifty per cent (-.40 to -.23 per cent per year) while in the rest of the regions of British India the rate of growth of output is drastically reduced by 66 per cent(1.41 per cent to .48per cent).

Let us stay with the regional contrast a little longer and explore the experience of Greater Bengal and Greater Punjab. These two regions represent two extremes in the performance of agricultural production. In Greater Bengal included Bengal, Bihar and Orissa and Assam. The main component of decline in all crop output was determined by the yields of rice which accounted for more than 75 percent of the total acreage. The Bengal figures in turn were determined largely by the rapid decline

in the rice output in Bihar and Orissa. If we exclude Bihar and Orissa, the figures of rice output in Bengal show stagnation rather than decline. What was the reason for the precipitous decline in the output of rice and other minor food grains in Bihar and Orissa? Blyn found that there was a fairly strong trend element in the total rainfall, which declined over the period 1911-46 for Bihar. But even after accounting for this possible decline there was still a large and unexplainable decline in rice output in Bihar and Orissa. This according to Blyn was a statistical aberration due to the continuation of a very high standard yield till 1922-23. This standard yield used for measuring annual yields was abruptly lowered after that year. The normal yield of Bihar and Orissa was from now calculated on independent crop cutting experiments, and this recalculated figure was now assumed to be the standard yield. To rectify for the presumed lower standard yield of rice for Bihar and Orissa, Blyn corrected the series by assuming the average output of 1937-41 to be the standard yield for the entire period.⁵ Thus with an assumption of a constant standard yield the Greater Bengal rice output was modified by Blyn to generate an alternative series for food grain output for Greater Bengal and British India as a whole. This modified series, raised the trend growth rates of food grain output of Greater Bengal by 58 percent for the whole period. The differences between the trend growth rates of the original and modified series for Greater Bengal and British India can be seen in Table 8.

Table 8: Trend Growth Rates: Agriculture Production-Greater Bengal and British India, 1891-1946

	Greater Bengal		British India	
	Original Series	Modified Series	Original series	Modified series
FG Yield	-0.55	-0.10	-0.18	0.04
AC Yield	-0.34	0.07	0.01	0.27
FG Output	-0.73	-0.15	0.11	0.30
AC Output	-0.45	0.00	0.37	0.55

Source: George Blyn (1966).

While the decline of Bihar and Orissa rice yield may have been a statistical aberration, it is doubtful if Blyn's correction assuming a constant yield for the whole period for all of Greater Bengal is justifiable since it lowers the initial base period figures by about 22 percent. Even with this most optimistic correction neither the food grain production nor all crop output could keep pace with the population growth. We still see a persistent decline in per capita food grain and all crop output over the whole period. The picture of stagnation and declining per capita output does not change substantially.

The trajectory of agricultural growth in Greater Punjab represents a sharp contrast to Greater Bengal. The overall output growth rate of 1.57 percent in Punjab is the highest in the whole of British India. This rate was composed of the food grain crop output growth rate of 1.10 percent (three times the All India Rate) and NFG output rate of 2.40 percent. In terms of temporal variation however we notice that the

⁵ Blyn reduced the average yield of the period 1891-1911 in Greater Bengal by 22 per cent each year to bring the 20 year average to the level of 1936-1941 (749 lbs per acre). This latter figure was then applied to the whole period 1891-1946. Thus with an assumption of a constant standard yield the Greater Bengal rice output was modified by Blyn to generate an alternative series for food grain output for Greater Bengal and British India as a whole. Blyn (1966) p222.

maximum growth was in the first half of the period (2.17 percent) which decelerates to 1.30 percent in the second half falling below the population growth rate (1.42 percent). Most of the expansion of output appears to have been due to the massive growth of acreage in the first half our period due to the great increase in cultivation in the canal colonies. Productivity (output / acre) growth rate was relatively less even though proportion of irrigated area to total cropped area increased substantially during this period. In 1885, only 29 percent of cropped area was irrigated in Punjab but by 1911 the proportion increased to 50 percent.

Table 9: Punjab Agricultural Production : Trend Growth Rates, 1891-1946

	Yield/acre			Acreage			Output			Population
	FG	NFG	AC	FG	NFG	AC	FG	NFG	AC	
1891-1916	0.30	0.52	0.47	1.70	1.75	1.75	1.99	1.56	2.17	0.20
1921-1946	0.47	1.70	0.90	0.39	0.50	0.44	0.92	1.80	1.30	1.41
1891-1946	0.31	1.13	0.62	0.87	1.20	0.96	1.10	1.40	1.57	.93

Source: George Blyn (1966).

If agricultural production in Punjab was driven by acreage expansion in the first half of our period, the growth in the second half is propelled by productivity growth specially in the NFG crops Cotton and Sugar. Extensive use of better seeds, the practice of intensive cultivation drove productivity up in these two crops.⁶ Though FG productivity also grew in the second half due to increased adoption of better seed and greater use of chemical fertiliser, the growth was not spectacular. The area of wheat under improved seeds grew from 5 percent in 1922 to about 50 percent by 1938-39, the irrigated area under wheat increased more slowly, and the improvement in wheat yields was even lower than the combined effect of these two factors would indicate. It seems that there were powerful counter tendencies operating to reduce yield specially in the food grain crops. One major counter tendency was the increasing problem of water logging and rising alkalinity of soil mainly as an effect of rapid growth of canal irrigation. It was estimated that nearly 24 percent of cropped area of Western Punjab districts were found to be beset with water logging in 1946-47.⁷ In the second half of our period, acreage expansion slows down as does productivity growth and consequently the output growth falls below the population growth. Blyn estimates that the trend of decline in per capita food production begins from the decade of 1911-1921 and in the next thirty years this decline was about 29 percent. So even in the most dynamic region of agricultural production , the spectre of declining per capita food grain production is an undeniable reality. But how rapid really was the growth before 1911? M.M Islam has argued that Blyn might have overestimated agricultural production growth between 1891 – 1911 and that the picture of Punjab’s dynamism need to be substantially modified. Islam uses an alternative production series based on the *Season and Crop Reports* to show relatively lower rates of growth compared to Blyn. Islam suggests that Blyn

⁶ See Carl Pray ‘Accuracy of Official Agricultural Statistics’ in Sumit Guha (ed) *Growth, Stagnation Or Decline?: Agricultural Productivity in British India* ,pp185-187 for extensive use of improved varieties of seeds in Sugar cane and Cotton and consequent rise in productivity. Acreage under improved variety sugar cane (Coimbatore variety) grew from 1per cent in 1921 to 78 per cent of the total acreage under sugar cane by 1944. Similarly larger area of Cotton came to be cultivated by high yielding American variety.

⁷ See M.M Islam ‘Trend in Crop Production in Undivided Punjab’ in Sumit Guha (ed) *Growth Stagnation or Decline?* P201-203.

overestimates the growth rates for food grain crops, in the period 1891-1906 (i.e before the publication of fuller production estimates of Season and Crop Reports) to arrive at a much rosier picture of Punjab agriculture.⁸

Table 10: Alternative Crop Output Trend Growth Rates : Punjab, 1891-1946.

	Islam's estimate 1891-1946	Blyn's estimate 1906-1946	Blyn 1891-1946
All crops	0.79	1.10	1.57
Foodgrain	0.42	0.41	1.10
Non Food Grain	2.64	2.10	2.40

Source: George Blyn (1966).

33.6 DEBATES OVER AGRICULTURAL STATISTICS

While Blyn's work on the agricultural production remains the single most comprehensive account of All India agricultural performance, several attempts have been made to improve upon it at the regional level. We need to consider some of these to reflect on the debate over agricultural stagnation and growth.

Blyn's agricultural production statistics was the basis for important estimations of national income by S.Sivsubrahmaniam for the period 1900-1947 and enjoyed a great deal of reputation in the radical nationalist historiography of the 1970s and early 1980s. However doubts were soon raised about Blyn's production estimates and the veracity of the official yield figures on which they were based. M.D Morris, an early dissenter, doubted whether the picture of decline food grain yield per acre could be sustained for the whole period. Citing an early study by Walter C. Neale, Morris argued that wheat yields in the districts of Muzaffarnagar and Bareilly increased by 900 percent between 1840-1940. Alan Heston provided the first systematic critique of the Blyn's production series by casting doubt over the official statistics especially on the Standard Yield and Seasonal Condition Factor components of the Production series. Clive Dewey debunked the official statistics because of the arbitrariness and unreliable methods used by those who collected the statistics, the patwaris and the Kanungos. Regional revisions were attempted by M.M Islam for Bengal and Carl Pray for Punjab. Islam revised the acreage and production figures of the 1920s and Pray argued that the official statistics were serious underestimates since they neglected the role of improvements in technology. The debate over the relative merits of Blyn's agricultural production series has been ably summarised in Sumit Guha (*Growth, Stagnation or Decline : Agricultural Productivity in British India, 1992*).

Those who have criticised Blyn's figures have focussed mainly on two components of the three that went into the making of the production series namely the Standard Yield and Seasonal Condition Factor (the product of these two elements gave the official yield or productivity). Heston's main criticism was that the official yield figures were subjectively estimated and were marked by an administrative bias. This bias was largely due to the proverbial " patwari pessimism" or the tendency on

⁸ K.L Datta, who also published an estimate of the Food grain output between 1890-1911 for Punjab found much higher initial crop out than Blyn and also a weak growth trend for that period. See arguments in favour and against Blyn's estimation in Punjab in Sumit Guha ' Introduction' in Sumit Guha ed) *Growth, Stagnation or Decline* pp22-25.

the part of the primary reporting agency to underestimate good years and overestimate bad years which led to systematic reduction of the seasonal condition factor. A second point of criticism was about the Standard Yield figures. It was argued that the standard yield figures were based on insufficient crop cutting experiments and were marked by large sampling errors, and changes in these figures did not reflect underlying yield trends. Heston demonstrated through a detailed analysis of the Bombay official yield figures that there was a declining trend over time which was unsupported by total rainfall trend during the period 1907-1947. (Heston, 1973) He suggested that the administrative bias was reinforced by a political bias towards remission of revenue (colonial officials were keen to show low yields and higher revenue remission to counter growing nationalist mobilisation). Secondly, Heston felt that standard yield figures were initially very high because European yields were projected on to India and when more realistic figures came to be adopted, there was a decline in Standard Yield figures over time. For Heston Blyn's downward trend in food grain crop yield was a statistical illusion. Since official yield figures were spurious, Heston emphasized that the picture of declining yield for food crops should be abandoned in favour of a constant yield for the whole period. He proposed that the yield figures of 1951-54 for all food crops based on extensive crop cutting methods should be applied to the acreage figures to generate a revised output series. For crops like cotton, sugarcane and tea, which showed a continuous increase in yield in the official series, he advocated the maintenance of official, yield figures.

How bad were the official yield figures in reality? It is interesting to note that for certain years in which both official yield and extensive crop cutting yields were published (1944-46), R.C Desai who did an extensive study of crop trends in 1937-1948 found that the official yields were underestimated vis a vis Crop cutting yields by a very narrow margin - 3.5 percent for rice and 1.5 percent for wheat. R.C Desai V.G Panse and P.V Sukhatme who were the pioneers of crop cutting method for yield estimations generally supported the Patwari estimations. Secondly, Heston's objections against declining condition factor in the official series due to administrative and political bias has been found to be untenable by Ashok Desai, Aswini Saith and Sumit Guha. The major point that had to be considered was whether the trend of declining official yield reflected underlying movements in real yield. And here Heston's alternative of constant yield (based on 1951-54 crop cutting yield) for the whole period 1868-1947 for major crops has been found wanting in many respects. Ashwini Saith's careful examination of United Provinces' wheat yield for the period 1840-1946 in Muzaffarnagar and Bareilly districts showed that contrary to an optimistic assessment of rising yield, there was a long term tendency for "intrinsic yield" to decline. This decline was partly offset for a short period due to what Saith calls a "shift effect" - i.e. shift of wheat from unirrigated to irrigated land. (Since irrigated wheat yield was nearly double the unirrigated yield) But once the shift effect had played out its role either with slowing down of expansion of canal irrigation or due to increasing alkalinity due to water logging, the long-term trend of decline in intrinsic yield resumed its course. If there is, as Saith shows, a long term tendency for decline of "intrinsic yield" then Blyn's figures are not implausible and the alternative of constant yield proposed by Heston is untenable. We are then left with Blyn's series of agricultural production for the period of 1890-1947 as the best and perhaps the most plausible estimation of trend in the key aspects of agrarian production in British India.

Blyn's portrayal of the overall picture of low growth and stagnation strengthens the nationalist argument about the baneful impact of colonial rule while the revisionists could take some consolation from the positive growth trend in the cash crop

production. Yet Blyn's statistics only seemed to deepen some of the paradoxes of agrarian growth. First: how did Indian population grow so rapidly (between 1921-1946) on the basis a stagnant food grain production? Second: how do we square the fact of rapid agricultural growth in the late 19th century with evidence of recurring famines and scarcities? The answers depend seemingly on the relation between population growth and agrarian production. Were the trends in these two variables independent of each other or was there a causal relation between them? If we accept Blyn's picture we still are left with a huge gap about the trends for most of the 19th century. Were the trends of 1890-1920 a continuation of longer term trends of growth from the 19th century or was there only a brief period of growth within a larger cycle of stagnation and decline initiated in the 19th century?

33.7 THE 19TH CENTURY TRENDS?

What can we say about the longer term 19th century trend as a whole? It may be noted here that Heston's revised output estimates effectively lowers the estimates of the earlier periods and thus instead of a declining trend we are presented a rising trend of output, yield and per capita food grain production, specially for the later half of the 19th century. (Heston 'National InCome' in Dharma Kumar (ed) *Cambridge Economic History of India*). The 19th century trends, in the absence of any series, are at best speculative. Heston's backward extrapolations of the mid 20th century yields are, as we have seen, highly improbable. Sumit Guha, on the basis of scattered evidence, a mix of reliable and highly speculative figures spread across several regions, has estimated that total cultivated area might have increased by 33 percent between 1825-1890.⁵ During the same period the best estimates of population growth range between 26 percent and 87 percent. Only with the lowest estimate of population growth can the acreage growth keep ahead of population.. During the same period he estimates, on the basis of all available crop cutting experiments in the District Settlement reports of North India and South India, a tendency for the yields to decline, though in several regions such as Punjab and United provinces irrigation might have countered this decline to an extent. Combining the trends in acreage, yields and population, Guha estimates a fairly slow growth in output and a decline in per capita output between 1825 -1890.

33.8 SUMMARY

Blyn's production figures based on the official yield and production series, established the following :

- a) Very low rates of growth of agricultural output between 1891-1946. and a strong trend of decline of per capita output.
- b) The relatively brighter performance of non foodgrain crops, while Foodgrain output stagnated. Within fgoodgrains, rice production declined while wheat production increased at a healthy rate.
- c) There were strong regional variations. Greater Bengal was stagnant while Punjab showed much greater buoyancy.

Agricultural production grew much faster in the first half of our period and stagnated or declined in most regions in the second half. Consequently per capita production increased in the first half and declined most precipitously in the second. Combined with the available trend estimates of the 1825-1890 we can now conclude that the period 1890-1920 represented a brief upward blimp in the overall trajectory of

agrarian stagnation and declining per capita output in the colonial period. The long trend of 19th century stagnation explains the massive mortalities due to recurrent famines in the late 19th century. The stagnant population trend of 1890-1921 and rapid expansion of acreage due to canal irrigation can explain the only favourable period of rising per capita output in the colonial period.

33.9 EXERCISES

- 1) Discuss the main trends in agricultural production in British India over the period 1890-1950.
- 2) What are the main factors for the difference in the performance of foodgrains and non foodgrains crops in the late 19th and early 20th century. Discuss with reference to regional variations.
- 3) Explain the reasons for the inter temporal variations in agricultural production from the late 19th to mid-20th century in British India.
- 4) How does the debate on agricultural statistics enhance our understanding of agricultural production.

33.10 SUGGESTED READINGS

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M.A. History

List of Courses

Course Code.	Title of the Course	Credits
MHI-01	Ancient and Medieval Societies	8
MHI-02	Modern World	8
MHI-03	Historiography	8
MHI-04	Political Structures in India	8
MHI-05	History of Indian Economy	8
MHI-06	Evolution of Social Structures in India Through the Ages	8
MHI-07	Religious Thought and Belief in India	8
MHI-08	History of Ecology and Environment: India	8

MHI-05 History of Indian Economy

Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
- Block 2** : Emergence and Structure of Complex Economy
- Block 3** : Early Medieval Economy and Its Continuities
- Block 4** : Expansion and Growth of Medieval Economy-1
- Block 5** : Expansion and Growth of Medieval Economy-2
- Block 6** : Trade and Markets
- Block 7** : The Rural Economy
- Block 8** : Craft Production, Technological Change and Industrialisation

UNIT 34 THE DE-INDUSTRIALIZATION DEBATE

Structure

- 34.1 Introduction
- 34.2 Early Nationalist Views and Their Critics
- 34.3 The 1968 Debate on De-industrialization
- 34.4 De-industrialization in Gangetic Bihar
- 34.5 Regional Variations in the Process of De-industrialization
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- 34.7 Recent Writings on De-industrialization
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 - 34.8.1 The Case of Brassware
 - 34.8.2 Leather and Leatherwork
- 34.9 Summary
- 34.10 Glossary
- 34.11 Exercises
- 34.12 Suggested Readings

34.1 INTRODUCTION

One of the key issues taken up by the nineteenth century nationalist intelligentsia was the question of de-industrialization of India in the colonial period. The British cotton textile industry was blamed for the flood of British goods into India, which led to the decline of traditional artisanal production and the decline in the earnings and employment of spinners and weavers, specially the former. Nationalist leaders from Dadabhai Naoroji to Tilak to Mahatma Gandhi have emphasised the destructive consequences of the inflow of British manufactured goods into the country. According to the nationalists India was subordinated to the needs of the British economy, transformed into an importer of manufactured products and an exporter of agricultural commodities. While Britain was experiencing an Industrial Revolution India was reduced to an agricultural adjunct of the British economy. This decline in artisanal production was not compensated for by the growth of manufacturing in the modern sense. The miserable conditions of the weavers, the greater dependence on agriculture and decline in living standards of the general population, and the greater incidence of famines in India in the 19th century were attributed to the inflow of British manufactured goods into the country specially after 1813 when the charter of the East India Company was amended. With the development of the railways in India in the second half of the 19th century the process of the destruction of artisanal production was speeded up because of the availability of cheap transportation for bulk goods. If India had been an independent country it would have made an effort to protect its traditional industry but this was not feasible under colonial rule. The British colonial rulers followed a policy of free trade, which enabled the products of the Lancashire cotton industry to enter the Indian market without the payment of customs duties. The cumulative effect of these policies was to destroy traditional industry and to restrict the opportunities for the growth of modern large-scale industry in India.

34.2 EARLY NATIONALIST VIEWS AND THEIR CRITICS

K.S.Shelvankar in *The Problem of India* (London 1940) and R.P. Dutt in *India Today* (Bombay, 1947) called the half century after 1875 the period of de-industrialization and peasantization. So did Colin Clark in *Conditions of Economic Progress*. Although the classic nationalist account of the impact of colonial rule in India by R.C.Dutt, *The Economic History of India in the Victorian Age, 1837-1900* (London, 1906), appeared very early in the twentieth century it dealt with the adverse consequences of British manufactured goods for India's hand manufactures. However, authors like L.C. A. Knowles and Vera Anstey contested the nationalist argument even in the colonial period itself. A substantial critique of the nationalist argument came from an analysis of the data on occupations from the decennial Censuses from 1881 to 1931. Later, in the 1950s, Daniel and Alice Thorner argued that a case for the decline of employment in the secondary sector during the period covered by the census data was not tenable. Essentially Thorner's argument was that there was not much change in the proportion of the population that was engaged in industrial occupations at least in the period covered by the census data, from 1881 to 1931. The case for de-industrialization in India arose from an erroneous reading of the evidence contained in the Census data. In an agricultural economy the classification of occupations is not an easy task because of the absence of clear-cut separation of work within the household. Besides the basis of classifying the population into different occupations itself changed from the early to the late Census reports.

The major source of the problem was the over-estimation of the number and proportion of the population engaged in industrial occupations in the Census of 1881 on the basis of a misreading of the categories used in that report. Thorner argued that it would be more appropriate to consider the Census categories of 'Manufacture and Trade' in one band, of 'Agriculture and General Labour' in another band, and to separate the data for male and female workers. The proportion of males in 'Manufacture -cum-Trade' to the total of all working males fell from 18% to 15% between 1881 and 1931. If the detailed data for all Provinces and four States is used to estimate the percentage for 1881 it is 16%. This reduces the extent of decline from 3% to just 1% over the 1881-1931 period. The proportion of males in 'Agriculture-cum-General Labour' changed by barely two percent between 1881 and 1931. The proportion was 74% in 1881 and 1901, 75% in 1911 and 76% in 1921 and 1931. In Thorner's view the whole case for de-industrialization rested on the "relatively dubious figures for the females but, above all, on acceptance of the meretricious 1881 data." [Thorner, "De-industrialization" in India: 1881-1931," in Daniel and Alice Thorner, *Land and Labour in India*, Bombay, 1974, p. 77. For details see Tables 1-4.] Excluding the 1881 data therefore Thorner estimated that the proportion of women in 'Manufacture-cum Trade' declined from 17% in 1901 to 14% in 1931. During the same time period the proportion of women in 'Agriculture-cum General Labour' rose from 77% to 78%. Therefore he concludes that de-industrialization on any significant scale could only have happened in the period between 1815 and 1880. However, Thorner was intrigued by the fact that the industrial structure of the economy remained "practically stationary during a half century when India's population rose by nearly one hundred million."

Table 1
Working force distribution by industry, 1881-1931: INDIA,
including Burma and Pakistan

Male Workers [Absolute numbers]	1881 [All India] Four States]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	80,675	71,330	93,607	97,333	95,734	100,179
Agriculture, Forestry and Fishing	52,029	46,944	64,148	70,244	69,646	72,197
General Labour	7,248	5,663	5,397	2,689	2,894	3,753
Manufacture, Mining and Construction	12,959	7,686	9,924	9,589	8,926	9,111
Trade	1,870	3,813	5,044	5,430	5,505	5,659
Transport and Other Services	6,569	7,224	9,094	9,383	8,763	9,459

Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 78-79

Table 2
Working force distribution by industry, 1881-1931: INDIA,
including Burma and Pakistan

Male Workers [in percentages.]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	100	100	100	100	100	100
Agriculture, Forestry and Fishing	65	66	68	72	73	72
General Labour	9	8	6	3	3	4
Manufacture, Mining and Construction	16	11	11	10	9	9
Trade	2	5	5	5	6	6
Transport and Other Services	8	10	10	10	9	9

Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 78-79

Table 3
Working force distribution by industry, 1881-1931: INDIA,
including Burma and Pakistan

Female Workers [Absolute numbers]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	34,446	n.a	41,913	45,683	43,844	40,020
Agriculture, Forestry and Fishing	19,642	n.a	28,442	33,357	32,570	28,027
General Labour	5,244	n.a	3,841	1,991	2,257	3,123
Manufacture, Mining and Construction	8,183	n.a	5,187	5,056	4,219	3,757
Trade	411	n.a	2,121	2,626	2,445	2,093
Transport and Other Services	967	n.a	2,321	2,654	2,353	3,020

Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 80-81

Table 4
Working force distribution by industry, 1881-1931: INDIA,
including Burma and Pakistan

Female Workers [in percentages.]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	100	n.a	100	100	100	100
Agriculture, Forestry and Fishing	57	n.a	68	73	74	70
General Labour	15	n.a	9	4	5	8
Manufacture, Mining and Construction	24	n.a	12	11	10	9
Trade	1	n.a	5	6	6	5
Transport & Other Services	3	n.a	6	6	5	8

Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, p. 80.

34.3 THE 1968 DEBATE ON DE-INDUSTRIALIZATION

In an essay criticizing the lack of theoretical rigour in the writings of the nationalists Morris David Morris argued that the case for the decline of the traditional industries of India rested on the evidence for the rising imports of British manufactured goods into the country. According to Morris there was not much direct evidence of the decline of India’s traditional industries and the nationalists had ignored the possibility of a rightward shift in the demand curve for cloth in India. If we assume that there was an expansion in the domestic market for textiles in India because of the increase in the population of the country and the increase in the purchasing power of the people based on an increase in the per capita income then despite an increase in imports of manufactured goods into the country there would be little or no decline in traditional artisanal production. The argument was that by ignoring the expansion in the size of the market for textiles in India the nationalists had exaggerated the negative consequences of the increase in British exports to India.

This article by Morris produced a strong response from scholars like Bipan Chandra, Tapan Raychaudhury and Toru Matsui in *The Indian Economic and Social History Review (IESHR)* of 1968. First of all these authors argued Morris had ignored a large body of evidence about the decline in traditional handicrafts and the economic position of the weavers which was easily available and scattered in a wide variety of sources ranging from government and famine reports to eye-witness accounts. The increase in the imports, which entered the Indian market, was so dramatic that the decline of artisanal production was inevitable. Secondly they argued that the domestic market could well have grown a little because of an increase in the population, but there was very little evidence to suggest that there was an increase in the per capita income of the country during the 19th century. In fact all the evidence pointed towards either a decline in the per capita income or stagnation. The technological changes in the cotton textile industry of Britain over the course of the 19th century led to a steady lowering of the cost of production, which enabled Lancashire products to flood the country. Although Morris had argued that the reduction in the price of imported yarn into India would have helped the weavers to produce better cloth at lower cost this was not of great help to the Indian weavers.

In his rejoinder Bipan Chandra argued that the ratio of yarn imports to those of woven goods was very low. Between the years 1849 and 1889 the import of cloth increased by 25.5 millions sterling, which was a twelve and a half times increase while that of yarn increased by only 1.8 millions sterling, which was a four times increase. Besides the productivity of the British weaver was rising while that of the Indian weaver remained stationary. Furthermore, the export price of woven cotton goods from Britain was falling far more rapidly than that of yarn. The average export price per pound of yarn fell from 29 pence in 1819-21 to 15.3 pence in 1829-31 to 12 pence in 1844-46 to 11.7 pence in 1859-61 to 12.8 pence in 1880-82. During the corresponding period the average export price per pound of cloth fell from 70.3 pence to 40.6 pence to 22.5 pence to 20.5 pence to 19.4 pence. [Figures from Tables in Bipan Chandra, 'Re-interpretation of Nineteenth Century Indian Economic History', *IESHR*, 1968, pp 55-56.] Besides the spinners in any case suffered a decline in employment and income precisely because of the imports of the cheaper foreign yarn.

What is interesting is that though Bipan Chandra argued that the work of Thorner only showed that census data were "too unreliable to prove or disprove" the case for de-industrialization he also asserted that "the Indian weaver could hold his own to a limited extent only after 1918 as a result of technological change, i.e. mechanization." [Bipan Chandra, pp. 61 and 58.] Some of the recent work on the handloom industry develops this argument much further than the nationalists might like, but even they were willing to consider this point in 1968. Tapan Raychaudhuri is critical of Morris but he does acknowledge that the argument about the destruction of Indian handicrafts by British manufactured goods imported into India has a long history and pedigree. D.R. Gadgil in *Industrial Evolution of India in Recent Times* in 1924 first asserted that the village weaver remained largely untouched by European competition. He also referred to the complex factors that led to the decline in handicrafts. As for Raychaudhuri himself he prefers the viewpoint of Morris that there was no net decline in handicrafts. In his 1936 monograph, *Urban Handicrafts of the Bombay Deccan*, N. M. Joshi argued that there were different trajectories of the industries in the handicrafts sector, some declined, some evolved and underwent mutations while some new ones emerged using factory made tools. A standard economic textbook of the early 1950s by Jathar and Beri quoted statistics to show "the steady growth in the production of hand-woven textiles in the twentieth century." As far as Raychaudhuri is concerned the survival of handicrafts into the mid twentieth century is not in doubt. What he wanted to emphasize is the "stagnation of skills and hence of productivity in the secondary sector of production." [Tapan Raychaudhuri, "A Re-interpretation of Nineteenth Century Indian Economic History?", *IESHR*, pp. 93-94.] The main argument is that the potentialities for growth available to countries coming to industrialization late were frustrated because of the constraints produced by colonial rule.

34.4 DE-INDUSTRIALIZATION IN GANGETIC BIHAR

The evidence from the Census did not support an argument about de-industrialization but by comparing the evidence provided in the Buchanan-Hamilton survey between 1809-13 and the Census of 1901 A. K. Bagchi was able to conclude that the percentage of the population in Bihar dependent on secondary industries declined from 18.6% to 8.5%. [See Tables 5 and 6.] This evidence about the decline of artisanal production in Gangetic Bihar in the 19th century was a modern nationalist restatement of the de-industrialization of the country during colonial rule. The argument did not depend on the use of the census data in the manner that Thorner had debunked. However, Vicziany challenged this position of

Bagchi on several grounds. It was argued that Montgomery Martin had put the data collected by Buchanan together in the form of tables in 1838 and therefore there was a need to go back to the original records in the India Office Library in London. Even Buchanan's own survey could not be very reliable since he covered more than 25,000 miles, averaging over 10 miles a day and was dependent on local informants who may have fed him wrong information because they were fearful of taxes or Company intervention.

Table 5
Industrial population in selected Bihar districts around 1809-1813

District	Absolute Number of the population dependent on industry		Percentages of the industrial to total population	
	Assumption (a)	Assumption (b)	Assumption (a)	Assumption (b)
Patna-Gaya	985,947	655,551	29.3	19.5
Bhagalpur	454,965	286,080	22.5	14.2
Purniya	874,860	587,860	30.1	20.2
Shahabad	446,775	287,285	31.5	20.2
Total	2,762,457	1,806,776	28.5	18.6

Source: Bagchi, 'De-industrialization in Gangetic Bihar,' in *Essays in Honour of S.C. Sarkar, 1976. Table 3, pp. 509.* Assumption (a) is that every spinner supports one person besides himself/ herself and assumption (b) is that every spinner only supports himself/ herself.

Table 6
Population dependent on industry in 1901 in selected Bihar districts

District	Total Population	Industrial Population		Percentage of Industrial to total Population	
		Unadjusted	Adjusted	Unadjusted	Adjusted
Patna	1,624,985	279,093	179,695	17.1	11.1
Gaya	2,059,933	287,732	187,016	14.0	9.1
Shahabad	1,962,696	346,400	228,051	17.7	11.6
Monghyr	2,068,804	281,325	155,439	13.6	7.5
Bhagalpur	2,088,953	222,796	115,618	10.7	5.5
Purnea	1,874,794	220,506	121,933	11.8	6.5
Total	11,680,165	1,638,662	987,752	14.3	8.5

Source: Bagchi, 'De-industrialization in Gangetic Bihar,' in *Essays in Honour of S.C. Sarkar, 1976. Table 4, pp. 512.* Unadjusted figures are raw census figures. The adjusted figures are calculations by the author.

The principal objection was that Bagchi had over-estimated the number of people engaged in industrial employment in the early 19th century and therefore he was able to make a convincing case for de-industrialization in Gangetic Bihar. Vicziany contended that Buchanan's estimate of the spinners was weak and many of the people classified as spinners could not have supported themselves on the basis of spinning. As is very evident some of the objections against Bagchi's use of data are a matter of interpretation. According to Bagchi the spinners in the early 19th century earned enough to support themselves. Besides in his view it was sufficient to demonstrate that spinning was the principal means of livelihood for such groups of people, not that it supported them fully. On the other hand the view of Vicziany was that spinners earned meagre sums and that

it would be more appropriate to characterize such groups as part-time spinners. For Bagchi the fact that households were engaged in a multiplicity of economic activities was evidence of prior de-industrialization.

As Sumit Guha has pointed out the calculation of employment in the traditional artisanal sector will depend on the estimates of labour requirements of handspinning to a considerable extent. Bagchi has estimated secondary sector employment on the basis of a ratio of 20 spinners to one weaver in Gangetic Bihar in 1809-13. For his part Twomey follows Om Prakash in assuming that 2.5 spinners are required to supply one weaver with yarn. If Twomey had used Bagchi's ratio then he would have estimated the decline in employment during the period 1850 and 1880 at 23 million instead of 3.55 million FTJE (Full Time Job Equivalent). The term FTJE refers to the work done by a number of part-time spinners and weavers that would be equal to the work done by a spinner or weaver if he had been employed fulltime. If Bagchi had used Twomey's ratio in his revised calculation then the secondary sector employment would be a modest 12.9% of the population instead of 21% in 1809-13. The decline in employment from 12.9% to 10.5% in 1901 would not be a very significant decline. Sumit Guha for his part has estimated that it would require the output of six spinning FTJE to meet the needs of yarn for one weaving FTJE. As a consequence of this revised ratio of spinners to weavers the loss in employment in the handicraft sector should be estimated at about 7.7 million FTJE. Although Guha revises the estimates given by Twomey upwards he also argues that the ratios of 20 to 1 or even 15 to 1 assumed by Bagchi are very high and unrealistic.

Although Krishnamurthy broadly agrees that there was decline in the number of people engaged in industrial activities in the 19th century he has drawn attention to the specific aspects of this process. In a 1985 *IESHR* article he argued that Bagchi estimated the number of people engaged in artisan activity in 1809-13, other than in spinning, by multiplying the number of people reported as 'artisans' by an assumed family size. This procedure overstates the dependence on industry in the case of the artisan families. However, this procedure does not take into account the industrial activity of other artisan families of Gangetic Bihar. For most women spinning does not appear to have been a major source of livelihood. It would be closer to the truth to classify women workers in the data for 1809-13 as workers engaged in rice processing than in spinning. On the whole, however, there was a significant decline in the major industries like cotton and silk. By and large there was a shift towards producing coarse cloth, which required coarse handspun yarn. Patna, Gaya and Shahabad became important centres of coarse cloth, like *motia* or *gazi*, which was even sold in the North-West Provinces. Maldehi – a fabric produced by mixing cotton and silk was extensively produced in Bihar, as was *tusar* silk. Some of the minor industries were not badly affected. The carpet industry did reasonably well and the *Karga darris* of Patna flourished. The leather industry did suffer a decline because of the increase in the use of foreign-manufactured shoes but the use of Indian leather for making water buckets, bellows, oil and molasses jars survived. The position of the leather workers suffered a decline partly because of the export of hides and the gradual decline and disappearance of customary payments at harvest time. Common pottery too survived in the 19th century.

34.5 REGIONAL VARIATIONS IN THE PROCESS OF DE-INDUSTRIALIZATION

As a result of several detailed studies of the nature of traditional industries in the colonial period the discussion of de-industrialization has become more complex and nuanced.

By now most scholars have come to accept that there was not much evidence for de-industrialization in the 20th century. In fact some authors like Tirthankar Roy have even argued for an increase in the share of handicraft and handloom production in the domestic market for textiles. However he sees a decline in employment in cotton, silk and wool weaving in the years between 1911 and 1931 based on the Census data. Employment also declined among potters and braziers and those who pounded rice and extracted oil. There was little change in the wood, metal and leather industries. [See Table 7.]

Table 7
Male workers in industry

Industry Group	1911 (millions)	1931 (millions)
Textiles	2.685	2.531
Cotton	1.921	1.761
Silk	0.078	0.057
Wool	0.103	0.064
Metals	0.658	0.660
Brassware	0.101	0.084
Leather	0.247	0.257
Wood	1.312	1.306
Ceramics	0.768	0.728
Pottery	0.652	0.601
Food	0.806	0.706
Rice-pounding	0.128	0.103
Dress and Toilet	2.676	2.566
Building	0.752	0.528

Source: Tirthankar Roy, *Traditional Industry in Economy of Colonial India*, Cambridge, p. 17. Based on the *Census of India, 1911 and 1931*.

The picture for the 19th century too does not appear as dismal and stark as it looked to the nationalists of that time. Part of this can be explained in terms of the greater awareness of regional variations. The flood of British manufactured goods which entered the country in the 19th century specially effected the economy of eastern India which was the worst affected of the regions of India. The change in the fortunes of Bengal artisanal production was quite dramatic. From a region, which supplied the British East India Company with the largest quantities of its textile products for sale in the European markets during the century before the battle of Plassey (1757) it was subjected to colonial exploitation after the British acquired the Diwani of Bengal, Bihar and Orissa. This region became the worst victim of British manufactured imports into the country during the 19th century though the reversal in the fortunes of the weavers and artisans of eastern India began soon after the battle of Plassey. While some historians like Tapan Raychaudhuri and Sushil Chaudhuri regard the decline in the fortunes of Bengal as largely a post-Plassey phenomenon others have seen a greater continuity in the economy of 18th century Bengal.

It has been argued in more recent articles that the inflow of manufactured goods into the Madras Presidency was on a lesser scale than in Bengal Presidency and that textile exports from Bengal fell more substantially and more quickly than in Madras in the 19th

century. In the case of western India the inflow of manufactured imports was delayed because of the poor development of transport facilities in the region. In 1881 in Rajasthan there were barely 400 miles of railways and manufactured imports could not reach the people living in the inaccessible areas until after World War I (1914-1918). By 1931 over 2900 miles of track had been laid and the local artisans began to face competition from manufactured imports. Not only did competition from manufactured imports come late in the case of Rajasthan the principal competition it faced also came from Indian mills rather than from imported textiles. The same structure of railway rates that favoured the movement of manufactured imports from the ports into the hinterland and of raw material from the interior to the ports also helped the Indian mills based in Bombay to transport their products cheaply to Rajasthan. It also enabled Rajasthan to move its raw cotton for sale to other parts of India at a lower cost.

34.5.1 De-industrialization in South India

In a study of handlooms in the Madras Presidency in the 19th century. Konrad Specker has argued that the volumes of Lancashire goods, which entered Madras in the 19th century, were less than in Bengal but in both regions there were changes in the composition of foreign trade marked by a growing share of agricultural exports. There were, however, some differences in the fortunes of handlooms in the two regions. In 1845 the Madras Board of Revenue concluded on the basis of an enquiry that the number of looms as well as of weavers had increased in most areas over the preceding 25-year period. In 1871 the Board of Revenue said that the number of looms had increased since the second half of the 1850's by about 20-25%. In examining the nature of the handloom sector one has to take into consideration the "massive yearly fluctuations" in the individual districts, which were the product of short periods of crisis. The short-term crises were produced by famines and epidemics, which led to the death, migration or impoverishment of weavers. The weavers were adversely affected both by the rise in the price of the yarn they used and a fall in their purchasing power and that of their consumers. When the harvests were better and agricultural conditions improved the number of looms would quickly go up. This indicated the extent to which the traditional textile sector was dependent on the fortunes of agricultural production and the consequent expansion and contraction of the domestic market.

When the commercial settlements of the East India Company were shut down a decline in textile exports from Madras Presidency set in on a significant scale in the 1830s. With the withdrawal of the East India Company investments there was a general shift towards the production of coarse variety of cloth instead of the finer cloths produced earlier. There was a significant decline in the production of fine quality cloth and the number of looms increased precisely because more coarse cloth was being produced. The fall in the quality of English textile exports to India in the first half of the 19th century forced the traditional textile sector to produce greater quantities of coarse quality cloth than they might otherwise have done. In the northern districts of the Coromandel Coast, where Company demand earlier had stimulated the production of fine cloth, the closure of their establishments led to the stagnation or decline of looms. In the southern districts looms either stagnated or increased. Increased production of coarse varieties of cloth led to the relocation of the textile industry towards the southern part of the Presidency. By shifting into the coarser varieties of cloth and by producing items suited to local tastes and demand the traditional sector was able to withstand competition. The Madras Board of Revenue, which had estimated that there were 280,000 looms in 1870-71, concluded that there were 300,000 looms in the Presidency in 1889. [See Table 8]

Table 8
Number of looms in the Madras presidency, 1856/57-1860/61 and 1869/70

District	1856/57- 1860/61		[Average] of looms	Number 1869-70		Difference	
	Urban	Rural	Total	Urban	Rural	Total	-(Minus) + (Plus)
Ganjam	757	3,735	4,492	1,227	6,080	7,307	2,815
Vizagapatnam				234	33,770	34,004	
Godavery	919	10,456	11,375	762	14,676	15,438	4,063
Kistna	4,081	10,640	14,721	4,321	15,319	19,640	4,919
Nellore	762	12,327	13,089	836	13,893	14,729	1,640
Cuddapha	258	19,173	19,431	256	18,450	18,706	725
Bellary	4,975	12,099	17,074	9,077	14,216	23,293	6,219
Kurnool	446	7,536	7,982	759	13,706	14,465	6,483
Chingleput	2,612	5,596	8,208	2,800	6,181	8,981	773
North Arcot	7,948	12,123	20,071	4,886	10,151	15,037	5,034
South Arcot			12,882	3,414	6,079	9,493	3,389
Tanjore	6,479	10,266	16,745	5,421	9,221	14,642	2,103
Trichonopoly	330	4,722	5,052	534	6,204	6,738	1,686
Madura				3,808	9,745	13,553	
Tinnevelly	7,460	6,579	14,039	9,463	14,586	24,049	10,010
Coimbatore	1,801	10,349	12,150	1,562	11,651	13,213	1,063
Salem	6,840	8,228	15,068	9,614	9,367	18,981	3,913
South Canara				69	1,978	2,047	
Malabar	75	4,882	4,957	162	4,742	4,904	53
Total.			204,623	59,205	220,015	279,220	

Source: Konrad Specker, 'Madras Handlooms in the Nineteenth Century,' in Tirthankar Roy (ed), *Cloth and Commerce: Textiles in Colonial India*, Delhi, 1996, Table 6.7, p. 192.

The income of the weavers declined with the increasing shift towards the production of coarse cloth because the raw material costs determined the final sale price more in the case of coarse rather than fine cloth. Consequently more weavers had to live off smaller money incomes. According to Specker the incomes of weavers declined since the increase in the number of weavers and looms was not accompanied by a corresponding rise in production. The prevailing low prices of grain, however, ensured that their real wages did not fall too much. The increased production for the local market exposed the producers of coarse cloth to greater risk in periods of famine. During the famine of 1877 the weavers had to pay high prices for the grain that they had to buy for consumption because they did not produce it themselves. In addition the fall in the purchasing power of the peasantry forced the weavers to sell their products at a loss, the losses often as much as 30%. The share of imports in the total yarn used in Madras Presidency was 37% in 1870 and rose to 55% in 1890. A lot of the yarn was imported from Bombay. The use of imported yarn was restricted to the areas around Madras partly because of transport costs. In the 1870's the bulk of the imported yarn was "in the lower ranks of the middle-quality range." Machine-made yarn was considered better for the middle quality range. Given raw material and labour supply conditions in India traditional yarn of the roughest kind was considered more suitable. Guledgud (24 kilometers from Badami,

Karnataka) weavers used both European and traditional yarn for their products. While the European yarn had the advantage of strength and purity the indigenous yarn was more suitable for dyeing. On the whole English yarn was preferred for the warp and Indian yarn for the weft.

Specker concludes that in quantitative terms there was no 'destruction' of the traditional textile industry. Despite local variations the number of looms tended to rise from 1820 to 1870. Despite a growing shift towards coarse cloth and problems of oversupply and 'socio-economic strain' several products were able to expand production based on their specific advantages like those produced by the weavers of Kornadu and of Guledgud. Unlike many other experts earlier who believed that the competitive position of the Indian weavers was strengthened by the use of the cheaper and superior imported yarn for Specker this was not very significant. Firstly, the cheaper machine-made imported yarn was available in significant quantities only after the shift to coarse cloth production in India had already taken place. Secondly, indigenous yarn of the coarsest and the finest qualities "proved to be more economic and/or superior in quality than imported yarn."

While Specker and C.J. Baker argued that the traditional handicraft production could not survive the competition from Lancashire imports in the 19th century and had to shift into the coarse cloth market the recent evidence for the 20th century points towards a relative increase in the share of the unorganized sector in the 1930s. One of the factors, which helped the handloom industry to expand its output, was the change in the traditional clothing habits of the people of Madras Presidency. The report of the 1942 Fact Finding Committee was that the competition between the Indian mills and the handloom weavers was most serious in the medium counts between 21s to 50s during the 1930s and 1940s. In the Tamil districts of the Madras Presidency handlooms survived competition by changing their products in four types of ways : (i) The weavers began to produce fine coloured cloths with high-count yarns or silk and less often with gold threads or *jari* for the upper end of the market. (ii) Artificial silk yarn was also used to weave coloured cloth for the less well-off consumers in India and abroad for use on ceremonial occasions. (iii) Coloured cloth was exported abroad and low count yarns were used to weave coarse cloth for the lower class consumers. (iv) In Madurai and Salem weavers survived by producing silk sarees, silk *angavastrams* or cotton ones with silk borders. Weavers engaged in the production of coarse cloth *duppattis* in the 1880s shifted by the 1930s into producing *angavastrams* of superior quality. In Tanjore, Kumbakonam (40 kilometer from Thanjavur), and Kornadu only silk weaving existed. Saurashtra Brahmins and Devanga Chettis in Tanjore worked only with pure silk. In Ramnad district, among others, the weavers shifted from producing rough cotton sarees to producing cloth from artificial silk and mercerized yarn.

The increasing use of cheaper and more attractive Japanese mercerized yarn not only displaced Indian mill-made yarn but also helped the handloom sector survive competition from Indian mills. In several districts as coarse cloth production was affected by Indian mill production the weavers shifted to the production of *kailis* or *lungis* and Madras handkerchiefs that had been manufactured on a much smaller scale earlier. Madras handkerchiefs were exported primarily to West, East and South Africa where they were used as clothing as well as curtains and cushion covers. The *lungis* were widely used in the South-East Asian countries and in Ceylon. While Indians settled in these countries had a taste for the products from Madras the *lungis* were also popular with the consumers in parts of Africa and South-East Asia. Yanagisawa has estimated that the share of the coarse varieties of cloth for the domestic market was probably less than one-third of total production in terms of value in the Tamil areas. Changes arising from transformation of clothing habits also had an effect on the evolution of the handloom industry. While the

decline in the use of turbans and *angavastrams* and the growing adoption of shirts, shorts and hosiery helped the mill-made goods to make inroads into the local markets there were other sartorial changes, which favoured the handloom industry. The growing demand for saris in north India, increasing use of blouses in south India, increasing non-Brahman demand for cloth formerly used only by the Brahmans, and the rising demand for artificial silk sarees by the poor classes were the factors which created the demand for the products of the handloom industry in Madras Presidency.

34.5.2 De-industrialization in Western and Central India

The Madras Presidency may have escaped the consequences of expanding British manufactured exports to India, but not so the Central Provinces or Western India. By about 1840 for India as a whole and somewhat later for the Central Provinces British imports to India became a significant economic factor. In terms of the volume of exports in 1839 and in value in 1843 India became the principal market for British textile exports. By the end of the 19th century Indian textile imports averaged more than two billion yards a year and were valued at nearly 20 million pounds annually. India absorbed more than 40% of the total cloth exports of Britain by the end of the century. Indian mill production also began to increase significantly in the 1870's. In the light of these factors a decline in handloom production was only to be expected. Although it met the entire domestic demand for cloth at the beginning of the 19th century the handloom sector was able to retain only a quarter share of the domestic market by the end of the century. The handloom weavers of the Central Provinces were able to retain nearly 40% of the domestic market until the beginning of the 20th century and therefore were more successful than their counterparts in other regions. Harnetty argues that de-industrialization did take place in the 19th century even though it was only partial.

The downward trend in the 20th century was checked partly by the diffusion of superior technology and partly by government effort to reverse the process of decline in handloom production. On the whole the position of the weavers deteriorated over the course of the 20th century. The introduction of the fly-shuttle slowed down the decline in the handloom weavers' share in the total production and consumption of cloth but the earnings of the weavers did not rise. The Fact-Finding Committee of the Central Provinces reported that the number of looms in the province declined by 25% between 1932 and 1940. Despite the decline in the number of looms and the population supported by them the output of cloth between these two dates remained unchanged or rose somewhat. This was made possible by the increase in output per capita since by 1940 half the handloom weavers in the Province had adopted the fly-shuttle. This was a significant transformation in the technology of production because in 1919 less than 2000 fly-shuttles were in use in the whole province. The average per capita income of a weaver's family was estimated at around Rs 93 a year or about four annas a day in 1939-40. Therefore, Harnetty has argued that though the gains in productivity enabled the handloom sector to increase its output even with a decline in the number of weavers, the per capita income of the weavers remained at the levels they had been at the end of the 19th century.

There was a change in the nature of handloom production in the long run not only in terms of technology but also of location. The handloom weavers who survived were concentrated in just a few urban centres like Nagpur, Umrer, Pauni and Burhanpur. There was a change in the composition of the weaver community both in terms of their skill levels and their caste backgrounds. Weavers like Koshtis and Momins who were the groups with higher skills and caste status continued in their old occupations and normally did not accept employment in the cotton mills. Village artisans with lesser skills, engaged in coarse weaving, as a part-time occupation together with work of a menial

kind could not continue in their traditional occupation, turning to factory work or agricultural employment. Saris and *dhotis* were some of the traditional garments produced by the handloom weavers, but the range of their products had greatly shrunk because of changing fashions and competition. Although the use of machine-spun yarn enabled the handloom industry to survive it also increased their dependence on middlemen. A system of advancing credit to the weavers developed in the Central Provinces in the late 1860's as a result of the decline in hand spinning and the dependence of weavers on mill yarn, specially in the urban areas. This increased their dependence on middlemen both reducing their profits and subjecting them to the vagaries of the market.

Though the fly-shuttle was an important factor in the ability of the weavers to withstand competition the innovation was not readily accepted in the early stages. In his efforts to popularize the fly-shuttle Chatterton discovered that the weavers of coastal Andhra districts, the Guntur and Krishna districts, were more responsive than those of large centres like Conjeevaram, Madurai, and Salem. In part this could be attributed to the greater rigidity of the caste system in the Tamil urban centres. According to Harnetty the rigidity and prejudices produced by caste could also partly explain the slower acceptance of the fly-shuttle by the Koshtis, a ritually pure caste of weavers established in the trade for long in the Central Provinces. On the other hand the Padmasalis who were Hindu immigrants from the Muslim state of Hyderabad had fewer prejudices much like the Momins who were Muslim immigrants from the Ganges valley. The diffusion of the fly-shuttle and the spread of the cooperative movement in the late colonial period helped the handloom sector of the Central Province to cope with the competition from the domestic and foreign mill sector.

34.6 DE-INDUSTRIALIZATION AND THE IMPACT ON EMPLOYMENT

In a brief article on the subject of employment in the textile industry of India in the 19th century Michael Twomey argued that the most severe employment effects of 'de-industrialization' took place between the years 1790-1830 and the years 1850-1880, the decline in the later period being much more significant. On the basis of his calculations Twomey concludes that employment in this period declines in Bengal by 244,000 FTJE and for the rest of the country by 56,000 FTJE. The full time job equivalents are calculated by including data on the number of weavers with that on spinners, the latter being mostly part-time workers, in terms of full-time employment. Since the value of Calcutta's exports fell from 14 to 1 million rupees or by 95% and that of the rest of the country fell from 11 to 8 million rupees or by 30% during the period 1790-1830 the greatest decline of employment was naturally in the eastern province of Bengal. Although the decline in textile exports constituted about two-thirds of Indian textile exports the drop was not a significant proportion of total production. The regional bias in the decline in employment is obvious and there were some options for weavers to take up silk weaving and using imported cotton yarn. The period 1830-1850 separates the period of declining Indian exports from that of declining handicraft production. There was not much decline of handicraft production since cloth imports constituted about 1 yard per person by 1850, which would have constituted about 10% of Indian production.

The real decline in employment took place in the post-1850 period when Indian production fell to less than 40% of Indian consumption. Therefore the greatest decline in handloom production took place in the 1850-1880 period when the cloth imports in India increased by 1500 million yards or 6 yards per person. Total consumption is estimated at about 11 yards per capita for this period. Twomey estimates that textile employment declined in

this period by 3.6 million FTJE's, though the loss could vary between 2 to 6 million FTJE's depending on the different methods used for estimation. The loss of 3.6 million full time jobs would have amounted to almost 1.5% of the 1850 population of 250 million. This is twice the absolute number estimated by Feuerwerker as the loss in employment in China during 1870-1910 due to imports of yarn from India and later Japan. Although handicraft textile employment fell in absolute terms throughout the 19th century, during the period 1800-1850 the growth of population did counteract the influence of the decline in textile exports. On this point Twomey supports the argument of Morris. By 1930 per capita imports had declined to 5 yards per capita from the level of 8 yards before World War I and the fate of Indian handlooms depended increasingly on competition with Indian mills rather than foreign mills.

In *The Cambridge Economic History of India*, Vol. II it has been argued that between 1881 and 1911 the share of agriculture, inclusive of general labour and of activities related to agriculture, did not change at all rising merely from 72.4% to 74.5% of the workforce. Though the share of manufacturing fell from 10.6% to 9.1% in this period part of this decline can be attributed to the fact that all manufacturers-cum-sellers in 1881 were included under 'manufacturing' whereas in the Census data of 1911 this inclusive category was dropped. Instead people were classified as either manufacturer or seller depending on which economic activity was predominant. There was a decline of the workforce engaged in both the activities of manufacture and trade and commerce from 15.5% to 14.6% in this period. This analysis of the workforce applied only to the male population. According to Krishnamurthy during the period 1901-1951 while employment in factories in the manufacturing sector rose from 0.6 to 2.9 million employment in small-scale enterprises declined from 12.6 to 11.4 million. According to the national income estimates made by Heston the real output of small-scale industry rose by 14% between 1900-1/1904-5 and 1942-3/1946-7. In the traditional industries there was some decline in employment from 2.4 million to 2.2 million between 1911 and 1951 in the case of cotton spinning and weaving. Since handloom output in undivided India increased from 965 million to 1068 million yards in the period between 1902-3/1912-13 and 1930-1/1937-8 Krishnamurthy concluded from this that the output per worker in this period must have risen.

The substantial decline in the employment of leather workers was a consequence of the rise of tanneries and shoe factories that progressively replaced the local leather workers. There were also declines in earthenware and earthen pottery, oil-pressing and foodgrain processing. Production of handloom textiles, *bidi* and *gur* production did not decline. Taking the entire manufacturing sector into account the share of handicrafts in total employment did not decline if the statistics for male workers alone are considered. If the evidence for both male and female workers is considered there is a decline from 9.6% to 8.7% between the years 1911 and 1951. This cannot be regarded as de-industrialization because there was a "significant relative and absolute increase in the output of the manufacturing sector." Even for the period 1881-1911 the term de-industrialization is regarded as inappropriate since the decline in industrial employment was accompanied by increases in relative and absolute industrial output.

34.7 RECENT WRITINGS ON DE-INDUSTRIALIZATION

The interpretation of the reasons for the survival of handicraft production has in recent times been influenced by the writings of Tirthankar Roy, Douglas Haynes, and Yanagasawa. For a long time the literature was dominated by the theory that the only reason why traditional handicrafts survived was by shifting to coarse cloth production, by catering to the needs of the poorest sections of the population in

sheltered local markets. Within this constraint the traditional producers tried to innovate, adopted the use of cheaper imported yarn and tried to produce goods acceptable to indigenous, and especially local, tastes and preferences. More recent writers take a more optimistic view of the situation of the traditional artisan sector. Roy has identified four basic processes at work that influenced the growth of the handloom sector. First producers diversified into those sectors where they did not have to compete against mill products. Secondly, the inequality among the weavers began to grow over time and many weavers actually flourished. Thirdly, there was a growing concentration of weaving in the urban centres where the methods of production were more advanced than in the rural areas. Finally there were changes in techniques which influenced the handloom sector for example by the shift from cotton to man-made fibres and the adoption of techniques that had a tendency to reduce the role of labour, specially family labour, in yarn processing.

According to Roy handloom factories emerged in southern and western India during the 20th century and big weaving towns like Sholapur, Salem and Nagpur had '*karkhanas*' which by the mid-20th century had a capacity of between 10,000 and 20,000 looms each concentrated in these towns. Weavers during the 1920s and 1930s were increasingly coming under the influence of a large trader or producer. Mass production and trade developed more in the south because the preference for handlooms in this region was more pronounced and the dresses and costumes were less subject to changes in fashion. Factory towns developed in the south based on the migrants from the arid and famine-prone zones in which they were located. These factory towns were characterized by sharp inequalities among weavers specially because the migrant weavers of the lower castes had "unequal access to markets and resources." In north and east India where weaving was predominantly a rural activity the trader-cum-moneylender acquired greater control over the weaver-producers. Mass production was also made possible by a market-sharing pattern that developed. The mills produced piece-goods or cloth that had to be stitched while the handlooms produced finished products, specially draped cloths. The handlooms produced coarse and fine cotton as well as pure and waste silks. Their loom woven designs, primarily bordered garments were popular. The mills produced more medium-count cotton and printed cloth. In the inter-war period when viscose fibers were first used handlooms benefited more than the composite mills. The small-scale power loom sector, which emerged in the mid-thirties "was an outgrowth of the handloom elite."

While cloth output fell by 40% between 1850 and 1880 and loomage may have declined as well, Roy asserts that in the first twenty-five years of the 20th century handloom production rose by 30% in both India and China. The number of looms and weavers grew in Egypt, Syria and Java for short periods of time between the late-19th century and the mid-20th century. In India weaving was relatively detached from the land and the weavers were apparently the "only prominent craftsmen excluded from the *jajmani* system of product sharing." [Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, p.14 footnote 5.] The handloom industry was able to survive because of the "persistence of decorative and complex weaving" which is not related to expensive products or luxury goods. However, during the period of expansion in the 20th century it was based more on real incomes rather than relative prices. Direct competition with the mill sector was not a major factor affecting the growth of handlooms. In fact growth was based on a polarization between producers in these two sectors. Roy has asserted on the basis of his calculations that though the share of handlooms in the home market were subject to considerable fluctuations the upswings seemed to get progressively higher. The share of handlooms in the domestic market rose between

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the years 1900-4 and 1935-39 from 27.6% to 31.6% while the share of imports during the same period dropped from 57.4% to 11.8% and that of Indian mills rose from 15% to 56.6%. [See, Table 9.] The fall in handloom market share to 24.4% in the years 1915-19 could be because of a raw material crisis. The fall in market share in the late 1920s after an upswing in the early 1920s could in part be the consequence of protective tariffs that were heavy on yarn and specially “on the superior quality yarn, which the handlooms preferred.” Once the domestic capacity for producing superior yarns increased the handloom share in the domestic market recovered. As weavers who used above-40s counts and those who used better yarns were adversely affected by tariffs and nationalist agitations in the 1930s the towns of Dacca and Santipur in Bengal actually experienced an increase in unemployment.

Table 9

Shares in the home market (in percentages)

Years	Cotton Mills	Handlooms	Import	Total	(M. Lbs)
1900-4	15.0	27.6	57.4	100	751.3
1905-9	19.1	29.6	51.8	100	875.9
1910-14	21.7	27.7	50.7	100	1108.6
1915-19	37.7	24.4	37.9	100	874.0
1920-24	37.3	30.4	32.3	100	975.8
1925-29	39.4	27.5	33.1	100	1160.7
1930-34	51.5	31.7	16.8	100	1158.8
1935-39	56.6	31.6	11.8	100	1325.1

Source: Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993. Annual averages of cloth produced in yarn equivalent. Based on statistics published in Reports of Bombay Millowners Association, pp. 28.

The level of wages in the handloom sector and the mill sector were surprisingly close. According to Roy’s estimate the weaver’s piece-rate per yard converted to a monthly wage about 10% below the mill average rate. The typical weaver was however employed for only two-thirds of a year. Moreover the gap in the earnings of the small weaver families and the *karkhanas* using hired workers widened during the inter-war period. The output increase in the inter-war period has to be attributed to technical change primarily because the total number of looms remained more or less constant around 1.9 to 2 million looms during this twenty-year period. The proportion of pit looms with fly-shuttle attachments rose from 5% in 1920 to 35% in 1940. Since better looms substituted for surplus family labour the improvement in the productivity of looms was based on widening differentials in the incomes of different categories of weavers. According to the official statistics the informal or handloom sector stagnated or declined in the decade of the depression in the 1930’s, but Tirthankar Roy on the basis of his own reconstruction of the data concludes that during this decade while the shares of physical outputs remained constant the value of the products of the handloom sector actually rose. The share of the handloom sector in the total value of products rises in the 1930’s partly because of the growth in the production of non-cotton production, mainly products intermediate between fine cotton and pure silk. Essentially the value of the output of the handloom sector rose because of the diversification towards costlier and superior products. [See Table 10 and 11 on ‘Quantity and Value of Handloom Output’, in Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, p. 61.]

Table 10
Market shares, 1931-32 to 1937-38

Years	Mill	Import	Powerloom	Quantity (in percentages)	
				Handloom	All
1931-32	51.4	15.2	—	33.2	100
1932-33	47.0	19.7	0.4	32.9	100
1933-34	51.7	14.9	0.8	32.6	100
1934-35	53.2	16.4	1.0	29.6	100
1935-36	50.6	16.3	1.3	31.8	100
1936-37	54.9	13.6	1.6	29.8	100
1937-38	56.9	10.5	1.9	30.7	100

Source: Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, Table 10, p. 62.

Table 11
Market shares, 1931-32 to 1937-38

Years	Mill	Import	Powerloom	Value (in percentages)	
				Handloom	All
1931-32	35.1	16.5	—	48.4	100
1932-33	31.5	17.9	1.2	49.4	100
1933-34	35.5	13.3	3.0	48.3	100
1934-35	36.3	15.0	3.4	45.3	100
1935-36	36.3	13.1	3.2	47.4	100
1936-37	39.1	11.5	4.3	45.1	100
1937-38	36.9	9.2	5.3	48.6	100

Source: Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, Table 10, p. 62.

The classification of handlooms by fineness of yarn reveals that between the years 1906 and 1940 they were supplying a smaller proportion of coarse cloth by the latter date. This was a break from the trend in the nineteenth century when handlooms did well in coarse goods and fairly well in medium and fine cloth. In the years between 1906-1940 coarse-medium and medium cloth handloom production gained but the mills gained much more from the decline in British imports. This was because the Indian mills produced coarse and medium count yarns. Observes Roy, “Import-substitution in cloth by the mills favoured these classes, whereas import-substitution by handlooms favoured the finer classes.” [See Table 12.]

Table 12
Segmentation of handlooms by fineness of cotton yarn

Yarn Counts	Handloom share in total yarn consumption (percentage)		Share of yarn group in handloom production, 1906 (percentage)	Market size 1940 (billion lbs yarn consumption)	Share of yarn group 1940 (percentage)
	1906	1937-40			
1s-20s	41	28	55	0.71	55
21s-30s	6	24	9	0.30	19
31s-40s	26	33	27	0.15	14
41s+	23	49	9	0.09	12

Source: Tirthankar Roy, *Traditional Industry in the Economy of Colonial India*, Cambridge, 1999, Table 3.2, p. 78.

In a recent publication titled *Traditional Industry in the Economy of Colonial India*, Tirthankar Roy has argued that the destructive side of colonial rule for the industries of India has been emphasized by the dominant viewpoint. His book, on the other hand, deals with the “creative impact” of colonial rule and asserts that there are certain similarities in the effects of long-distance trade on the artisans of India as well as those of Britain and Europe. Dissenting from the dominant view in Marxist and nationalist accounts of the destructive impact of colonial domination Roy argues that the evidence does not support such a view. The experience of textiles is ambiguous. While competitive imports effected some handloom weaving in the case of non-competing cloth production the experience of long distance trade was more positive and creative. Secondly, the evidence on employment is regarded as ambiguous because it does not take into account the changes in technology and organization within artisan production. Finally the dominant view is inconsistent with the long-term character of industrialization in India since the informal sector has remained important long after independence. Even in 1991 about 71% of industrial employment was outside registered factories; in 1911 the proportion was 95%. On the basis of the changing interpretation of the Industrial Revolution and proto-industrialization the progress of industrialization is not regarded as a process of replacing tools with machinery, of old with new technology but of numerous hybrid ways of using labor in artisanal production under new conditions of production and exchange.

Although the author disagrees with the Marxist view of colonialism and of development and highlights the creative responses of traditional industry to long-distance trade he does recognize the limits of his re-interpretation. India did industrialize in the sense of replacing domestic labour with wage labour and improving industrial organization, but the process of change was weak. India did not experience “significant structural change or economic development.” [Roy, *Traditional Industry*, p. 57.] The rise in agricultural productivity and rise in domestic demand, which could have stimulated the growth of Indian industries, was absent. Industrialization was also slowed down because of a sustained high population growth rate and the limited availability of institutional credit for the financing of fixed investments. Roy deals at great length with the creative transformation of traditional industry but acknowledges that it did not lead to a rise in average incomes or a new paradigm for technology finance or management. The problem was that this industrialization was constrained by “informal training, informal credit, and plenty of low quality labour.” In so far as social factors based on caste restricted entry into and exit from traditional occupations this factor too contributed to India’s economic backwardness.

The transformation of traditional industries in India in the colonial period has been well documented in the work of Roy and Haynes. There was a shift from production for local use to a process of production for a wider market, from local to long distance trade, a change in consumer and producer behavior associated with the growth of long-distance trade, and of institutional and other changes associated with these developments. Trade led to a reduction in the local production of several inputs like cotton yarn, jari and dyes and the growth of imports. The use of imported sheets in metals and blocks in glassware increased. As a consequence of production for the market, handlooms for instance, gravitated towards the towns where input trade was concentrated. Purely economic factors were more important in the growth of craft towns in the colonial period. Towns like Sholapur, Salem, Ludhiana and Surat served primarily non-local markets. The methods of sale of products shifted from spot to contractual arrangements. There was a decline in the quality of output as production was increasing for distant and anonymous consumers. In order to cope with the problems arising from commercialization, craft towns either tried to improve quality control or simplify products for the mass market. Surat *jari*, Mirzapur carpets and Moradabad brass were craft-town products, which adapted to the mass market. There was a greater primacy of the craft in the process of

production and despite the growing importance of trade and finance in the 20th century it was easier for the producer to become a financier or merchant. There were two types of production units, which existed. One was the hierarchical team of male Muslim artisans, which “crystallized around master-apprentice lineages”, and the other was the hierarchical team of parents and children in rural or semi-rural crafts or among Hindu artisans. Under the first type of unit, where the division of labour was more elaborate than under the second, many of the most refined products were produced in the *karkhanas*. Moradabad brass, Benares *zari* and brocade, Lucknow *zardozi*, Agra, Amritsar and Srinagar] carpets were some of the quality products which were produced by the Muslim artisans.

There is a case for a decline in employment, but the loss in employment cannot be attributed to the rise in imports alone. The numbers of potters and braziers also declined, as did those of rice pounders and builders. A range of quasi-services placed in the category of ‘dress and toilet’ was also adversely affected. Roy argues that the decline in these industries, which did not face competition from British goods, has to be regarded as “an effect of an as yet poorly understood macroeconomic transition.” If British policy had an effect on this process of transition it was an indirect one. Although Indian handicrafts did decline somewhat the process of industrialization does involve the replacement of skilled workers by machinery. Moreover the real income per worker in industry increased at a compound rate of growth of about 1.7% per year during the period 1900-1947. Real income per capita grew by 0.7% during the same period. All this makes possible “a non-Marxist interpretation of the decline in handicrafts.” National income data is used to prove that during the colonial period there was an increase in productivity. Real income in ‘small-scale industry’ increased by 72% between 1901 and 1947 even though employment declined. Average income in this sector increased by about 1.1% per annum; the average rate for ‘large scale industry’ was lower at about 0.9% per annum.

The traditional handicrafts did not survive primarily by accepting lower incomes and “becoming an industry of the poor for the poor.” In actual fact while some weavers and artisanal producers suffered declines in both income and employment there were other segments of these industries which improvised and succeeded by improvements in technology and organization. The steady decline in the numbers of low-productivity workers is misinterpreted as evidence for a general decline in handicraft production. There were technological changes which facilitated increases in productivity: the use of the fly-shuttle, innovations in plating and polishing in brassware, use of power in the plating of wires in jari production, vegetable dyes and the warping mill in the case of textiles. There was also the growth of urban centres precisely because of urbanization in the crafts. Urbanization in 19th century India was closely related to craftsmen movements. However, in India the “productive role of artisans did not connect strongly with rapid economic development” as in the case of Europe and East Asia.

34.8 CASE STUDIES

Let us look at the evidence on the evolution of industries like brassware and leather.

34.8.1 The Case of Brassware

The Brassware industries were not threatened significantly by foreign competition. The use of imported brass sheets led to reduction in production costs. The use of brass sheets eliminated the older practice of melting scrap in crude furnaces. Mass production of utensils was facilitated by the use of sheets of a standard quality. The increased scale and variety of metals used at the end of the 19th century was a consequence of the diversification of consumption. Cheap transportation provided by the railways helped

the brass industry to expand from the late 19th century to the early years of the 20th century. During the inter-war period as well the demand for brass-wares may have expanded. Indian artisans copied the light durable goods that the Europeans had brought for their own use because the better-off Indians wished to imitate the Europeans. A form of import-substitution by artisans was the production of cast metal goods such as lamps, locks and scissors, hollow glass-ware and printed textiles. The number of workers in brass and bronze grew from 125,000 in 1891 to 145,000 in 1901, declining to 106,000 in 1921. In 1931 the number of workers were estimated at 120,000 and for a thirty-year period thereafter the numbers hovered around a hundred thousand workers. The concentration of workers in 'factories' was higher than in the other crafts. Brass-wares developed quickly in part because they were a substitute for earthenware, but they faced competition from alternatives like aluminum, china and enamelled iron. Brass products were threatened by galvanized iron in the case of heavy and large vessels, by enameled iron in products for poorer households and by porcelain for fashionable goods. Change in crafts unaffected by imports was effected by an "industrial contest within." Larger towns, which were in a position to benefit by economies of scale, creation of brand images and quality control were able to grow faster than the smaller artisan colonies in both ornamental and utilitarian products. In Bengal and Bombay there was a collapse of small-town manufacture in utility products. In western India some of the smaller centres began to shift towards bronze, which was mostly in demand in the rural areas. In the Punjab after the British conquest the village brass and coppersmiths slowly disappeared and metal work became concentrated in the towns of Jalandhar, Batala and Gurgaon.

In the United Provinces during the inter-war period some metalworker colonies disappeared, particularly in copper and bronze. On the other hand towns like Farrukhabad, Mirzapur and Moradabad flourished. The growth of Moradabad was greatly facilitated by the railway links that not only provided cheap transportation for bulk goods but also godowns and storage space. Moradabad had an enormous range of products which combined utility and aesthetics in varying degrees catering to the new urban groups and the middle classes. Brass-wares too, like the other Indian crafts, benefited by the creation of a mass market utilizing skills that could not be matched by machinery. The industry not only produced arabesque (floral and geometrical motifs) engravings on goods for the better-off but tinned wares for the poor. Tinplating copper was a skill that contributed to the early fame of Moradabad. Certain technological changes -like power-driven technologies in polishing and electroplating, use of dies and presses and of power-operated forges, the greater use of wheel-operated instead of hand-operated bellows, the switch-over from clay to graphite in moulding-also helped the brass-ware manufacturers to survive. The increased scale of the karkhana and its gradual upgradation combined with import-substitution in raw materials also helped the artisans to survive under changing circumstances. Mass-production based on new products and better designs and import-substitution in the form of producing billets from scrap in rolling mills accounted for the dynamism of the industry much more than the technological changes which were adopted very slowly. Brasswares survived by differentiating products and "applying craftsmanship" on utilitarian goods.

34.8.2 Leather and Leatherwork

The great transformation in the nature of the leather industry in India began in the 1870s with the increase in exports of hides from the country. By 1890 the trade had reached a figure of Rs 60 million while the domestic rural-urban trade was estimated at Rs 8 million. Leather exports amounted to anything from 5% to 9% of total private merchandise exports from 1890 onwards. The composition of exports changed from cured to tanned goods and eventually to processed leather. The trade in hides was

stimulated by a variety of factors. The famines of 1876-8 and 1896-8 brought cattle to the market in large numbers. The Germans who had mastered the science of mineral dyeing and the Americans who had developed techniques of chrome tanning were major importers of Indian hides during the late 19th century. The railways also brought the hides and skins-producing zones in touch with the port cities where a lot of the hides were being tanned. The railways were a major reason for the growing urbanization of the industry. Once the slaughterhouses began to grow the number of tanneries in urban areas grew. By the early 1920s nearly a quarter of the 20 million hides produced every year came from the slaughterhouse. Now the tanneries could bypass the middlemen and deal directly with the butchers and the merchants who collected dry cattle from the villages. The breaking of the links between tanning and the rural economy is one of the reasons why the proportion of traditional leather castes engaged in the craft declined over time. The number of those employed in the leather industry did not decline during 1901-1931 in northern India but castes associated with leather declined in tanning. In the south, by contrast, the proportions of castes associated with leather were low throughout this period because several labouring castes, chiefly the Paraiyans, entered the leather industry. There were several processes at work. Many leatherworkers were giving up their craft to become agricultural workers or to join 'clean' occupations. Many became specialist tanners. Those who specialized in leather had three options, according to Roy, "to become subcontractors of hide merchants; to become workers in tanneries; and to become traders themselves." [*Traditional Industry*, p. 169].

As a result of the changes taking place the Chamar in the Punjab who lost traditional rights to fallen cattle was able to become a subcontractor in the new configuration because he was the only one who could flay and cure the hide locally. Also in the newly established tanneries in the urban areas only the Chamars were willing to work in the tanning sections. The traditional leather castes moved not only into tanneries in the urban centres but to a variety of occupations. In western India the Mahars moved into the cotton mills, railways and gin factories. From Chhattisgarh they moved into the tea gardens in Assam, and into a variety of industrial occupations in Bengal. The Malas and Madigas of southern Andhra went to the gins and presses. The migration of the rural tanner was also an outcome of the tendency of the cattle owners to sell their hides or cattle to the slaughterhouse or its contractors. The decline of many traditional uses of leather also weakened the links of the rural tanner to the village. Rural tanning in Gujarat, Khandesh and Marathwada declined because a centralized system of water distribution made the older irrigation water-bag irrelevant. Besides the peasants preferred the chrome-tanned leather for irrigation purposes, which the rural tanner did not produce. There was a small but significant minority of Chamars who became successful traders and entrepreneurs. Chamars owned tanneries in Lucknow as early as the 1880s; they were successful traders in the small towns of Bombay Presidency and in and around Kanpur, Raipur and Mysore. However in the largest tanneries of the country the Chamars were mostly industrial workers.

The reluctance of Hindu merchant castes to lend money to tanners and the ordinary artisans' aversion for raw hides led to a greater participation of non-Hindu and non-artisan participation in this trade. The growth of production in the factories increased steadily during the period after World War I. By 1952 a government report estimated that the rural tanner was processing only 43% of the hides whereas the factories were handling about 50%. There were three types of units, with the village tannery at the bottom of the hierarchy, using family and community labour. At a higher level was the town tannery, which had a slaughterhouse and a spot market in hides. At the

top of the hierarchy was the big factory using a hundred workers or more in the large ports and industrial centers. The number of large tanneries in India rose from thirteen in 1901 to sixty-six in 1939. In Madras Presidency the 1931 census revealed that a quarter of the workers in tanning worked in small and large factories.

Artisans engaged in the production of leather articles were also influenced by change. Products that were in demand during the 19th century, like oil containers, water-bags, and embroidered shoes were in decline during the period after the First World War. With the use of motor transport the demand for saddlery declined. The Bhishtis declined with the steady rise in the supply of water by pipes. However, the leather artisans adapted to the situation quickly enough and began producing boots and shoes as well as harnesses and bags, according to the new styles in demand. The proportion of Mochis who followed their traditional occupations rose because of the increase in the demand for their skills during World War I. They supplied large consignments of 'munda' shoes to army contractors during the war. The 1920s was the period in which the production of finished goods increased. Mochis began to move into the cities. Meerut, Kanpur and Allahabad became centres for manufacture of leather footwear with Agra as the biggest center employing about 25,000 people in the early 1920s. By the 1930s there were Mochi-owned *karkhanas* in Allahabad using Mochi workers. Immigrant Mochis from Bombay Presidency in Madras "asserted a higher social standing than they would command in the lands they came from." [Roy, *Traditional Industry*, p. 191.] Muslims, Europeans, Parsis as well as Eurasians and the Chinese dominated the tanning trade and industry. In Bombay the Bohras and Memons owned tanneries. Muslim entrepreneurs were important in regions as far apart as Madras and the Punjab. In leather manufacture the artisan capitalists like the Mochis also played a role. This did not happen in the tanning industry. In fact subcontracting with the Mochi remained important even after the European multinational Bata entered the market for leather goods.

34.9 SUMMARY

The evidence on de-industrialization in recent writings indicates that the picture is more complicated and less dismal than that which emerges from the works of the older nationalists and nationalist historians. Nevertheless it cannot be denied that there was a decline in artisanal production and employment in India during the 19th century. Despite the evidence of regional variations the overall employment, output and incomes of the artisans in India suffered a notable decline that was related to the disruptive impact of colonial rule and the steady rise in the imports of manufactures from Britain. The recent evidence has drawn attention to the creative responses of the traditional crafts to the impact of long-distance trade on craft production and the capacity of these industries to survive by combining technological with organizational changes to improve productivity and raise the output per worker. In the most optimistic account the share of artisanal production in total textiles consumption grew somewhat in the inter-war period in terms of output. Further, the value of the output of the artisanal sector grew because of a growing proportion of goods of higher quality and value produced by this sector in the 20th century. During the 1930s the share of the handloom sector in terms of physical output did not change, but there was an increase in terms of the value of output.

Technological changes and improvements in productivity may have been limited but a case for de-industrialization in the 20th century is unacceptable to older experts like Thorner and Krishnamurthy as well as more recent ones like Haynes and Roy. There is

no denying the decline in traditional industry in the 19th century with Eastern India being the worst affected region. Even if in Madras Presidency in the 19th century the decline in handlooms is not much in evidence, according to Specker, there is a reduction in the range and quality of the products manufactured. There is a general shift towards the production of coarse cloth in this region too and the incomes of the weavers decline as they do in other regions exposed to competition from imported products. Probably the greatest decline in output, incomes and employment was during the period 1850-1880 for the country as a whole. The controversy about de-industrialization is not only about the extent of disruption and decline but also about the colonial impact on the Indian economy. The negative impact of colonial rule in India is a subject of wider significance and other elements of the critique of colonial rule will be taken up in subsequent sections.

34.10 GLOSSARY

Fly Shuttle

John Kay invented it in 1733. The weaver uses this by pulling a cord that triggers hammers to propel the shuttle left, then right, across the width of the cloth. The flying shuttle, fly shuttle or spring shuttle replaced the old weaving process of carrying the weft through the warp the shuttle had been passed by hand from side to side through alternate warp threads. In weaving two workers needed to throw the shuttle from one end to the other. With the flying shuttle, the amount of work a weaver could do was more than doubled, and the quality of the cloth was also improved. (See Illustrations on pp.37-38 of the present Block, Unit 35)

Jajmani System

Jajman means patron. Under the *jajmani* system, in a village, members of different castes perform various services/tasks for their patrons, usually members of the dominant castes. Service castes are linked through hereditary bonds to their patrons. The lower-caste members provide services according to traditional occupational specializations. Thus, client families of launderers, barbers, shoemakers, carpenters, potters, tailors, and priests provide customary services to their patrons, in return they receive customary seasonal payments of grain, clothing, and money.

Pit Loom

In this type of loom the weaver sits on cushions on the floor and puts his/her feet into a pit that houses the loom paddles. (See Illustrations on pp.44-45, Block 5, Unit 23)

34.11 EXERCISES

- 1) Give a brief account of Daniel Thorner's critique of the Nationalist thesis on de-industrialization.
- 2) Critically examine Morris D. Morris' argument that there was 'not much direct evidence of the decline of India's traditional industries.'
- 3) Analyse the impact of Lancashire imports on the Indian textile industry.
- 4) Define FTJE. Analyse the impact of de-industrialization on employment.
- 5) Examine Tirthankar Roy's argument on de-industrialization.

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UNIT 35 CRAFTS INDUSTRIES AND SMALL SCALE PRODUCTION

Structure

- 35.1 Introduction
- 35.2 Small-scale Industries and Large-scale Industries: Similarities and Contrasts
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35.1 INTRODUCTION

Standard histories of industrialization and industrial labour in colonial India deal mainly with a type of firms described as ‘modern industry’ or ‘large-scale industry’. Large-scale industry, however, accounted for a rather small percentage of employment and income in the early-twentieth century. It has also had a shorter and a more recent history than small-scale industry. Until recently, small-scale industry has had at best a shadowy presence in Indian historiography. Recently it has emerged as a somewhat established field of research. This Unit summarizes some of the main themes in this emerging field. It begins with a look at definitions and the main trends in the small-scale industry. It also covers the debates on ‘de-industrialization’ in the early nineteenth century and the role of small-scale industry in industrialization.

35.2 SMALL-SCALE INDUSTRIES AND LARGE-SCALE INDUSTRIES: SIMILARITIES AND CONTRASTS

Large-scale industry can be defined by three basic characteristics, use of machinery and steam-powered technology, large factories, and some form of government regulation, most important of which was the Factory Act. The vast majority of industrial firms in India in the past or the present times, however, did not use machinery, were located inside households or small workshops rather than large

factories, and were not subject to government regulation. We call this sector ‘small-scale industry’. Handicrafts formed a significant subset of small-scale industry. One more feature, in addition to the three mentioned above, defined ‘handicrafts’ in particular. These industries dated from before colonialism. Keeping this feature in mind, handicrafts have sometimes been called ‘traditional industry’. Important examples of traditional industry or handicrafts are handloom weaving, leather manufacture, a variety of industries using metals, wood, and minerals, etc. In contrast to traditional industry, all of large-scale industry was of recent vintage, it was a product of the Industrial Revolution and India’s close political and economic contact with Britain.

Apart from technology, organization, regulation and vintage, there were a few other points of contrast and similarities between large-scale and small-scale industries. Large-scale industry in India was concentrated in two provinces, Bombay and Bengal. By contrast, about 1950, nearly half the employment in small-scale industry was located in the United Provinces, Punjab and Madras. Thus, large-scale industry and small-scale industry involved different regions. And likewise, the industrial histories of different regions in India involve different types of enterprise.

There was less of a contrast in composition. By far the most important industry among both sets was textiles. One in every four workers overall was employed in textiles. Next in importance were food processing, metals, wood products and hides and skins. We can conclude from this pattern that industries, intensive either in natural resources (cotton, metals, minerals, animal substances) or labour, dominated the composition of both. The relatively high resource- and labour-intensity characterized small-scale and large-scale industries.

The small-scale and large-scale, modern and traditional, had close relationships. Large-scale industry supplied raw materials to small-scale. Workers often moved between them. And small-scale industry workers and entrepreneurs sometimes learnt their skills and acquired new ideas by working in large-scale industry. The former could even buy secondhand machinery from the latter. Textiles supply examples of all three.

35.3 GENERAL TENDENCIES IN SMALL-SCALE INDUSTRY

We need to now look at the different phases of the history of small-scale production, and account for the changes that occurred within them.

35.3.1 The Seventeenth and Eighteenth Century

Modern industry began in India from about the 1850s in some sense as an extension of industrialization in Britain. India, however, was a world leader in handicrafts and small-scale industry such as hand-loomed textiles in the pre-colonial period. At 1750, India supplied about a quarter of the world’s industrial output, and possibly a larger percentage of world textile exports. India was, thus, important in world trade. But it is not clear that world trade was so important to the textile economy within India. At the end of the eighteenth century, cloth export from India amounted to about 50 million yards (Twomey, 1983), whereas total production within India could not have been smaller than 1800-2000 million yards. We know a great deal about European trade, however, thanks to the trade archives in Europe. In fact, having to rely almost wholly on this resource, we know far more about the world that traded abroad than about the world that traded locally and over land, more about trade than production and producers, and about textiles than other industries.

The major exporting regions in India were Punjab, Gujarat, the Coromandel coast, and Bengal. These regions had or could get raw cotton, water, and labour. Before European traders entrenched themselves in Indian waters, each of these regions accessed particular trading networks, Central Asia in the case of Punjab, Red Sea and Persian Gulf with Gujarat, Southeast Asia with Coromandel, and Bengal used its waterways to trade with upper India. For a long time after the entry of the Europeans, the intra-Asian networks remained in place. Europe was not the leading market, nor were Europeans the paramount power until the eighteenth century.

By and large, the weaver worked from within a household unit, the women and children of which supplied auxiliary services including spinning in some cases. There were some exceptions to the family firm in the towns of the northern Gangetic plains, in the form of large workshops owned by rich men. Workers within these typically consisted of all-male master-apprentice teams, perhaps more than one team under a roof. We encounter these two general types - household and male master-apprentice teams - for a long time afterward. But both tended to dissolve into various mutant types of wage-labour-based workshops in the late twentieth century.

With the consolidation of Europeans in the Indian Ocean trade, there came about a long-term process of change. Contractual ties between the trader and the producer progressively strengthened in place of spot transactions, and a bigger number and greater variety of intermediaries began to be involved. The dispersed location of production, and increasingly concentrated markets involved rather high information costs. The need to enforce quality and standardization, and the need to ensure timely supplies, were forever problems the European traders grappled with. No easy or permanent solution was found, leaving enough room for breach of agreement, fraud, default, and in turn, coercion. European trade in Indian textiles had, thus, an essentially chaotic character.

35.3.2 The Early Nineteenth Century: De-industrialization?

By 1800, the Europe-bound export trade network was dwindling. A fairly large demand for Indian handicrafts on behalf of the older nobility and elite whom the British increasingly suppressed, also declined. The first few decades of British revenue policy in the ryotwari areas is often believed to have caused a general demand depression in the rural areas. And from 1820, English machine-made yarn and cloth began to reach Indian markets. As a result, cloth and yarn prices probably fell by a factor of three or four in the next 75 years or so. All of these may have combined to deal a blow to Indian handicraft textiles in the early nineteenth century. This phenomenon is known as 'de-industrialization' and is believed to have pushed many industrial workers into other low-paying occupations.

The existence of an industrial decline in the nineteenth century is not in question. But the impact, timing, and significance of 'de-industrialization' in the early nineteenth century, are open to question. There is no direct evidence on how large the impact was. Nor is there any conclusive evidence on the time-table of a likely industrial decline in India. And while all scholars would agree on a large loss in employment in the handicraft textile sector, the scale of the corresponding loss in income and general welfare is disputed.

The statistical foundation of de-industrialization in the early nineteenth century is based on estimates (Bagchi, 1978; Twomey, 1983) suggesting a fall in industrial employment in the nineteenth century. Before English imports, an estimated 4-5 million persons were engaged in hand-spinning industry. Employment loss by the

end of the nineteenth century was at least as large as this. These estimates, however, do not pinpoint the decline to the early-nineteenth century. On the other hand, regional textile histories covering this period suggest that the decline in hand-spinning and hand-weaving was far more gradual and evenly spread out over time (see essays by Konrad Specker on south India and Sumit Guha on central India reproduced in Roy, 1996, and Harnetty, 1991). Increasingly, from the third quarter of the century, positive forces on the demand for handicraft textiles were strengthening, as we shall see. The decline, therefore, may not have come as a sudden violent cataclysm, but happened gradually and increasingly offset by positive forces.

As for income loss, hand-spinners were by and large domestic workers or agrarian labour castes who performed spinning on the side. The low opportunity cost of their labour implied that they were willing to perform spinning for very small payment. The income loss, therefore, was necessarily much smaller in magnitude than the employment loss. Further, Morris (1969) pointed out that a massive cheapening of cloth due to English imports must have caused an expansion in demand for textiles overall (including demand for those handloom cloths that remained in business). And the effect of a cheapening of yarn must have been a net gain for the handloom weavers who remained in business.

To summarize, there is no question that a large number of jobs were lost in the handicraft textiles in the nineteenth century. But we cannot be sure when and in how concentrated a manner this happened. Nor can we assert if there was a large income loss as a result within textiles. And from welfare point of view, these changes were more likely to have been a net gain than a net loss.

35.3.3 The Late-Nineteenth Century: Re-industrialization?

Implicit above was two points that we now need to tackle. First, while a part of the handicraft textiles disappeared in the nineteenth century, a part survived. How did this survival happen, given that the technological gap between hand-tools and machinery continued to be wide and become wider progressively? Second, from the late nineteenth century, some positive forces began to work in favour of the handicrafts. What were these forces?

By every direct or indirect index that we can use, the period 1870-1914 saw net expansion rather than contraction in handloom weaving. The long-term survival of the handloom can be easily explained by relative advantages of power-loom and handloom. In the mid-nineteenth century, two types of hand-woven cloth faced keen competition from foreign or Indian mill-made cloth: 'coarse-medium' cotton cloth, and printed and bleached cotton cloth. In these classes machine production and mass production were distinctly superior. By contrast, cloths that used very coarse or very fine cotton yarn, or complex designs woven on the loom, or non-cotton yarn, tended to use the handloom. These were either so labour-intensive that the mills did not enter them by choice, or used non-cotton fibres that the mills did not want to handle.

The handlooms did not merely survive, but expanded in the twentieth century. How did this come about? The factors sustaining this growth, on the demand side, were threefold. There was, first, an expansion in average cloth consumption as a result of fall in cloth prices. Secondly, agricultural growth and commercialization strengthened local demand for traditional textiles and strengthened market networks in several regions (for an example, see, Haynes, 1998). Third, tariff protection to the textile industry from the mid-1920s helped the handloom industry. On the supply side,

there was increasing diffusion of labour-saving tools adaptable to small-scale workshop and household production, and changing industrial organization from households to wage-labour-using workshops (Roy, 2002).

35.3.4 Pattern of Growth in Small-Scale Industry: 1900-51

Employment

Large-scale industry was, and remains, a relatively small segment in employment. At 1900, it accounted for 5 per cent of industrial employment. In 1991, it accounted for 29 per cent of industrial employment. The overwhelming majority of Indian industrial workers functioned, and continues to function, in small-scale industry. Today, the share of large-scale industry in real income from industry is about half. The share increased from 15 per cent in 1900 to about 40 per cent in 1947.

The British period censuses tell us that industrial employment declined steadily and sharply, between 1881 and 1931. It declined from about 20 million to 13-15 million, while at the same time, employment in agriculture increased from 71 to 100 million. The percentage of workers in agriculture increased from 62 to 71, and that in industry it declined from 18 to 9. The decline in industrial employment was concentrated in small-scale industry. Some scholars, such as Patel (1952), read these percentages to mean that de-industrialization continued in the late nineteenth century. Further work by Daniel Thorner and J. Krishnamurty (see Roy, 2002, Chapter 9 for discussion) has shown that these shifts in occupational structure were probably spurious and arose from census definitions. In their reconstruction, occupational structure hardly changed between 1881 and 1951.

However, the Thorner-Krishnamurty critique is not very satisfactory either. It rests, among others, on the argument that the data on women's employment is questionable and should be excluded from analysis. Women's participation in industry declined dramatically in the census period. If women's data are excluded, occupational structure shows rather little change. If women's data are included, the share of industry in work-force shows a fall. Patel included women, Thorner-Krishnamurty exclude women. The argument for exclusion, however, is rather conjectural and not acceptable.

Are we then driven to Patel's perspective that de-industrialization continued in the late nineteenth century? The answer is, we are not. There can be another explanation why employment growth was small or negative. That is, change in industrial organization. Employment in small-scale industry fell before independence, and grew at a very small rate after independence. Post-independence census data show that the low rate of growth in employment does not mean an overall stagnation, but a shift from households or family-labour-intensive firms to small workshops or wage-labour-based firms. In other words, it implies a shift from less specialized labour to firms that use more productive and more specialized labour. Most household workers work in industry only part-time. Clearly, such a shift can reduce total employment, and yet raise the productivity of labour, which is what happened throughout the twentieth century. Such a shift is consistent with income trends as well.

Such a shift also explains why women tended to exit manufacturing work more often. Women worked mainly in family firms, and family firms were generally in decline. Patel's statistics may well be believable, but it has a different explanation, one that gives supply-side changes more importance.

National income data suggest that total and per worker real income in industry grew at significant rates (in the range 1.5-2 per cent per year) between 1901 and 1947. In fact, income per worker probably increased at a faster rate in small-scale industry than in large-scale industry (Sivasubramonian, 2001). Evidence of productivity increase is strong also in specific industries like handloom textiles, tanning, and metal work. In textiles, real value-added unquestionably increased, and in all of them, output indicators show growth whereas employment indicators show stagnation or fall (Roy, 1999).

Any general account of the handicraft industries in the twentieth century needs, therefore, to explain two things:

- 1) Low or negative growth rate in employment
- 2) Increase in productivity.

A story of uniform unqualified decline is consistent with the first, but not the second of these facts. A different story is possible, one that places more accent on commercialization of product and labour markets within the handicrafts.

35.4 A NEW PERSPECTIVE ON INDUSTRIALIZATION

Let us look at the emerging trends of industrialization.

35.4.1 Commercialization, Competition, and Institutional Change

Our discussion relates to a period of rapid commercialization in India. Long-distance trade expanded and regional markets integrated due to three factors: foreign trade, modern transport and communication, and security of private property rights. Small-scale industry was also transformed by commercialization. Production for subsistence, production under various types of non-market and barter distribution arrangements, and production for local, rural, periodic and other spot markets declined in favour of production on contract for distant markets. New marketing systems arose. These were located in big cities or at key railway points. This rise in long-distance trade had two types of effects: increased competition, changes in industrial organization, and changes in technology.

- 1) Commercialization increased competition within small-scale industry. In textiles, leather, metal-work, etc, we see numerous cases of small remote manufacturing traditions decaying from the late-19th century because either they were not known for good quality products or were located too far from marketing and transportation networks. At the same time a few large agglomerations emerged, these became concentrations of production, trade, capital, and labour. Artisans migrated in increasing numbers. These migrations created or extended markets in labour and capital, and encouraged the hiring of labour.
- 2) Industrial organization changed for two reasons. Commercialization made information and working capital essential resources. These being scarce resources, those in command of these resources increased power and could take closer control of the manufacturing process. Capitalists and labourers became more clearly distinguishable. So did employer-employee relationships. Second, competition among manufacturers led to increased specialization and division of labour.

35.4.2 A New View: Labour-Intensive Industrialization

All this entails a different way of looking at Indian industrialization in the colonial period.

The term ‘de-industrialization’ is sometimes used to illustrate the thesis that while Europe and North America experienced industrialization, the third world experienced some kind of an inverse of ‘industrialization’ (articulated in Bagchi, 1978, for example). Industrialization in this case tends to be defined as substitution of labour-intensive by capital-intensive products. Such a process is seen to have occurred in the north, but was impeded in the south. The idea that the third world saw an antithesis of industrialization found its most famous expression in a scholarship on the origins of underdevelopment, a process not restricted to early-nineteenth century India, but fairly general in time and space.

Based on a reading of the early-twentieth century evidence, some recent works in Indian industrial history call into question this usage of ‘de-industrialization’ as the distorted mirror image of ‘industrialization’ (Roy, 1999). These works suggest that a certain kind of industrialization took shape in India from at least the mid-nineteenth century, which relied on (and continues to rely on) cheap skilled labour, natural resources, a particular consumption regime that preferred traditional goods, and an internal market-induced drive to achieve greater efficiency in production. This ‘industrialization’ did not happen by getting rid of artisans like the hand-weaver. Rather artisans were a part of it and made a positive contribution in it by raising income per worker, as we have seen.

35.5 TWO MAJOR INDUSTRIES

From a discussion of overall patterns of change, we will now move to a consideration of two specific industries.

35.5.1 Cotton and Silk Weaving

Scale

In the interwar period (1919-1939), possibly 3 to 3.5 million persons were engaged in the cotton, silk and wool spinning-weaving industry. The mills employed about 10 per cent of this total, the rest used mainly hand-tools and were organized in households or very small factories.

From the late-19th century, it is possible to estimate the scale of production of handloom cotton cloth based on quantities of mill made and imported yarn that was left over after use by the mills. Handlooms accounted for about 25 per cent of the cotton cloth produced annually in the first half of the 20th century. Market-share of handloom cotton cloth was roughly stable between the 1890s and the 1930s. The total production of cotton cloth expanded by about 30 per cent between 1900 and 1939. Throughout this period, total cloth consumption was growing marginally, and Indian cloth was steadily substituting imported cloth. In cloths made of silk and other fibres, handlooms dominated. Taking all fibres together except wool, in the 1930s handlooms’ market-share in total cloth consumption in value may have been about 50 per cent.

The number of handlooms was roughly stable in the first half of the 20th century at around 2 million. Rising production and constant loomage suggest that the productivity

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and the capacity of the looms increased. This can be independently confirmed. Estimates of real wages and earnings in handloom weaving suggest great variation between more skilled and less skilled weavers. But there was no sign of a sustained downward trend. National income data, in fact, suggest a slow increase in wages.

Conditions of Demand

At least parts of the cotton textile industry were highly commercialized even before British rule. These segments supplied mainly foreign trade. From the first quarter of the 19th century, this foreign trade declined, and British cloth began to compete with Indian cloth even in Indian markets. Some commercialized cloth thus disappeared. But some other cloths that were not heavily traded before became commercialized during the colonial period.

Cotton textile is the most important example of a craft threatened by steam-powered technology. The threat came from Lancashire from the 1820s until the pre-war decade. Thereafter, the competition came mainly from the cotton spinning-weaving mills in Bombay and Ahmedabad. The power-driven loom is much faster than a handloom. Why, then, did the handloom survive at all? We have seen the answer already. It survived because it was more efficient in certain types of traditional clothing.



a) James Hargreaves' Spinning Jenny, b&c) Edmund Cartwright's Power Loom

As we have seen above, cloths that used very coarse or very fine cotton yarn, complex designs woven on the loom, and non-cotton yarn partially or wholly, tended to use the handloom. The most important example of a handloom specialty, one that is still made on a handloom, is a sari with designed border. In 1930, there were many more such cloths. Turbans, bordered dhoties, checked and striped lungies, were also common handloom items. By contrast, the mills dominated shirting, suiting, dhoties and simple saris, basically, any cloths that could be woven in long sheets with very simple design.

Even as handlooms faced competition in certain categories, in those classes where it had a comparative advantage consumption grew in the early 20th century. The increased consumption derived partly from increasing purchasing power of those rural regions that produced lucrative cash crops. It also derived from changes in clothing habits. For example, the depressed castes of South India began to wear a greater quantity and finer types of clothing from the turn of the century.

In handloom cloth, especially silk, long-distance trade was not a new invention. But trade almost certainly increased in extent in the second half of the 19th century. Imported and mill made cloth had destroyed many local weaving traditions. Thus it had reduced local transactions of cloth in rural markets or seasonal fairs where weavers and consumers often dealt directly. At the same time, wholesale trade increased. Similarly, long-distance trade in yarn, dyes, silk and gold-thread-all major raw materials for the handloom industry-became more extensive and more organized from the 1870s when these materials began to be imported or made in the mills. Handloom cloth also used these systems. Quite often the wholesale traders in textile raw materials were of weaver background.

The Supply Side

About 1860, the usual system of work in weaving was the household. Inside a weaving household, one would generally see adult men working as weavers, adult women on winding and sizing operations, and children as assistants in both weaving and winding. By and large the family remained the usual type of unit in handloom weaving during and after the colonial period. But there was a noticeable expansion in handloom factories from the interwar period. These factories employed mainly migrant labour, and were established by persons who had made money in the relatively new trades in cloth, yarn, dyes, jari, or silk. They generally used improved tools. And they concentrated in major textile towns of western India.

Capital and labour involved in the handloom industry became increasingly mobile. There was migration from rural regions towards new points of trade, and towards the railways and spinning mills. The most important example is a migration into textile towns in western India such as Sholapur, Malegaon, Bhiwandi, Burhanpur and Surat. The weavers came from depressed or overpopulated regions like eastern Uttar Pradesh and the Hyderabad state (see Haynes and Roy, 1999, on migration).

Many new types of invention in handloom weaving became available for wide usage in the 20th century, largely due to the efforts of provincial governments in popularizing



Fly Shuttle

these instruments. It will not be wrong to say that this was the only significant example of government policy in promotion of traditional and modern small-scale industry. On the other side, the increasing wealth and knowledge of

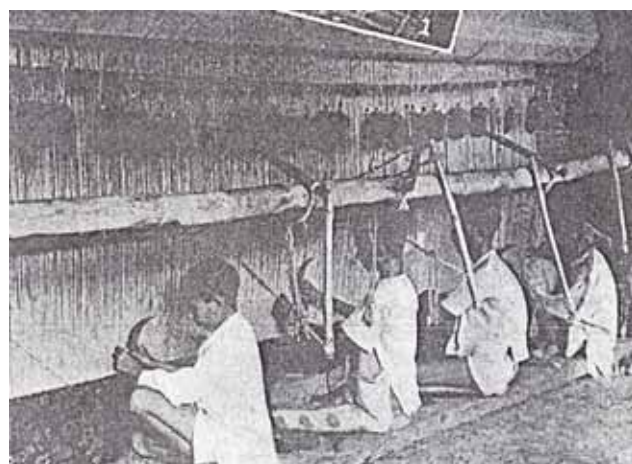
capitalist weavers, increasing certainty of their markets, made them more willing to try out new tools. The traditional loom was set up in a pit dug up in the living room of a weaver's home. The shuttle was thrown by hand across the width of the loom. From this system, there was change towards (1) the fly-shuttle loom, where the shuttle was moved much faster by ropes and pulleys, and (2) a type of loom mounted on wooden frame. The frame loom took up much less space, could weave longer lengths of yarn, and thus, became very popular with the handloom



Fly Shuttle

factories. The systems of preparing warp for the loom also changed. The use of a warp beam was popularized, with the effect that longer lengths of thread could now be woven. Warp preparation was previously a side activity of women in weaving localities. This form of collective labour was replaced by the warping factory. Another major example of technical improvement was the synthetic dyestuff.

A final stage in this process of endogenous technological change was the 'powerloom' factory. From the frame loom, the idea of a power-driven frame loom was a very



Operation of Loom in Shaikh Gulam Hussun's factory, Amritsar, c. 1915 (Roy, Tirthankar, *Traditional Industry in the Economy of Colonial India*, Cambridge, 1999, p. 216).

small step. Power-driven looms were constantly being discarded at scrap rates by the mills. So buying such a loom and reconditioning it to fit the weaver's factory shed was not expensive. Relatively well-off weavers started to replace handlooms by power-driven looms in products where such a switch was possible. The first such looms in India appeared in handloom towns about 1900 and were run with fuel oil. They spread

much faster from the 1930s when many such towns received electricity. These looms, of course, were run with power. By 1940, there were about 15,000 such looms, some in cotton, and some in silk and rayon. These had been started by persons of handloom background. The ground had thus been prepared for what was to become in the next few decades India's largest industry.

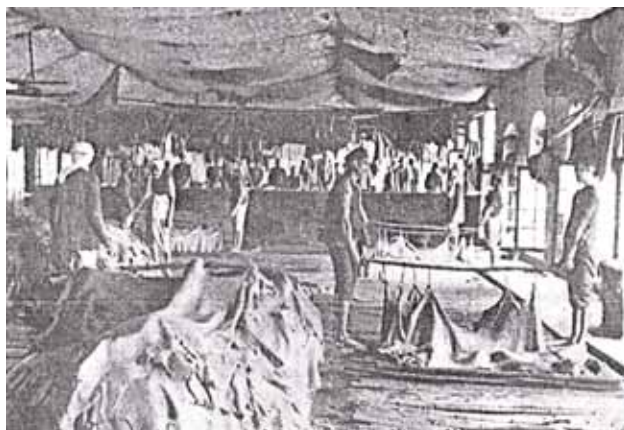
Through these changes and through the handloom factory, weaving and processing separated out as tasks, and thus specialization and division of labour increased by comparison with the household.

35.5.2 Leather

Tanned hides and skins became a major export item in the late 19th century. From the 1870s down to the Great Depression (1930-37), it remained a major export. Thereafter, the export of tanned hides and skins fell, but hides were being used more and more as inputs by local leather manufactures, and the export of such

manufactures began to increase. Today, leather is one of South Asia's most important manufactured exports.

Tanning was originally a rural craft, and practiced by groups who were part-time agricultural labourers. They were very lowly placed in the caste hierarchy, and had little bargaining power in dealing with their main customers, the peasants. In most places hides were bartered for grain. But the terms of the barter were adverse for the suppliers. The grain-share of the leather artisans was much smaller than



Tanning house, Cawnpore, c. 1915 (Roy, Tirthankar, *Traditional Industry in the Economy of Colonial India*, Cambridge, 1999, p. 178).

their share in population. The usual organization in rural tanning was either a single household, or a kind of collective labour not ordinarily seen in other crafts. The tanning locality was set a little apart from the main village where the village was a large one. In this locality, men, women and children worked together in pits jointly owned.

The export market concentrated hide trade in Kanpur, Madras, Bombay and Calcutta. And the better quality demanded by foreign buyers of Indian hides encouraged factories in these cities owned by hide merchants. These developments weakened the rural barter system, because every one with hides now wanted to sell it to an exporter. It also encouraged leather artisans to migrate to the cities. They were re-employed there as factory labourers. In the course of this change, flaying, tanning and leather-manufacture-which were often performed by the same person formerly-separated out. Division of labour and specialization increased. The old customs did not completely vanish, but often persisted in the tannery in the form of direct or indirect hierarchy between workers and supervisors, and a tolerance for poor working conditions inside the factory. Still, the factory was a new and a freer system of work.

35.6 LABOUR

As we have seen, one of the most fundamental long-term tendencies in traditional small-scale industry has been the increasing employment of hired labour, or the growth of a labour market.

The tendency was most obvious when a rapid growth of factories took place. Small factories grew in four circumstances. First, they appeared in towns that received many migrants, such as handloom weaving in Sholapur. Second, factories appeared in industries that were relatively less skill-intensive, such as tanning of hides and skins. Third, factories appeared in industries that partially mechanized. The fourth circumstance occurred in some skilled crafts of northern India where merchants set up large sheds where master-artisans came with their teams of apprentices to work. Such sheds, however, did not really employ wage labour strictly speaking. Carpet weaving furnished one example, which will be referred again below.

Migration of artisans is intimately connected with the growth of factory labour. From the last quarter of the 19th century, there is record of steady and large-scale migration of artisan groups to industrial towns. Some of them gave up their craft to become

general labour. Some entered the mills. Still others only relocated their craft near sources of raw material and market points. Employment was typically in factories in these towns.

Factories and a visible labour market were not the usual systems though. Elsewhere, the emergence of a labour market was a more gradual and subtle process. As the skill-intensive industries commercialized, merchants put out work to producers who worked in traditional types of relationships. These firms recruited labour without full-fledged hiring. This happened in broadly two ways. Firms using mainly family labour employed workers from within the family. And masters hired apprentices. The family-firm and domestic labour was usual among Hindu artisans. The apprenticeship system was usual among the Muslim artisans. The latter was most clearly visible in the towns of western Uttar Pradesh.

These traditional systems tended to weaken and dissolve in the second half of the twentieth century, illustrated by the retreat of household industry in census employment data that we have seen above.

The decline of households and old-style apprenticeship suggest that traditional industries in India witnessed a change from social contract to unregulated labour market in respect of employing children and women. This process is yet to be documented from a historical perspective.

35.7 CAPITAL

What were the sources of capital that flowed into the small-scale sector? Who were the capitalists investing in this sector?

35.7.1 Source of Capital

Small-scale industry in general had little or no contact with the formal banking sector. It had very little contact even with the informal credit markets. The main form of working capital finance was trade credit, as it is even today.

There is evidence that it was easier to raise fixed capital loans in certain towns than in others. Surat, for example, was a major textile centre where employers and traders in the jari industry routinely gave loans to their contractors for purchase of machinery. How universal such practices were and why they occurred in certain towns is not clear.

35.7.2 The Capitalist

The wholesale trader, the raw material importer, and the factory-owner were new types of capitalist. In some industries, notably handloom weaving, the capitalists tended to come from artisan communities. On the other hand, in an industry such as tanning, capitalists came from merchant communities. What determined which background the capitalists would come from? Three factors were possibly of importance.

First, differences in the level of skills mattered. In many handicrafts, craftsmanship was an important resource, and those who possessed such capital could often control the trade as well. In weaving, such logic worked more than in a relatively unskilled craft such as tanning. Second, whether a craft was export-oriented or home-market oriented mattered. In exportable crafts, the larger scale of trade and the nature of

the market made working capital and information both scarce resources. Here merchants had greater control over production. Third, social hierarchy mattered. For tanners, to either get loans for business or start a new enterprise could be difficult in the face of resistance from their upper-caste neighbours. Weavers, on the other hand, did not face such social sanctions.

35.7.3 Associations and Organizations

Collective organizations usually play a number of important roles in traditional industry. Via such institutions, masters control the graduation of their apprentices into potential competitors, insiders control the entry of outsiders, and conflicts over industrial relations could be kept in check. Further, any business needs credit and insurance, which markets cannot function without either good laws or a lot of trust. Where these markets are undeveloped, trust is often ensured by collective organizations. In medieval Europe, the guild performed some of these functions. In India, guild in the formal sense was rare. Nevertheless, caste and community associations did develop to take care of some of these roles.

35.8 SUMMARY

Economic historians often have a tendency to focus on the large industries and international trade in goods. This module emphasizes the need to look at the small producers, study the changes within artisanal production, and the significance of local trade in sustaining specific types of manufactures. Before the consolidation of the Europeans in the Indian Ocean trade, production in different regions was linked to particular trading networks: Central Asia in the case of Punjab, Red Sea and Persian Gulf with Gujrat, Southeast Asia with Coromandel. With the entry of Europeans the older networks were weakened, and the textile trade was re-oriented towards Europe. By 1800 the European bound trade dwindled and the local demand in fine handicrafts was affected by the decline of the nobility. There is no doubt that over the nineteenth century there was a decline of handicrafts, reflected in the substantial shrinkage in the work force. But this essay argues that there is no agreement as to the scale and the timing of this decline. Local studies show that the decline was often gradual and spread out over time and not as cataclysmic as it is often thought to be. Textile production survived because European imports could not displace the very coarse and very fine varieties of textiles. By the third quarter of the nineteenth century, the decline was in fact offset by a trend towards recovery - a process that may be described as re-industrialization. While the work force continued to decline, output increased. This was because of reorganization of production and technological changes within small-scale industries. This essay elaborates this argument through case studies of cotton textile and leather industries.

35.9 GLOSSARY

Apprenticeship

A production relationship where skilled artisans or 'masters' recruit labour from their students or apprentices. Labouring is simultaneously wage-labour and a learning system.

Commercialization

Production (including production of labour power or supply of labour) for the market rather than for own use. The term can also be applied in the case of increasing production for long-

De-industrialization

distance or export markets. Usually it is used to mean a qualitative change in the process or relations of production.

This refers to two distinct arguments. (1) There was a large industrial decline in the early-nineteenth century. And (2) colonial India experienced a process of delayed or retarded development of capital-intensive industry, or some kind of opposite of 'industrialization'.

Factory

A shed where a collection of workers hired by the owner or manager perform production tasks.

Factory Acts

In England beginning from 1802 series of factory legislations (1802, 1819, 1815, 1831, 1833, 1834, 1840, 1842, 1844, and so on) were introduced to regulate the conditions of work, the working hours, the safety, and the sanitary conditions, etc in the factories.

Fly Shuttle

John Kay invented it in 1733. The weaver uses this by pulling a cord that triggers hammers to propel the shuttle left, then right, across the width of the cloth. The flying shuttle, fly shuttle or spring shuttle replaced the old weaving process of carrying the weft through the warp the shuttle had been passed by hand from side to side through alternate warp threads. In weaving two workers needed to throw the shuttle from one end to the other. With the flying shuttle, the amount of work a weaver could do was more than doubled, and the quality of the cloth was also improved.

Guild

Formal associations of masters or merchants to regulate competition, among other tasks.

Industrialization

Defined variously, as (1) increasing contribution of manufacturing to national income or employment, or as (2) increasing capital-intensity of manufacturing process.

Ryotwari

In the *ryotwari* settlement land revenue assessment was imposed on individuals who were the actual occupants. The system was introduced by the British in Bombay and Madras Presidencies and in Assam and Burma.

35.10 EXERCISES

- 1) Discuss the changes that took place in the Indian small scale industries during the late 18th and early 19th centuries.
- 2) Define the term 're-industrialization' in the Indian context. Examine the pattern of growth of Indian small scale industries during the late 19th and early twentieth centuries.
- 3) Discuss the changes within textile and leather industries in India during the first half of the 20th century.

35.11 SUGGESTED READINGS

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UNIT 36 PATTERNS OF INDUSTRIALIZATION

Structure

- 36.1 Introduction
- 36.2 What is Industrialization?
- 36.3 Measurement
- 36.4 Periodization
 - 36.4.1 1850-1914
 - 36.4.2 1914-1939
 - 36.4.3 1939-1947
- 36.5 Enterprise
 - 36.5.1 Bird Heilgers & Co.
 - 36.5.2 Birla Brothers
- 36.6 Why No Take-Off?
- 36.7 Summary
- 36.8 Exercises
- 36.9 Suggested Readings

36.1 INTRODUCTION

Before the British conquest of India (1757-1818), which coincided with the Industrial Revolution in England (c.1750-1830), India was famous for its artisan industries. In fact, India was then the world's leading textiles producer and exporter.

What happened afterwards is a matter of debate among historians.

The point at issue is the fate of industrial activity in colonial India. The debate is an old one. Around the beginning of the twentieth century, there was a sharp exchange between Romesh Chunder Dutt, a Congress leader and economic historian, and Lord Curzon (1899-1905), the then Viceroy of India. Dutt maintained that British policy in India caused a widespread destruction of handicrafts and cottage industries. Lord Curzon was concerned to prove, on the contrary, that British India had experienced economic improvement.

That India did not experience an industrial revolution, as did England, Germany, the United States of America and Japan, is not in dispute. Beyond that there is no agreement. One view, shared by both Indian nationalists and Marxist historians, is that the colonial rule de-industrialized the Indian economy. The opposite view, propounded among other works by *The Cambridge Economic History of India* (vol. II, 1983), is that some amount of industrialization occurred in British India.

The question therefore arises: What happened in colonial India: some industrialization or absolute de-industrialization?

36.2 WHAT IS INDUSTRIALIZATION?

Before we consider that question, we must ask ourselves a prior question: what is meant by industrialization?

In England, where the industrial revolution first occurred, industrialization meant the growth of large-scale industry. In India, too, factories and mills appeared in the second half of

the nineteenth century, but at that time, they were not of sufficient size to make much difference to the vast Indian population and its occupational structure. Industry was mainly cottage industry. In the period between 1900 and 1947, large-scale industry became a more significant part of the Indian economy. Here we are concerned with large-scale industry alone. However, we cannot ignore the question of growth or decline in handicrafts and cottage and small industries. As soon as we begin to consider the rate of industrialization, we have to take into account of what happened to artisans and their manufacturers? For, at least until the outbreak of the Second World War (1939-1945), they contributed more to industrial production than did labourers in mines, mills and factories. It is only in course of the war that large-scale industry outweighed small-scale industry. So, how can we exclude the performance of small-scale industry in considering the question of industrialization in British India? It would be unwise to do so.

What, then is industrialization in the Indian context?

Several alternative definitions are possible. Industrialization may mean the rapid growth of *large-scale* industry, so that it becomes a significant sector in the economy. By this definition, industrialization might have occurred in India during the period 1900-1947, but it did not happen on any appreciable scale in the *nineteenth century*. Mills and factories did appear in the late nineteenth century for the first time but their contribution to industrial production was small.

An alternative definition of industrialization would be the growth of the output of both large-scale and small-scale industry, so that the share of the secondary sector (i.e. the industrial sector, as opposed to the primary or agricultural sector) in the total production might increase at the expense of agriculture. By this definition, it appears that the share of industry in the total production went down in the nineteenth century (i.e. some de-industrialization might have occurred) and then it went up in the twentieth century (i.e. industrialization occurred in some measures).

Yet another definition of industrialization would be increase in employment (as distinct from output) in industry at the expense of employment in other sectors of the economy. By this definition, it appears that no clear change occurred in the relative share of industrial employment (taking factories and artisans together) during the period when census operations were conducted between 1872 and 1951. In other words, the census yielded no evidence in favour of either industrialization or de-industrialization.

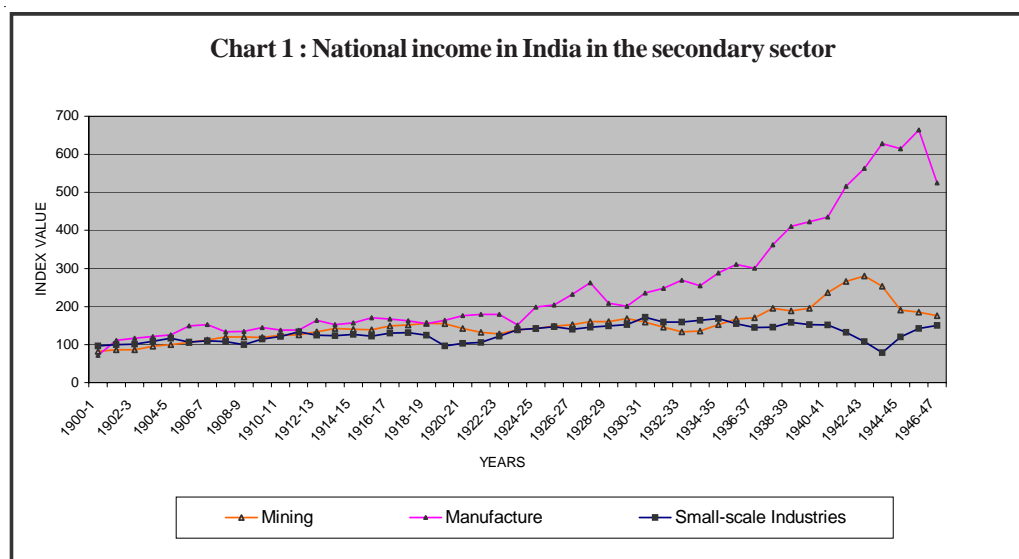
All these definitions must be considered when we try to judge the rate of industrialization (if it occurred at all) in British India.

36.3 MEASUREMENT

Let us first look at the statistical evidence relating to large-scale industry in India. The evidence relating to the twentieth century is reliable, but it is not so good for the nineteenth century. The most well known estimate for the nineteenth century is the one made by Alan Heston in *The Cambridge Economic History of India*. His guess is that large-scale mining and manufacturing contributed Rs. 53 million to India's national income in 1868-69, and Rs. 1023 million in 1899-1900, at constant prices. But large-scale industry began from scratch, so this increase made practically no difference to the economy as a whole; for

large-scale industry's contribution to the national income was only 0.17 per cent in 1868-69 and not more than 2.65 per cent in 1899-1900. The Indian economy was still predominantly agricultural, and as far as industrial production is concerned, large-scale industry was less than a quarter of the size of small-scale industry at the beginning of the twentieth century. India was still a country of peasants and artisans in 1900. That is why Romesh Chunder Dutt did not give any attention to large-scale industry when he wrote *The Economic History of India* at the beginning of the twentieth century. At that time it was still marginal to the economy.

During the period from 1900 to 1947, large-scale industry grew sufficiently to become a sizeable sector in the Indian Economy. (See Chart 1) We have reliable statistical calculation of the growth of India's industry and national income for this period by S. Sivasubramonian, who presented his findings in articles in *The Indian Economic and Social History Review* in 1977 and 1997, and subsequently in *The National Income of India in the Twentieth Century* (2000). His findings may be briefly summarized here. First of all, it is clear from his statistics that there was no de-industrialization in the twentieth century. Even if there had been de-industrialization in the nineteenth century (some scholars would dispute this, see Unit 33 of the present Block for the de-industrialization debate), such a trend is definitely ruled out after 1900. Instead, Sivasubramonian's statistical series reveals some degree of industrialization between 1900-1947. (See Chart 1) However, it is equally clear from the same series that this industrial development was weak and halting.



Source: Based on Sivasubramonian (1977), pp. 491-92. Average of 1900-01 to 1902-03 = 100.

The pattern of this industrial development will become clearer if we look at certain points that emerge from census data, and from Sivasubramonian's measurements of national income and its sectoral distribution. These points are the following:

- 1) Factory output rose rapidly between 1900-1946, by as much as 4.41 per cent per annum. How did the output of the factories rise so fast? It did so due to an increase in the output per worker, and also because of the multiplication of factories. It is estimated that output per factory worker increased by 47.9 per cent during the period. (See Table 1) This clearly, does constitute what we might call industrialization.

Table 1
Net output per engaged person at 1948-49 prices

Industry (1)	(Rs)		
	1900-01 (2)	1946-47 (3)	Percentage change (4)
Agriculture and allied industries	426	425	-0.2
Mining	1,841	763	-58.6
Manufacturing	1,653	2,445	+47.9
Small scale and cottage industries	409	548	+34.0
Railways and communications	1,442	2,358	+63.5
Government administration	552	922	+67.0
Other commerce and transport	753	1,206	+60.2
Professions and liberal arts	417	624	+49.6
Domestic	229	316	+38.0
All sectors excluding house property	453	553	+22.0

Source: S. Sivasubramonian, 'Revised estimates of the national income of India, 1900-01 to 1946-47' *Indian Economic and Social History Review*, Vol. 34, No.2 (April-June), 1997, Table-4, p. 136.

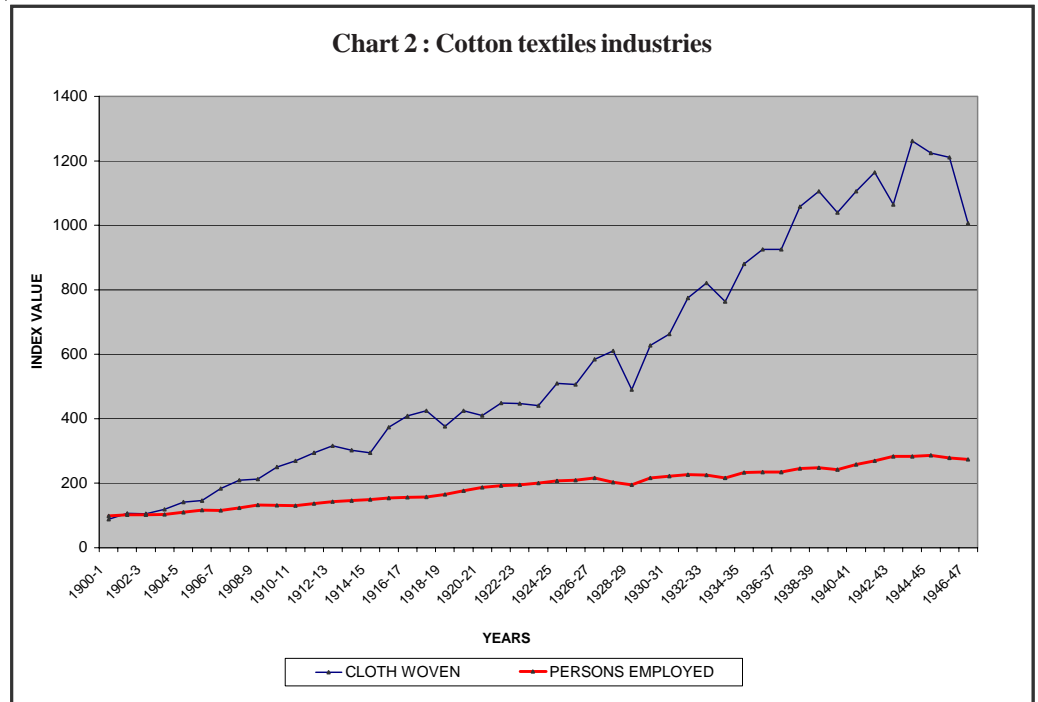
- 2) Yet it is evident at the same time that employment in the factories did not increase fast, at least not as fast as their output. This is true both for the Cotton Textile as well as Iron and Steel industries (See Charts 2 and 3) The number of factory workers, taking undivided India as our unit (that is, including Pakistan after 1947), rose from 584 thousand in 1901 to 2844 thousand in 1946. (See Table 2) These are census figures, and they do not reflect an industrial revolution. What they reflect is some degree of industrialization. De-industrialization, of course, is ruled out, whether one looks at the factories in terms of either output or employment.

Table 2
Average daily number of workers employed in factories, 1900-1 to 1946-7

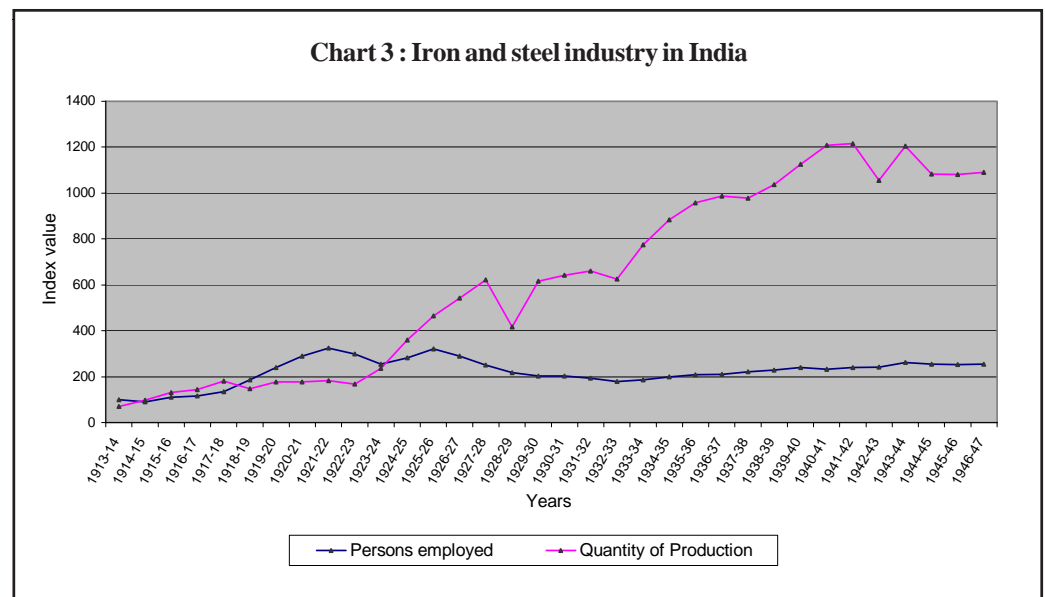
(in thousands)

Year	All In- dustries	Year	All In- dustries	Year	All In- dustries	Year	All In- dustries	Year	All In- dustries
1900-1	584	1910-11	957	1920-1	1389	1930-1	1624	1940-1	2144
1901-2	617	1911-12	933	1921-2	1467	1931-2	1541	1941-2	2156 (2492)
1902-3	642	1912-13	1003	1922-3	1419	1932-3	1522	1942-3	2282 (2638)
1903-4	666	1913-14	1023	1923-4	1458	1933-4	1526	1943-4	2436 (2816)
1904-5	766	1914-15	1089	1924-5	1506	1934-5	1706	1944-5	2614 (2916)
1905-6	803	1915-16	1073	1925-6	1547	1935-6	1759	1945-6	3121
1906-7	893	1916-17	1141	1926-7	1585	1936-7	1819	1946-7	2844
1907-8	871	1917-18	1163	1927-8	1588	1937-8	1958		
1908-9	894	1918-19	1213	1928-9	1576	1938-9	2037		
1909-10	929	1919-20	1303	1929-30	1657	1939-40	2050		

Source: S. Sivasubramonian, *National Income of India in the Twentieth Century*, OUP, New Delhi, 2000, pp. 201-203, Table 4.2.



Source: Based on Sivasubramonian (New Delhi 2000), pp. 208-210, Table 4.3. Average of 1900-01 to 1902-03 = 100.



Source: Based on Sivasubramonian (New Delhi, 2000), pp. 245-252, Tables 4.24 - 4.26. Average of 1913-14 to 1915-16 = 100.

- 3) The total output of the artisans increase slowly during the period between 1900-1946. (See Chart 1) Sivasubramonian's estimate of the increase of output in the small-scale and cottage industry is 0.46 per cent per annum. (See Table 3) Yet strange to say, the number of artisans, going by the census figure of 1901 and 1951 (Pakistan included), Still, the per head output of the artisans increased by 34 per cent between 1900-1946. (See Table 1) Looking at the record of the artisans industries, this is a mixed kind of industrialization, if one may consider this industrialization at all. Consider the facts together: the number of artisans goes down; their output per head increases; and in consequence of these two facts, the total artisan output does achieve some increases, but not much. On the other hand, as mentioned above, the total output of large-scale industry has in the meanwhile increased rather rapidly. (See Chart 1 and Table 1)

Table 3

Comparative Average Annual Growth Rates by Sector/Subsector

(per cent)

Sector	1900-01 to 1910-11	1910-11 to 1920-21	1920-21 to 1930-31	1930-31 to 1940-41	1940-41 to 1943-44	1943-44 to 1946-47	1900-01 to 1943-44	1900- to 1046-47
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
PRIMARY	1.78	-1.72	1.74	0.24	1.75	-2.33	0.59	0.39
Agriculture	1.95	-2.51	2.09	0.19	2.03	-2.96	0.53	0.30
SECONDARY	3.30	-2.34	5.46	0.26	2.47	0.58	1.69	1.62
Manufacturing	6.72	2.46	2.99	6.17	13.42	-5.83	5.16	4.41
Small-scale and cottage industries	2.58	-4.19	6.80	-3.00	-8.57	10.56	-0.21	0.46
TERTIARY	2.42	1.50	2.31	2.08	1.58	-4.85	2.04	1.58
Railways and communications	6.34	4.80	-0.10	1.45	8.40	3.84	3.45	3.48
Government administration	2.64	0.94	5.06	3.82	-9.80	0.0	2.15	2.00
Other commerce and transport	2.47	2.20	0.90	2.93	9.47	-13.19	2.62	1.51
Other services	1.71	-0.02	3.66	0.02	-7.64	7.40	0.68	1.10

Source: S. Sivasubramonian, 'Revised estimates of the national income of India, 1900-01 to 1946-47' *The Indian Economic and Social History Review*, Vol. 34, No.2 (April-June), 1997, Table-7, p. 141.

- 4) Now let us consider the large-scale industry and small scale and cottage industry together to get the whole picture. Sivasubramonian's measurements reveal an increase of production by 1.68 per cent per annum in the industrial sector as a whole. This is considerably lower than the figure of 4.41 per cent per annum cited earlier, which was the rate of increase in factory output. (See Table 3) Evidently, the rate of growth was pulled down by the slower rate of increase of artisan output. Nevertheless, the output of the handicrafts did increase. In consequence, the share of industry as a whole in the net domestic product went up from 10.8 per cent in 1900 to 14.9 per cent in 1946.

We may conclude, from the above measurements, that industrial production increased (See Charts 2 & 3) in the twentieth century, though it might have decreased in the nineteenth century. By world standards, the performance of the Indian industry in the twentieth century was not so bad, in fact rather good. According to a League of Nations' study entitled *Industrialization and Foreign Trade*, industrial production in India and in the world increased by 139.7 per cent and 82.7 per cent respectively between 1913-1938. India's industrial performance between 1913-1938 was better than the world average. According to the League of Nations, the Soviet Union and Japan did better than India during the period, but on the other hand, industry grew faster in India than in the USA, Britain, Germany, France, Netherlands, Italy, Canada, Australia and a number of other countries. At the same time, one must bear it in mind that the level of industry was still low in India compared to all these advanced countries.

36.4 PERIODIZATION

If we take the nineteenth century and the twentieth century together, what result do we obtain for the colonial period as a whole? Was there industrialization, or de-industrialization? As indicated earlier, there are two distinct criteria for measurement of industrial performance: output and employment. Did the share of industrial output increase or decrease compared to the output of agriculture and the service (tertiary) sector? Alternatively, did the share of industrial employment in total employment increase or decrease relative to the other sectors? The answers to these questions are not certain.

It is likely that industry, taking organized and cottage industries together, had a lesser share in total employment in 1947 than, say in 1800. On the other hand, both the total product and the industrial product increased many times during the period. While no measurement of this is possible we may guess that industry's share in the total product might have been pretty much the same in 1947 as it was in 1800, after deducting the probable decline of the nineteenth century from the certain rise of the twentieth. And, to take another indicator into consideration, per capita industrial output is certain to have been substantially higher in 1947 than in 1800.

However, the structural changes that took place in the economy between 1800 and 1947 are so imponderable, that these comparisons are in a sense meaningless. What is relevant is that large-scale industry, with which we are concerned here, became a substantial sector in the Indian economy between 1850 and 1947. Furthermore, its growth was rapid. After 1900 and before that, though output was not so big in itself, the annual rate of its growth was quite high.

It is therefore necessary to have some sense of the distinct periods through which this industrialization (in the sense of the rapid annual rate of increase of production in large-scale industry) took place. Broadly speaking, it is possible to distinguish three periods: 1850s-1914, 1914-1939 and 1939-1947. In terms of products, markets, production centres and the entrepreneurial groups involved in industrialization, the period up to 1914 is quite distinct from the period that followed the outbreak of the First World War in 1914. Again, certain new features appear with the outbreak of the Second World War (1939), features which are prominent in 1947 and afterwards. There is a certain over-lap in this periodization, nevertheless the distinctions in the time series are meaningful.

36.4.1 1850-1914

The jute and cotton mills appeared in Bengal and Bombay respectively, in course of the 1850s. A small number of coal mines and tea gardens had appeared in Eastern India even before this, the Ranigunj colliery (financed by Alexander & Co. of Calcutta) in 1820 and the Assam Tea Company (incorporated in London) in 1839.

The nineteenth century witnessed the virtual monopolization of India's shipping and foreign trade by British firms. Since the industries that appear at this time, tea, coal, jute and cotton catered initially to foreign markets. It is not surprising that British expatriate firms in Calcutta and Bombay and a number of companies in London had a predominant presence in the early industries. The mining and plantation products (coal and tea) and light manufactures (jute and cotton) were typical colonial products; meant mostly for export and not for consumption in the country. In other words, they created no domestic demand for industrial goods. The new industrial products, moreover, were (except for coal) consumer products rather than capital goods, so they did not add to the country's productive industrial capacity.

The cotton mills in the Bombay Presidency, though at first engaged in exporting cotton threads (yarns) to markets in China, gradually extended their operations from the foreign to the home markets, and from spinning yarns to weaving fabrics. It is in this area that Indian enterprise first made its mark. Among the Bombay mill owners, European, Jewish, Parsee, Khoja and Bhatia firms figured prominently as managing agents, and the Ahmedabad cotton mills were mostly owned by the local Bania capitalists.

In Calcutta on the other hand, an exclusive set of European managing agency houses dominated the complex of the tea, coal and jute industries that had sprung up in the hinterland of the great colonial port city. Among them again, six big expatriate firms acting as managing agents, namely Andrew Yule & Compnay, Jardine, Skinner & Compnay, Bird & Company, Shaw Wallace & Company, Begg Dunlop & Compnay, and Heilgers & Co. controlled more than half the rupee capital invested in the three industries in 1914: 51 per cent of tea, 57 per cent of jute and 52 per cent of coal. The European managing agents, who enjoyed the patronage of the British authorities, did not encourage Indian entry in this oligopolistic complex of industries.

It should be noted that the Tatas of Bombay were producing a little steel in this period, but before 1914 this was not of sufficient quantity to make much difference to India's industrial capacity. Production began in a small way at Jamshedpur in 1911. Overall, the big houses in industry at the outbreak of the First World War were expatriate British firms based on the colonial port cities of Calcutta, Bombay and Madras, and as managing agents they controlled mining, planting and light manufacturing companies which catered mostly to foreign markets, where their advantage lay. During this period, Indian industry received no protection from duties on imported industrial goods. The open Indian economy encouraged imports and exports, and light manufacturers grew under expert-oriented European enterprise. There was not much large-scale industrial activity catering to domestic industrial needs.

36.4.2 1914-1939

At the end of the First World War, the European managing agency houses still dominated business and industry, but, by the end of the Second World War (or even before), this domination, though yet not at an end, had been shaken. The European domination, it has been speculated by India's leading economists such as Amartya Kumar Sen and Amiya Kumar Bagchi, might have been a factor inhibiting balanced and over-all industrial development. Amartya Sen commented on the early pattern of Indian industrialization: 'It is most significant to note that the two manufacturing industries that provided the basis of the British industrial revolution, namely cotton textiles, and iron and steel, were both developed mainly by Indian and not British industrial enterprises. British enterprise confined itself apart from transport, mainly to export industries, e.g. tea, coffee, indigo, jute goods and to extractive and trading operations'. Sen speculates that this might have been part of the reason for India's under-development, and for her failure to achieve an industrial revolution based on the domestic market and increasing internal consumption.

After 1914, however, Indian industrialization began to occur at a faster pace, and in fact as S. Sivasubramonian has pointed out the pace was sustained through the First World War (1914-1918), the Great Depression (1930-1937) and the Second World War (1939-1945). (See Charts 1, 2, 3 and Table 3) This was in strong contrast with the setbacks that the advanced industrial countries suffered during these events. Several new features distinguished India's industrial performance during the period 1914-1939 compared to the period before 1914. In the first place, the new industrial concerns were mostly founded by Indian business communities, especially as Thomas

A. Timberg's study shows, by the Marwaris. Second, the new products were still mainly consumer goods rather than capital goods, and the cotton mills considerably expanded their output of piece goods (as against the yarns, which had been the predominant form of their output at the outset). For the first time, too, steel, an important factor in the productive capacity of any industrial economy, began to be produced in significant quantity, especially after the Tata Iron and Steel Company's works at Jamshedpur houses tried their hands at other types of industry, especially sugar mills and paper mills, which proliferated in the 1930s. Third, the new industrial products catered to the domestic market, unlike tea and jute, which were sold abroad. Fourth, industry began to move inland from the earlier centres in Calcutta and Bombay.

What is the explanation for these positive developments? Amiya Bagchi has suggested that the First World War and Great Depression weakened the British economic grip over India. At the same time, the growing nationalist challenge compelled the colonial government to give heed to the Indian demand for economic development. In consequence, the government, for the first time, granted some measure of protection to industry by imposing a protective tariff over imported industrial goods in the 1920s. Imports of industrial goods had been interrupted even before this by the war. Moreover, wartime speculation and profiteering had led to the accumulation of capital in the hands of Indian business communities, and they were now eager to extend their operations from trade and speculation to industry. In these circumstances, Indian business houses began investing their accumulated assets in new forms, especially cotton mills, jute mills, sugar mills and paper mills. They breached the virtual monopoly, which the British expatriate firms had hitherto enjoyed in business and industry. A process of industrialization based on import substitution in the domestic market, now protected by tariff, was under way.

36.4.3 1939-1947

Industrialization based on selling consumer goods in the protected domestic market had certain definite limits in a poor country like India. Per capita consumption was low, so the scope for profitable investment in things such as cotton piece goods, sugar and paper was also narrow. In such market conditions, as Amiya Bagchi has pointed out, no industrial revolution could occur; industrial investment would go on only until imports had been substituted, and would hit a ceiling thereafter. There were signs by the late 1930s that this was beginning to happen.

Then the Second World War broke out, and a new chapter in Indian industry began. This time again, Indian business houses, such as Tata, Birla, Walchand, JK and Shriram, took the lead. The effects of the war seriously weakened the European managing agencies, which still depended on exports. By this time a new type of foreign firm, the multi-national 'India Limiteds', had appeared on the scene, and they sought to capture the potential domestic market for technology intensive goods. However, Indian business houses, now much stronger than earlier, began to compete in this field too.

In these circumstances, the scope of industrial investment in India widened from the production of consumer goods to the pioneering of capital goods. The extraordinary requirements that arose out of the Second World War, together with the machinery requirement of the newly established consumer goods industries of the inter war period, generated a profitable market for capital goods industries for the first time. At the same time, the big Indian business houses began seeking an outlet for their

accumulated profits from the steel, cotton textiles, sugar, paper and construction industries, and were attracted towards the new, technology-intensive metallurgical, chemical and engineering industries.

The technological problems in setting up the basic and heavy industries were extremely complex. Moreover, there were wartime constraints upon imports of essential plant and machinery for setting up the new industries. The plans of the Indian industrial houses and the new multinational groups were therefore impeded by many difficulties. Even so workshops multiplied. At the beginning of the war there were no more than 600 workshops capable of producing engineering components. Before the war was over, 15,000 engineering workshops were supplying the Government of India's urgent war requirements. Again, the war needs of the Government speeded up the production of aluminium: the Indian Aluminium Company (1938), set up by a joint British-Canadian multinational group, and the Aluminium Corporation of India (1937), managed by the J K Group [Juggilal Kamlapat], commenced production in 1943 and 1944 respectively; when independence arrived, the two groups together were producing more than the total pre-war demand for aluminium in India, but demand had increased so much in the meanwhile that they could meet only 22.5 per cent of the total demand, the rest being imported from abroad. The house of Tata set up Tata Chemicals in 1940 and the Tata Locomotive and Engineering Company (TELCO) in 1945. The Walchand Group set out to build ships, aeroplanes and motor cars during the war, but like the Birla Group which was also interested in producing motor cars, was obstructed by the Government of India which was also interested in producing motor cars, was obstructed by the Government of India which wanted Indian industry to concentrate on producing munitions of war. Still, the slow structural shift of industry towards the production of heavy chemicals, machine tools, aircraft, automobiles, locomotives, ships and other basic and heavy industries began during the Second World War and would continue during the Five Year Plans.

36.5 ENTERPRISE

Industry in colonial India was typically promoted and managed under the managing agency system. A private firm would promote a number of joint stock companies and it would hold a contract for managing their operations in the capacity of managing agent. As Blair B. Kling has noted, British expatriate firms in Calcutta, Bombay and Madras were increasingly employed as local agents of companies floated in Britain, and by 1914 British managing agents managed both the sterling and the rupee companies that dominated the tea, jute and mining companies. This promoted a system of horizontal concentration. In fact, the biggest of the early managing agencies achieved a concentration of diverse concerns - profitable tea, jute, coal and steam navigation companies and other interests of proven profitability. The European managing agencies were overall conservative rather than bold, they insisted on sound finance, and were not disposed to venture into new lines such as the chemical and metallurgical industries. They controlled the profitable expert-oriented industries through racially exclusive chambers of commerce such as the Bengal Chamber of Commerce, the Indian Jute Mills Association and the Associated Chambers of Commerce (ASSOCHAM).

Interestingly, the Indian business houses, which were more often than not family firms belonging to the traditional merchant castes and communities, also showed a preference for managing joint stock companies through the managing agency system, thereby replicating the same horizontal concentration of industrial interests. The early

cotton mills in Bombay and Ahmedabad were promoted in this way; and later on the other industries, even the engineering, metallurgical and chemical industries, were controlled through the parent firm of managing agents. Overall, Indian managing agency houses showed more initiative than the British expatriate firms did in the first half of the twentieth century, and so the greater part of industry gradually shifted from European to Indian management. The history of two Calcutta managing agency houses, one British and the other Marwari, may be briefly explored here for a comparative view. Bird & Company, later Birds, Heilgers & Company, was a leading member of the European dominated Bengal Chambers of Commerce and of ASSOCHAM. Birla Brothers, on the other hand, took a lead in organizing the Indian Chambers of Commerce (Calcutta) and the Federation of Indian Chambers of Commerce and Industry (FICCI) in protest against the racial exclusiveness of the European Chambers of Commerce. Incidentally, ASSOCHAM and FICCI emerged in the 1920s as all India bodies opposed to each other, one imperialist in disposition and the other nationalist in sentiment. Bird and Birla, as prominent members of the rival business confederations, offer an interesting contrast.

36.5.1 Bird Heilgers & Co.

Bird Heilgers & Co., along with Adrew Yule & Co. and Jardine Skinner & Co., constituted the trio of the most influential members of the European-dominated Bengal Chambers of Commerce. As Maria Misra, who has studied the expatriate British firms in India, says, Bird was a 'typical' managing agency firm. Like the other European managing agencies. Bird expanded its concerns until the end of the First World War, and thereafter began to stagnate and then contract. Founded in 1860s Bird & Company was originally a firm of labour contractors to the East Indian Railways and other railway companies. In the 1870s it lost these lucrative labour contracts to competitors, and shifted into new concerns; coal mines in the 1870s and 1880s, jute mills in the 1890s, and paper mills in the 1900s. The firm expanded rapidly so that the outbreak of the First World War, it controlled the largest block of investment in jute and coal in India. In 1913 it was the managing agent for nine jute mill companies, three coal companies, one paper mill company, a small engineering works, and was engaged in export of raw jute and raw cotton; besides, it owned an insurance company. European managing agencies were all heavily involved in foreign trade alongside the export-oriented industries and Bird's special line was export of raw jute. F.W. Heilgers, another European managing agency with smaller interests in jute and coal and a controlling interest in the Titagarh Paper Mill (the largest paper mill in India), merged with Bird in 1917. The combined houses and their companies had a capital of Rs. 20 crores, revenue of Rs. 3 crores and employees numbering over a hundred thousands. During the First World War and immediately after, Bird, Heilgers & Company floated a number of new concerns, especially light engineering companies, but these 'war babies' soon collapsed in the depression that followed the post-war boom, and thereafter, the firm lost its spirit of adventure. At the end of the war, it had planned the largest steel works in Asia, the United Steel Corporation of Asia Limited (TUSCAL), but it never got around to floating it. The losses Bird Heilgers suffered, amounting to Rs. 1.25 crore, made them wary of ventures beyond the firm's normal experience, and henceforth disposed them in favour of 'sound' concerns such as jute mills. Even there a shock awaited them: 'Indians are determined to get into our industry', exclaimed the head of the firm Sir Edward Benthall, as no less than seven Indian jute mills, led and encouraged by G.D. Birla, broke into the European monopoly. As its Indian competitors expanded their concerns in new fields such as sugar, paper, metallurgy, chemicals and engineering

during the 20s, 30s and 40s. Bird Heilgers drew back into its 'core', jute mills and trade overshadowing everything else, next the coal mines, Titagarh coming not far behind and its other manufactures falling behind the burgeoning concerns of the Indian managing agencies that rose from the bazaar.

36.5.2 Birla Brothers

Like Bird Heilgers & Co., Birla Brothers Limited was also an industrial managing agency, and like Bird Heilgers, Birla Brothers. was at the same time involved in trade heavily. While Bird Heilgers stagnated after 1919, Birla Brothers, formed in 1919, expanded rapidly. The Marwari firm (they were Maheswaris from Pilani in Rajasthan), with a capital of Rs. 50 lakhs at the start, grew out of earlier family concerns, namely, Shivnarain Baldeodas (Bombay, 1879), Baldeodas Jugalkishore (Calcutta, 1903), and Ghanshyamdas Murlidhar (Calcutta, 1911). Shivnarain and Baldeodas were respectively the grandfather and father of Ghanshyamdas (G.D. Birla the founder of Birla Brothers.), and Jugalkishor was G.D.'s elder brother. The family rose out of an obscure position in the Bazaar. The first known ancestor, Seth Shivnarain's father Shobharam (G.D.'s great grandfather), was the clerk of a Marwari firm of Hyderabad. He was posted in the desert town of Nawalgarh in Rajasthan on a salary of Rs. 10. Shivnarain, who for his part had a retail shop in Pilani, migrated to Bombay in 1857 and there he became a seth speculating in opium, in partnership with his son Baldeodas. 'Shivnarain Baldeodas' shifted its headquarters to Calcutta during the plague epidemic of 1896 in Bombay, its net worth being then Rs. 1.5 lakh. In Calcutta, the Birla firm, under a new partnership called 'Baldeodas Jugalkishore', speculated in opium, and then began trading in opium, silver grain, linseed, Manchester cloth, and Japanese cloth. The Birla family became a member of a profitable opium syndicate of Calcutta in 1911. In that year, G.D. Birla began trading on his own account, as a broker in raw jute and gunny bags to Bird Heilgers, Andrew Yule, Jardine Skinner and other big European houses.

With the outbreak of the First World War, the Birlas reputedly grew from a party worth Rs. 20 lakhs to a party worth Rs. 80 lakhs, thus providing themselves with the capital to enter industry under G.D. Birla's leadership. The wartime profits they made were derived principally from two sources; speculations on silver prices (Baldeodas Jugalkishore) and trade in raw jute, jute fabrics and jute shares (Ghanshyamdas Murlidhar). At the end of the war, the Birlas were second only to the European firm of Ralli Brothers in the export of raw jute. In 1911 the Birla family concerns were consolidated under G.D. Birla as the modern firm of Birla Brothers, which, while carrying on trade, at the same time thrust into the jute mill industry, breaking a tenacious European monopoly. Birla Jute Manufacturing Company (1919) started production in 1920, and in the same year, a cotton mill was acquired in Delhi. In the 1930's the newly protected domestic market encouraged G.D. Birla to set up upcountry sugar mills and paper mills: Bharat Sugar Mill Ltd. in Saran, Bihar (1931), New Swadeshi Sugar Mills Ltd. in Champaran, Bihar (1931), Awadh Sugar Mills Ltd. in Sitapur, Uttar Pradesh (1932), Upper Ganges Sugar Mill Ltd. in Bijnore, Uttar Pradesh (1932). New India Sugar Mills Ltd. in Darbhanga, Bihar (1933), Orient Paper Mills Ltd. in Brajnagar, Orissa (1936), and Sirpur Paper Mills Ltd. in Hyderabad (1938). Finally the Birla Group extended their operations from the manufacture of consumer's goods to the production of capital goods. On the eve of the Second World War G.D. Birla pioneered the Textile Machinery Corporation (Texmaco) with a paid up capital of Rs. 1 crore, and then in 1942 he floated the Hindustan Motors Limited with a paid up capital of Rs. 4.96

crores. Actual production of textile machinery, however, began because of wartime difficulties, only in 1946, and motor cars were not assembled, because of the same reason, before 1947. On the eve of independence, the share capital of the Birla Group amounted to Rs. 24.8 crores.

At the end of the Second World War and especially after Independence, the European managing agencies passed one by one into the control of Indian managing agencies, especially big Marwari houses. In the technologically more complex industries that now sprang up, there were tie-up arrangements between the Indian managing agencies and the big multi-national companies, which entered the field. Independent India inherited from the colonial period a strong indigenous business class.

36.6 WHY NO TAKE-OFF?

Soon after independence, the economic historian Daniel Thorner noted that despite some achievements, India's development under the British had been 'strangely lopsided.' There was no industrial revolution and no 'take-off' into sustained economic development. The question is why a take-off did not occur? One view blames Indian backwardness; the opposite view blames British policy in India. Morris David Morris, who belongs to the former school of thought, emphasizes the technological backwardness of the Indian economic structure, and he elaborates on how this prevented sustained investment in large-scale industry. Amiya Kumar Bagchi, who belongs to the latter school of thought, is of the opinion that this backwardness was produced by colonial economic policies, and he highlights the throttling system of monopoly that held up industrialization in the high noon of empire. There is no consensus among economic historians about the reasons behind India's failure to achieve an industrial revolution.

Statistical research has never established one point. In the period 1900-1947, the rate of growth of large-scale industry was relatively high; but this growth began from a low level. In fact, there was not much organized industry in 1900, and the economy was overwhelmingly agrarian. Even the faster rate of industrial growth, therefore, could not transform the economy from an agricultural to an industrial one. The performance of agriculture, as S. Sivasubramanian's statistical series on national income established was poor between 1900-1947, and this pulled down the rate of over-all economic growth despite a considerable degree of industrialization. Moreover, artisan industries expanded after 1900, but at a lower rate than factory industries. Industry grew, but it did not transform agriculture or the economy.

36.7 SUMMARY

Industrialization in the European context has been usually associated with the growth of large-scale industries. In India, till the twentieth century, industrial production was based on the cottage sector. So it is difficult to study the developments in the factories without reference to what was happening to small-scale production.

How do we measure the process of industrialization? Economists and historians commonly use two different measures. First, they calculate the growth of output of each sector (primary/ secondary/ tertiary), and their relative weights. Second: they estimate the changes in employment and distribution of work force in different sectors. By considering both these measures we see that factory industries did not grow in the nineteenth century, but expanded in the twentieth. Between 1900 and 1946 the national income from secondary sector increased substantially, and factory output went up more

rapidly than the number of workers engaged, implying an increase in the net per capita output per engaged person. This expansion did not, however, lead to a take off into sustained growth. While industrialization did occur in the twentieth century, the figures tend to over state the magnitude of growth since the base level from which it started was very low. The process of industrialization was halting and lopsided. Capital goods industries did not grow, and production was limited to consumer goods. This Unit traces the phases through which industrialization occurred in the twentieth century, and the process through which the Indian capitalists acquired business power.

36.8 EXERCISES

- 1) Discuss the nature of industrialization during 1900-1946.
- 2) Account for the fluctuating trends of industrial production in the different phases of industrialization in India.
- 3) Analyse the impact of World Wars on Indian industries.
- 4) Discuss the role of commercial enterprises in the growth of Indian Industries during the pre-independence period.
- 5) Examine the growth pattern of Bird Heilgers & Company and Birla Brothers enterprises.

36.9 SUGGESTED READINGS

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UNIT 37 TECHNOLOGY, SCIENCE AND EMPIRE

Structure

- 37.1 Introduction
- 37.2 Colonialism and Scientific Knowledge
- 37.3 Dual Mandate
- 37.4 Organizational Imperatives
- 37.5 Technology, Empire and Economic Growth
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37.1 INTRODUCTION

Every society, however crude or primitive it might appear from the benefit of hindsight, has a certain amount of scientific rationality and endeavour within it. The South Asian society, from time immemorial, has nurtured a thinking civilization. It never lived an isolated existence and never displayed xenophobic tendencies. Techno-scientific tradition in South Asia has been largely a synthetic tradition, continuously evolving as a result of each politico-cultural interaction with the outside world and social change within the region (Rahman, 1984). In pre-modern times, South Asia was known for its contribution to astronomy, medicine and mathematics. Centuries ago Said al Andalusi (1029- 70) in his *Tabaqat al Uman* (Probably the first work on history of science in any language) referred to India as the first nation which cultivated the sciences. But it was during the post-Renaissance epoch (that of Rene Descartes (1596-1650) and Issac Newton (1643-1727) that Europe began to outdistances all other culture-areas. In the eighteenth century this distance became virtually unbridgeable. For India, this century proved unique in the sense that it saw the decline of pre-colonial systems as well as the inauguration of systematic colonization. During this period the rise of modern science itself coincided with the rise of capitalism and colonial expansion (Moraze, 1982). Probably they grew in tandem, feeding each other.

Eighteenth century India, however, remained 'blissfully' ignorant of these developments. In the early eighteenth century an *amatya* (minister) of Kolhapur, Ramchandrapant, wrote about the activities of the European traders and 'factors'. He called them *topikars* (hat-wearers) and recognised that their strength lay in 'navy, guns and ammunitions'. His prompt advice was to avoid the *topikars*, 'neither troubling them nor being troubled by them'. This was an early sign of withdrawal and of playing safe. But this attitude tempted the *topikars* to attempt conquest along

with commerce and their success was virtually assured. The Indian world-view remained by and large tradition-bound. Even notable exceptions like the scholar-prince Sawai Jai Singh (1688-1743) who invited Jesuits and shared astronomical knowledge with them, could not transcend the cultural limits of his age and people. But there were certain areas in which interaction between the East and the West resulted in acceptance and improvement. These were ship-building, armaments, metallurgy, cloth printing and architecture. European innovations were conveniently ignored wherever existed an alternative or appropriate indigenous technology which could serve the Indian needs to a reasonable degree (Qaisar, 1982). For example, mechanical clocks, the printing press, telescopes, coal, etc. remained mere curios. Since these were not found culturally compatible, the Indian nobility simply ignored them. While explanations about the acceptance or rejection of a particular idea or tool may not always appear convincing, it nevertheless remains true that the eastern knowledge-corpus and its implements were no match to what was then happening in the West. The problems of eighteenth century India were compounded by an enormous intellectual failure on the part of the ruling class (Athar Ali, 1979). This was true not only of late Mughal India but the Safavids in Iran, the Manchus and the mighty Ottomans had also begun to show signs of crack.

37.2 COLONIALISM AND SCIENTIFIC KNOWLEDGE

Some resurgent nations, now ruling the waves, came in and through their trading companies chalked out large areas. Their sails, their guns, their training were substantially different. They had 'new' knowledge behind them. In the midst of political intrigues, plunder and numerous local wars, some official of the East India Company could think of establishing a forum for knowledge (The Asiatic Society, 1784) and a college at their fort (Fort William College, 1801). Trained surveyors marched along with their armies. The British could succeed against their numerically superior adversaries largely because they possessed a thorough and scientific knowledge of the country through which they marched. In 1760s Rennell surveyed Bengal and later Kelly surveyed the Caratic region. Their charts were of immense value for both military operations and revenue settlements. Survey and expansion moved side by side. Every boat that touched the Indian shores had a medical man on board. Trained in the scientific seminaries of Scotland and Northern Europe, he would be known as surgeon-naturalist: and true to his training, in his spare time, he would look for and report on the topography, minerals, flora, fauna and people of his area. They were scientific soldiers who willingly and promptly extended the help of 'new' knowledge to the process of colonial expansion and consolidation.

Thus was born the phenomenon of 'colonial science'. In some ways, it did represent an advance over pre-colonial science. It was far more systematic, methodical, penetrative and pervasive. It involved everything: science, politics, commerce, military operations, administration, etc. In any case it is now widely acknowledged that techno-scientific developments and colonial expansion had closer links (Headrick, 1981; Deepak Kumar 1995, 2001; Roy MacLeod & Deepak Kumar, 1995). These links beg certain questions. Can there be an imperialist side to the core of natural knowledge? What was the shape that 'modern' and 'universal' science took in a colony? What was the colonial posture in science and to what extent were scientific discourses used to achieve political and cultural goals? No less important is to glean how the recipient culture sought to appropriate or redefine the metropolitan ideology of science. How was the indigenous scientific tradition perceived? How did the local people react to the introduction of 'new' knowledge and new tools? Was a synthesis possible? Finally, could the integration of technological and scientific tradition

have taken place as part of the natural evolution of the Indian society had colonization not intervened?

Clear answers are difficult to attempt, for colonialism was no monolith and it left several facts and questions open to interpretation in diverse ways. Yet one thing is certain, colonial science lacked sovereignty. Its contours were of course drawn on the colonial terrain, but it enjoyed a rather limited autonomy which was further reduced as the colonial grip tightened. Several colonial scientists felt uncomfortable, yet they had to perform a dual role-to serve the colonial state and to serve science. This state claimed superiority in terms of structure, power, race, etc. Science claimed superiority in terms of knowledge and inter alia helped the colonial state dismiss 'other' epistemologies. Both needed each other and became mutually dependent.

37.3 DUAL MANDATE

As the Company rule in India owed its origin primarily to mercantilist activities, the notion of 'science for profit' makes an early appearance. Yet, in the early stage, the colonial scientists (those days mostly surgeon-naturalists) had more freedom and flexibility. There were many difficulties but also enormous opportunities to discover and sight new things. Support from metropolitan scientists added to their confidence and their agenda was not entirely derivative. They did enjoy a certain amount of autonomy and they too influenced metropolitan discourses (for example, on the deposition of coal-seams, nature of cholera, etc.). Richard Grove has shown that the idea of environmental conservation came from the colonies, and colonial planters, botanists and foresters contributed a great deal to the initiation and maturation of conservation debates in the metropolitan circles. Moreover, the very concept of a state scientist emerged in the colonies and this shows how aware the trading companies, who ran the colonial business, were of the importance of scientific explorations. A knowledge of the local terrain, local resources, customs and traditions was vital for the founding of a colonial state. The process of acquiring this knowledge was not an easy one; almost insurmountable physical and conceptual problems came in the way.

The early colonizers in India realized that they had to tread cautiously. The state they sought to establish had to adapt to, and yet be substantially different from, the pre-colonial structures of power. In order to legitimize their own rule, they first had to delegitimize several pre-colonial structures and texts. For this, the condemnation of the immediate past was considered necessary. Indians were declared unscientific, superstitious and resistant to change; India was 'identified with dirt and disease'. Travellers, scholars and officials of both the Orientalist and Anglicist variety subscribed to this view. William Jones, the foremost Orientalist, declared that in scientific accomplishments the Asiatics were 'mere children' when compared with the Europeans (Adas, 1990). Thus was established a paternalistic Raj which would be caring and dismissive at the same time. It was to be based on claims to not only superior musketry, but to a superior knowledge as well. This sense of superiority came from western discourse on rationality and progress, and was promptly used to denounce whatever scientific knowledge e.g. in astronomy and medicine the Indians could boast of. Yet this denunciation was not total. Several early colonial scholars showed respect for certain indigenous scientific traditions and techniques. They wanted western knowledge to permeate slowly and cause gradual displacement.

There were certain individuals on the spot who largely determined what was advantageous to (both trade as well as the country. Thus James Rennell (Surveyer

General of Bengal who surveyed and mapped Bengal), Thomas Kyd (English Elizabethan dramatist 1558-1594), Roxburgh, William Carey (Baptist missionary to India, 1761-1834), John George Lambton (1792-1840, British statesman who played an important role in drafting the reform bill of 1832), Williams, O'Shaughnessy and others emerge as pioneers. These colonial scientists tried their hand in several fields simultaneously and were in fact botanists, geologists, zoologists, physicists, chemists, geographers and educators-all rolled into one. For example, while seeking lecturership at the Calcutta Medical College, West Bengal, O'Shaughnessy offered not only to teach chemistry and experiment with medical plants but also to give practical instructions to non-medical as well as Indian and European students, on the chemical arts of dyeing, bleaching, calico-printing, distilling, sugar-refining, melting of ores and manufacture of drugs'. This had its positive as well as negative points. As data-gatherers they had no peers; but for analysis and recognition, they had to depend on the metropolitan scientific culture whose offshoots they were and from which they drew sustenance.

37.4 ORGANIZATIONAL IMPERATIVES

An impressive institutionalization alone could have consolidated the gains that accrued from the exploration. It may be interesting to observe how and in what form a particular scientific organization at a particular historical juncture worked for the then existing politico-economic structure. Geological and survey department, for instance, received the maximum patronage from the government. Next ranked botany. Agriculture remained a Cinderella till the 1890s, though a few private agricultural and horticultural societies did try to give it a commercial drift. Private scientific bodies were often more vigorous than the government machinery itself. Among them can be counted the Asiatic Society of Bengal, the Bombay Branch of the Royal Asiatic Society and the medical and physical societies. in Presidency towns. Changing economic needs, the proliferation of scientific establishments, and the growing concern shown for them by the educated Indians made the government to think in terms of an apex body to regulate scientific affairs in India. In 1898, at the instance of the Home Government, the Royal Society formed an Indian Advisory Committee, and in 1902 the Government of India established a Board of Scientific Advice. These experiments unfortunately generated more heat than light and ended in a whimper. Still these institutions had brought the government, science, and economic consideration into a close relationship. The economic interest-group desired research to gain immediate and practical ends. The economic ramification can well be spotted in the growth of industries fed on applied science, viz. coal, cotton, jute, tea, etc. One may argue that scientific development in British India should be treated as individual romances with natural history without linking them with the political economy of the time. But where would be natural sciences without industry and commerce? The light of science had certainly been dimmed by the smoke of commercialism.

Excessive government control of scientific undertakings often hampered the logical development of modern science in India. The government would always goad the various organizations to work only along economically beneficial lines. Most of them buckled under this pressure. George Watt, for example, was asked in 1903 to prepare an abridged volume of his famous *Dictionary of the Economic Products of India*. But he was not given a free hand in selecting the products. He was asked to include only those which were of commercial value. The result was that instead of a Dictionary of Economic Products, he produced a Manual of Commercial Products.

Colonial researchers often found themselves unable to distinguish between ‘basic’ research and ‘applied’ research. This was particularly true of the geologist and botanists. Their dilemma was fairly acute. On top of it, though the colonial government would always recognize the importance of science, it would never approve of ‘any large outlay upon them which must, however useful in its remote results, be immediately unremunerative’. Some of the specialists (especially the botanists) felt slighted. A few received a great deal of attention while others none; for example, large sums were spent on geological explorations and nothing on the examination of agricultural soils. George Watt wrote to Thiselton-Dyer (15th January, 1902) that its ‘absurd to suppose that the Geology of India requires fourteen European experts, while the Agriculture and the Industries of India must be content with two or three expert investigators.’

A significant feature of this phase is the relative neglect of medical and zoological sciences and this is in sharp contrast to larger investments in botanical, geological and geographical surveys from which the British hoped to get direct and substantial economic and military advantages, while medical or zoological sciences did not hold such promises. Western medical classes, for instance, were started in 1822, but it took another thirty years to produce the first exhaustive compilation of information on tropical disease in India. Charles Morehead brought out in 1856 *Clinical Researches on Disease in India* in two volumes. The treatment and study of tropical diseases was undertaken by individuals who were separated both geographically and professionally and so, naturally, a consistent body of knowledge failed to develop. This was true for every branch of knowledge.

Another important feature is the almost total absence of pure or theoretical research. Research activities in science like physics and chemistry which had by then reached ‘a professional stage’ in Europe, were hardly noticeable in India. In the *Centenary Review of the Asiatic Society* (Calcutta, 1886), P.N. Bose apologetically wrote: ‘Our chapter of chemistry at the Asiatic Society is near being as brief as the proverbial chapter on Snakes in Ireland.’ Till the advent of P.C. Ray, only one chemical paper had appeared by A. Pedler on the volatility of some of the compounds of mercury. There were chemical analyzers in every province but their job was confined only to medico-legal cases and the inspection of government stores. India was found suitable only for field research. She was in fact used as a ‘vast storehouse’ with exotic varieties of flora, fauna and minerals which were to flood the European laboratories for many years to come. The real research was thus to be done in the metropolis. India could get only ancillary units. And this happened in a century when England itself was undergoing a phase of transition wherein professional scientists, the government and industrialists who understood the full potentialities of science, were all attempting the very difficult task of integrating science into the English government, industry and education. In India the story was, however, different. Here scientific explorations brought the government, science and economic exploitation into a close relationship. But the Indians and India’s interests were left largely in the cold.

37.5 TECHNOLOGY, EMPIRE AND ECONOMIC GROWTH

Technological changes occur in every society. But the parameters of development are determined by the pace with which technological changes take place in a particular society and its ramifications. In pre-British India, the process was definitely slow. Although not primitive, it certainly was no match to what was then happening in

Europe. A European thinker Max Weber marvelled at how the Indians had perfected the 'technology of contemplation', but faulted them on material technology. Why, it is often asked, did India not generate these modern technologies, and why was it sometimes slow in their absorption? It is easier to ask such questions than to answer them. Did British colonisation accelerate India's 'fall'? Or did the British presence, however inadvertently and lacking in foresight, prepare what became in Indian hands a vital basis for later economic, scientific, and technological take off? If so, how was this managed, and what conclusions may be drawn? Such questions call for an emphasis on structural and technological factors, to take their place alongside the political, administrative and cultural literature.

Civilian officials were concerned about traditions and customs and did not wish to unsettle them for fear of a revolt. But technical men like engineers were not enamoured by such considerations. They were less interested in 'local knowledge and practices'. Their technical discourse was universal. Thorough professionals which they were, their real concern was to ensure the most efficient use of nature in the service of the state. Among the new technologies of the Victorian era which made waves in India were the steamship, exotic seeds, the telegraph, and of course, the railway. In the industrial sector, in order to maintain commercial advantage, British legislation largely discouraged technological change in India. Failure, it seems, can be attributed either to colonialism, the retention of an archaic culture, the changing nature of the technological push, or to some combination of these factors. Whether it be the railways or any other technology project the disadvantages accruing from the loss of sovereignty are well manifest in their internal workings. They remained enclavists. Technology transfer is a deliberate (perhaps organic) deliverance. What colonial India saw was a cultural as well as an economic syndrome which contained within itself an intricate interplay of 'colonial' penetration, 'native' resistance and response. Caste did not act as a barrier. Yet colonialism and the 'technological imperatives of the nineteenth century' collaborated to ensure India's relative technological backwardness.

In short, India's burgeoning commercialisation was not supplemented or followed by industrialisation. Formalised courses were there, but no incentive to innovation. A factory system did emerge, but industrial laboratory came only on the eve of independence. For India to industrialise, using applied science, there had to be structural incentives to invest and innovate. But these could not come from 'within', as the 'within' had lost its sovereignty. The nascent Indian bourgeoisie could not produce heavy capital goods on a weak and dependent technological base. They faced formidable problems arising from the absence of essential machinery, know-how, and trained personnel. The 'token' industrialisation that did take place in certain sectors (textiles and later in steel) had no 'multiplier' effect on the industrialisation of the colonial economy as a whole.

37.6 WHY SCIENCE EDUCATION?

In the educational scheme, science was never given a high priority. The character of 1813 called for the introduction and promotion of knowledge of the science among the inhabitants of British India. But it remained a pious wish. Moreover, it gave no indication of which system of science, indigenous or European, was to be preferred. In 1835, Thomas Babington Macaulay not only succeeded in making a foreign language (English) the medium of instruction, his personal distaste for science led to a curriculum which was purely literary. The entry of science was thus delayed. A few medical and engineering colleges were opened but they were meant largely to

supply assistant surgeons, hospital-assistants, overseers, etc. The curriculum, the instruments, and the very organisation of these colleges were geared to meet the requirements of only subordinate services. Later in 1870, the Indian universities began to show some inclination towards science education. In 1875, the Madras University decided to examine its matriculation candidates in geography and elementary physics in place of British History. Bombay was the first to grant degrees in science, Calcutta University divided its B.A. into two branches - 'A' course (i.e. literary), 'B' course (i.e. science).

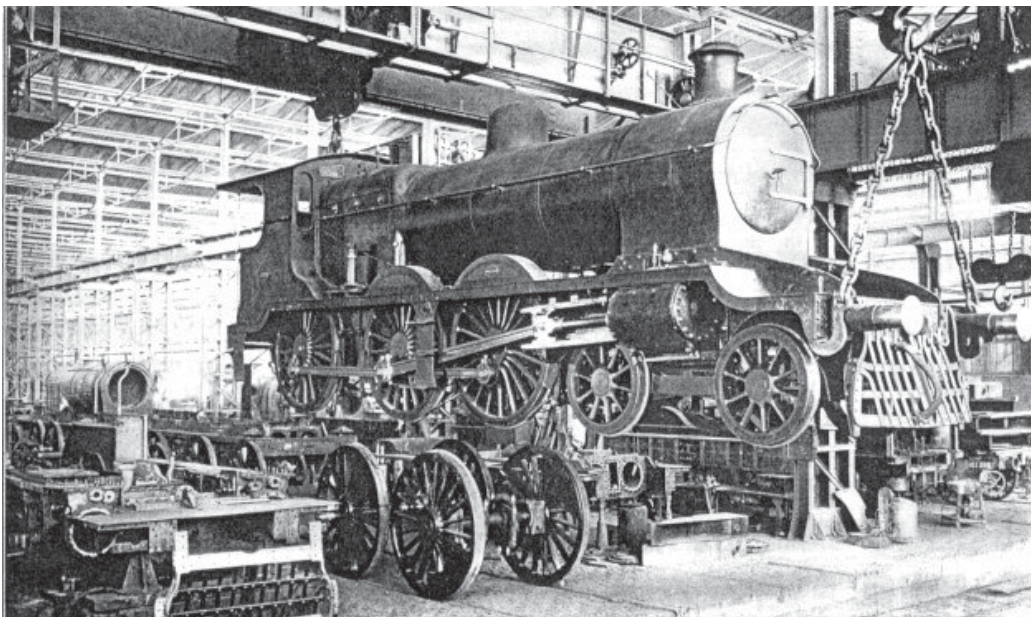
Even this slow growth of science education was beset with many problems. First was the very aim and character of educational policy itself i.e. 'character formation'. K.M.Chatfield, Principal of Elphinstone College, admitted that the institution of university professorship would indeed foster the development of knowledge through research but argued that not this but 'the education of youth was the aim of the system'. For this purpose a liberal-literary education was found more suitable. The second problem was the shortage of funds and its unequal distribution. In 1900 the four colleges of Patna, Cuttack, Hooghly, and Krishnagar cost the government Rs.55,441 while the Presidency College of Calcutta claimed Rs.1,14,702. Another problem was that the authorities in India looked for western models. C.Benson of Saidapet Agricultural College, for example, justified major emphasis on theoretical instruction there on the ground that Professor Jorgensen had done the same thing for the Royal Agriculture College at Copenhagen. But they seldom incorporated their advantages, and in the name of adapting to the local conditions often made a mess of them. In almost every field of activity, British institutions were looked upon as the ideal models. But they would not grant anything like "higher form of scientific or technical education". What India got was some sort of a hybrid emerging out of a careless fusion between industrial and technical education. What is more, the adoption of English as the sole medium of instruction in science rather hampered its percolation to the lower classes.

The British educational experiments in India have often been severely criticized. Education was no doubt an important segment of the whole colonial enterprise and was definitely meant. to strengthen it. Gauri Viswanathan (New York, 1989) calls it a 'mask of conquest' and Susanta Goonatilake (New Delhi, 1982) considers it a tool for 'cultural blanketing'. Are these sweeping judgements? S.Ambirajan (Deepak Kumar, 1995) raises the important question as to whether the system was planned and erected for just this aim or whether there were other forces that brought about the same results. He believes that chance, more than foresight, determined the future. There is also a bureaucratic momentum, which propels institutions along a path, though not necessarily the one charted by the initiators. 'Chance' and 'bureaucratic momentum' are valid arguments if we do not lose sight of the fact that it was a colonial bureaucracy. This bureaucracy ensured the primacy of colonial requirements. Engineering colleges existed for the Public Works Department and were called 'civil' engineering colleges. The nature and pattern of engineering education in India differed from that of Britain. Whereas in England it evolved from below and gradually became a part of the University curriculum, in India it was organized from above. Though in France also it was organized from above, the motive and situation differed greatly. In Europe, engineering education was developed in order to facilitate the process of industrialization. In India there was no such imperative. Here hopes were pinned not on 'material' but on 'moral' uplift. In fact, the whole aim of colonial education was 'moral development' and 'character formation'. The 'native' character was considered defective, immoral and superstitious. The 'new' education armed with

western rationality was supposed to correct it. But the Public Works Department (PWD)-oriented education could not have achieved this.

37.7 TECHNOLOGICAL RAMIFICATIONS

The latter half of the nineteenth century was a period of consolidation and institution building. These institutions not only 'imported' knowledge; they imparted and, to some extent, generated knowledge. But could they diffuse new knowledge and to what extent? Telegraphs and railways were the high-technology areas in those days. Telegraph operations remained a purely governmental exercise, while the railways, raised on guaranteed profits, depended on wholesale import from Britain. Even the repair-cum-manufacturing establishments, like the Jamalpur workshop (established in the year 1862), proved to be islands in themselves. No technological spin-off could emerge, much less galvanize, the neighbourhood of a railway colony. Mechanical engineering came later and remained a poor dismal cousin of engineering in the public works department.



Jamalpur workshop

Irrigation and later hydraulic engineering definitely benefitted from the large irrigation works. The Roorkee Engineering College was closely linked to Proby Tomas Cautley's Ganges canal. Whether the generation or refinement of irrigation technology at Roorkee or Guindy (in Chennai?) reduced or increased the economic dependency of India is arguable and a matter of several statistical debates. These enterprises were basically technology projects with specific aims, and not technology systems with a wider canvas and greater results. A geographical relocation of technology (as in the case of railways) was possible and was achieved, but a cultural diffusion of technology is so different and much more complex. Moreover, the professional colleges were so controlled that they could not induce change at perceptible or a faster pace. The medium of instruction was also a factor to be considered. In Japan, the Japanese had insisted on their own language as a medium of instruction. The result was that modern knowledge and the scientific spirit could percolate down to the masses. In India, colonial education widened the gulf and accentuated the age-old divide. Even in government institutions, growth was kept under a self-regulatory check. The Tokyo Engineering College was established in 1873, much later than the Engineering College at Roorkee, and by 1903 it had a staff of 24 professors, 24 assistant professors and 22 lecturers. The Massachusetts Institute of Technology

was established in 1865 and by 1906 it had 306 teachers. On the other hand, Roorkee, even after hundred years of existence (i.e. in 1947), had only 3 professors, 6 assistant professors and 12 lecturers. The inference is simple. As D. R. Headrick points out, colonial rulers educated their subjects only up to a point. Beyond that point, they withheld the culture of technology.

37.8 INDIAN RESPONSE

Indian response can best be understood in terms of a cultural encounter that was initially disturbing, even agonizing. Gradually the colonizer-colonized relationship stabilized and the recipients started examining what was living and what was dead in their system, and, under the new circumstances, what to accept and what not. The encounter raised questions of attitude (towards each other), an uneasy acceptance, a quest for identity and, finally, the seeds of decolonization.

There was definitely an urge to comprehend the modern knowledge and tools that the colonizers had brought, and to assimilate them. This urge came from within, and the acculturative influence of European thought and Christian liberalism strengthened it. Even the commercial class realized the importance of new knowledge. Leading Bombay merchants like Manekji Curserjee and Jagannath Sunkersett viewed Western arts and sciences as a commodity, easily transported and, when acquired, easily adopted for use like any other material goods. The new interlocutors did put a premium on alien rule, and in a sense idolized it and supported downward filtration. They had to do this the more so because initially they could think of no other effective way to dealing with the serious ills of their society. They experienced a dual alienation (a la Cabral) from the traditional and later from the colonial life and system. (Panikkar, 1986) To some extent they could anticipate the distortions the colonial medium was likely to produce. But the realization was slow and diffident. Perhaps this explains why Rommohun Roy (1772-1833, Calcutta) looked to both Vedanta and the West. Ishwarchand Vidyasagar (1820-91, Calcutta), an admirer of Western knowledge, wanted Indian students to study their own 'false system' also. Bal Shastri Jambhekar (1802-46, Bombay) commenced his science popularization activities in both Marathi and English. and Master Ramchandra (1921-80, Delhi) began his mathematical Treatise from a twelfth-century Indian text, Bhaskar's Bij-Ganita. The soil was being prepared for cross-fertilization, and the seed was a crossbreed.

Rommohun Roy and Vidyasagar were great social reformers. Unlike them, Bal Shastri Jambhekar and Master Ramchandra concentrated in mathematics teaching and science popularization. Jambhekar was the first Indian to become a professor of mathematics and astronomy. He taught at Elphinstone College, Bombay, and among his early pupils was Dadabhai Naoroji, the doyen of Indian nationalism. Jambhekar worked for science learning through the local Marathi language. In 1836 he published the Marathi translation of a well known English work on Mathematical Geography, to which he added an 'Essay on the system of Bhaskarcharya'. In 1942 he published in Marathi two books, *The Theory of Equations* and *The Differential and Integral Calculus*. A little later in Delhi, Master Ramachandra tried to revive the Indian spirit of algebra so as to resuscitate 'the native disposition'. Bhasker was common to both. To begin with one's own heritage was quite natural. Indeed, this was the strategy advocated by the orientalist's as well. L. Wilkinson a British Resident and an astronomer at the court of Rewa, found Bhaskara's works 'beyond all comparison, the best means of promoting the cause of education, civilization, and truth amongst our Hindu subjects. What can be more flattering to the vanity of the Hindu nation, than to see their own great and revered masters quoted by us with respect, to prove

and illustrate the truths we propound', L. Wilkinson, 'On the use of the Sidhantas in the work of native education', *Journal of the Asiatic Society of Bengal*, 1834, vol. 3, 504-19. Ramchandra, however, moved ahead and incorporated the post Bhaskara 'advances' in his Treatise on the *Problems of Maxima and Minima*, published in 1850. His idea was to bridge the gap. But the efforts aborted. An alien government confident of its epistemic superiority (especially after Macaulay), would not allow the transplantation of modern science on an indigenous base.

Another interesting dimension of these 'early stirrings' was that both Jambhekar and Ramchandra took to science popularization through the Indian languages. Both worked for their respective Native Education Society and published journals (*The Bombay Durpan* in English and Marathi, and *Mohabb-e Hind* in Urdu). Both were avid translation enthusiasts. In a meeting organized by the Delhi Education Society on 'Learning European Knowledge through Translations' on 12 November 1867, an English priest argued that no society had gained knowledge through translations, to which Ramachandra replied that Europe was enriched through translations as the centres of science had shifted from Greeks to Muslims.

What Ramchandra probably did not realize then was that the translations in the Arab and the Mediterranean culture area were accompanied and often preceded by original research. The subsequent years were to prove the priest more correct, as the translation activities of Master Ramchandra and his more illustrious contemporary Sir Syed Ahmad Khan (and the Aligarh Scientific Society) were to end on a feeble note.

The most important characteristic of mid-nineteenth century Indian thinking was an unprecedented emphasis on cultural synthesis. Akshay Kumar Dutt, a contemporary crusader, worked for 'Indianising Western Science', Numerous journals of the period (like *Samvad Prabhakara*, *Tatva Bodhini* and *Vividharta Samgraha*) claimed the same objective. The idea of a cultural synthesis gave them the best of both worlds. First it enabled them to absorb culture shock and also promised a possible opportunity to transcend the barriers imposed by colonialism. Moreover, it also fitted well with the dominant Hindu doctrine of epistemological pluralism. So the clamour for cultural synthesis grew. Sir Francis Bacon (1561-1626) and Auguste Comte (1798-1857) impressed the Indian mind. But how to integrate their experimental method and rationality into the Hindu "science of spirit." This, the local thinkers were not clear about. They pursued a great variety of strategies – imitation, translation, assimilation, 'distanced' appreciation, and even retreat to isolation – but without much success. The search for synthesis remained, elusive, yet it did accelerate the quest for identity.

During 1860-80 a number of cultural essayists tried to articulate modern scientific rationality in terms of indigenous traditions and requirements. Bankimchandra, a Bengali novelist of high intellect and repute, for instance, wrote on *Vijnan Rahasya* (Secrets of Science), which appeared in *Banga Darshan* during 1865-70. With the help of John Tyndall's *Dust and Disease* he wrote *Dhula*, and T.H. Huxley's *Lay Sermons* was utilized in *Jaivonik*. Bhartendu Harishchandra, a very influential Hindi laureate, was also impressed by the developments in machinery and he associated them with a certain kind of attitude and behaviour. There are a number of direct reference to Comte in his literary as well as discursive writings (for example *Debi Chaudhurani* and *Dharmatatva*). These forays sometimes led Bankimchandra to return to certain ancient theological concepts. In 1873 he rejected the Hindu concept of Trinity as an aberration, but in 1875 he found it close to Darwin's theory of

natural selection. Hindu spiritualism finally sucked up many who ventured to travel outside its orbit. Islamic progressives faced a similar situation and sometimes fared worse. In 1877 one Maulvi Ubaidullah wrote:

The Mahomedans with their philosophy are exactly in the position of the school men of Europe, that is they have travelled half way towards actual civilization: consequently when the modern reformed philosophy of Europe once gains an entrance to their minds, they will be able to make more rapid progress than their neighbour Hindoos. Among us a Newtonized Avicenna or a Copernicized Averroes may spring up, who may be able to criticise even sons of Sina and Rushd.

The lure of inching towards 'actual civilization' and the hope of producing 'a Newtonized Avicenna (Ibn Sina, 981-1037) or a Copernicized Averroes' (Ibn Rashid, 1126-1198) present a curious mix of both self-criticism and a yearning for change (and also a hope perhaps yet to be realized).

Two things are striking in any account of this period. First, it was an age of translations. The numerous schoolbook societies and the scientific societies (Aligarh and Bihar, for example) were basically translation societies. Translations, no doubt, were very important and must have helped popularize certain scientific notions. But a major lacuna was that they were not accompanied, except in one or two cases, by any research. They remained mere translations, secondary, superficial and of limited value. In earlier transfers of knowledge, for example from Greek to Arabic, research 'preceded' or at least accompanied translations. This was not so with 'colonial transfers' at least in the case of India. It was at best a 'trial' transfer and in this sense one could speak of the disintegration, not of the integration of knowledge. Yet the penchant for translations must have done some good. Following Ballantyne's (1825-1894) efforts, Rajendralal Mitra (the most active Indian member of the Asiatic Society) prepared 'a scheme for rendering European scientific terms in the vernacular'. In the vernaculars of India 'untrammelled by any existing scientific literature' he could see the possibility 'to secure something thoroughly national and perfect.' With limited and defective means his intentions, however sound, were to remain utopian.

The second important aspect, of course, is the magnetic pull of tradition. In a subtle way the colonizers themselves promoted this by heaping occasional praises on 'the spirit of the East', and 'the Hindu Technology of Contemplation', etc. The Indians were shown as a superior civilization in spiritual matters. This was some, though poor, compensation for the loss of sovereignty. Indians themselves seemed to enjoy this distinction and it seems that Max Muller (German Indologist) was discussed more than Charles Darwin. The positivists and the Brahmos emphasized the importance of reason and observation, though their reason was not without God and was mixed with a heavy dose of moral and spiritual teaching. In any case, modern science was not seen as an alien import. Darwinism, for instance, was imported readily and the theological issues at its heart did not cause a ripple in India. The new paradigms in science were quickly accepted and numerous popular articles traced the seeds of modern advancement in ancient texts. How to characterize such arguments? Were they exercises in revivalism or revitalization of cultural self-defence or self-assertion? It was perhaps a combination of both a delicate balancing act which promised a semblance of identity in an age of intellectual torpor and crisis.

The theme of the identity of the colonized on its own terms (that is, away from what the colonizers thought about or dictated) also contained the seeds of decolonization.

An imperial rationalist discourse showed Indians how rationalism could be turned against the Europeans themselves. Rationalism was seen as something inherent in human nature rather than a European ‘speciality’ and as a mark of progress independent from Europeanization. Gradually colonialism came to be viewed as a cultural invasion of space, to be ended, neutralized and rolled back.

37.9 FROM DEPENDENCE TO INDEPENDENCE

One of the first to realize the necessity of re-articulating science in national terms was Mahendra Lal Sircar (1833-1904). In 1869 he wrote an article ‘On the desirability of a national Institution for the cultivation of sciences by the natives of India’. This title is extremely significant. He argued against the prevailing contention that the Hindu mind was metaphysical, and called for the cultivation of the sciences by ‘original’ research. He wrote, ‘We want an Institution which will combine the character, the scope and objects of the Royal Institution of London and of the British Association for the Advancement of Science’, and then added, ‘I want freedom for this Institution. I want it to be entirely under our own management and control. I want it to be solely native and purely national’. In April, 1875, *Bharatvarshiya Vigyan Sabha* (an all-India Science Society) was formed. Its objects were: (1) to discuss science as a subject by instituting a Society at Calcutta, which would have branches in other parts of India; and (2) to educate the people of India in various scientific subjects and to publish all the ancient Indian tracts relating to science. In 1876, after a great deal of effort and controversy, the Indian Association for Cultivation of Science was inaugurated in Calcutta. This event was no less important than the establishment, nine years later, of the Indian National Congress, a political forum that was to spearhead the national movement. The Association was a cultural challenge and symbolized the determination of a hurt psyche to assert and stand on its own in an area that formed the kernel of Western superiority.

The Swadeshi movement provided further impetus. It had two objects: (1) the promotion of education along national lines and under national control with special reference to the exact sciences and technology; (2) the industrialization of the country and the advancement of materialism. In 1904, all Association for the Advancement of Scientific and Industrial Education of Indians was formed. The object was to send qualified students to Europe, America and Japan for studying science-based industries.

As noted earlier, the environment was not conducive to higher studies, much less research. The Indians were allowed only subordinate posts and even those who had distinguished themselves abroad were given less salary than the Europeans of the same grade and rank. This “apartheid” in science made the Indians react strongly. J.C. Bose refused to accept this reduced salary for 3 years. Not only this, till the Royal Society recognised Bose, the College authorities refused him any research facility and considered his work as purely private. J.C. Bose was unorthodox in other ways. He was one of the first among modern scientists to take to interdisciplinary research. He started as a physicist but his interest in electrical responses took him to plant physiology. To fight for a place in the metropolitan scientific circle was not less difficult than fighting against the administrative absurdities of a colonial government. Bose persisted and won. P.C. Ray had also suffered. On his return from England in 1888 with a doctorate in Chemistry, he had to hang around for a year and was finally offered a temporary assistant professorship. All through he had to remain in Provisional Service. P.N. Bose preferred to resign when in 1903 he was superseded by T. Holland, who was 10 years junior to him, for the directorship of the Geological Survey.

These problems were reflected also on the political platform of the country. In its very third session (1887), the Indian National Congress took up the question of technical education and since then every year repeatedly passed resolution on it. K.T. Telang and B.N. Seal pointed out how in the name of technical education the government was imparting merely lower forms of practical training. The Indian Medical Service was severely criticised. In 1893 it passed a resolution asking the government 'to raise a scientific medical profession in India to the best talent available and indigenous talent in particular. Whether it be education, agriculture or mining, the Congress touched several problems under its wide sweep.

The activities of this era had two important features. One was that almost all the exponents of Swadeshi looked to Japan as a major source of inspiration. Japan's emergence as a viable industrial power and its subsequent military victory over Russia in 1904-5 caught the imagination of a fellow Asiatic, though enslaved, society. Another characteristic was that sometimes they showed revivalist tendencies. Distant past comes in handy for the recovery of a lost self or reassertion of one's identity. This search for moorings made P.N. Bose (a geologist) write *A History of Hindu Civilization* in 3 volumes. J.C. Bose gave Sanskrit names to the instruments he had fabricated (*Kunchangraph, Soshungraph*). Many science popularisers had a tendency to show that whatever was good in western science existed in ancient India also. For example, Remendrasundar Trivedi's discussion on Darwin ended with Gita. In his posthumous publication *Vichitra Jagat* (published in 1920) Trivedi talks of two worlds, one *Vyavharik Jagat* (visible world), the other *Pratibhasik Jagat* (reflected according to the individual consciousness). The first world he relegates to the collective and demonstrable outcome of direct experience while the other he extols. Then he talks about one more world that of concept (*Dharna*) which can never be observed or measured. Later B.K. Sarkar wrote on the Hindu Achievements in Exact Science. They were all for the industrial application of modern science but would not like to trespass certain cultural limits. They tried to demonstrate that the Indian ethos and the values of modern science were congruent and not poles apart. This was an extremely difficult task. Total colonisation had certainly blunted the possibility of evolving perspectives rooted in indigenous intellectual and cultural heritage.

These efforts had nonetheless a galvanizing effect. Taking advantage of the University Act of 1904 which allowed the existing Indian universities to organise teaching and research instead of being merely affiliated teaching bodies, Sir Asutosh Mukherjee took the initiative in establishing a University College of Science in Calcutta. Eminent Scientists such as P.C. Ray, C.V. Raman, S.N. Bose and K.S. Krishnan taught there. This very college, although starved financially all through, produced a group of physicists and chemists who received international recognition. By contrast, many government scientific organizations staffed by highly paid Europeans cut a sorry figure.

Those who put India on the scientific map of the world were J.C. Bose who studied the molecular phenomenon produced by electricity on living and non-living substances; Ramanujan, an intuitive mathematical genius; P.C. Ray who analysed a number of rare Indian minerals to discover in them some of the missing elements in Mendeleef's Periodic Table. C.V. Raman's research on the scattering of light later won him the Nobel prize in 1930. K.S. Krishnan did theoretical work on the electric resistance of metals. Meghnad Saha contributed to the field of astrophysics, S.N. Bose's collaboration with Einstein led to what is known as the Bose-Einstein Equation; D.N. Wadia worked in the field of geology, Birbal Sahni in palaeobotany, P.C. Mahalanobis in Statistics, and S.S. Bhatnagar in Chemistry. Apart from the

individual contributions of these scientists, their greatest contribution was in the field of teaching and guiding research. Many of them set up scientific institute, for example the Bose Institute (1917), National Institute of Science (1934), Indian Academy of Science (1934), Sheila Dar Institute of Soil Science (1963), Birbal Sahni Institute of Palaeobotany, etc. This gave further impetus to scientific activity in India.

Soon the need for an annual scientific meeting was felt so that different scientific workers throughout the country might be brought into touch with one another more closely than in the purely official and irregular conferences such as the Sanitary Conference or the Agricultural Conference. Thus was born the Indian Science Congress in 1914 with objectives similar to those of the British Association for the Advancement of Science.

In the wake of the first world war the Government realised that India must become more self-reliant scientifically and industrially. The Government appointed an Indian Industrial Commission in 1916 to examine steps that might be taken to lessen India's scientific and industrial dependence on Britain. The scope of the resulting recommendations was broad, covering many aspects of industrial development. But few of the Commission's recommendations were actually implemented. Similar was the fate of the recommendations of numerous other Conferences and Committees. Whenever requests were made by Indians for starting new institutions or expanding existing ones, the government pleaded insufficiency of funds or inadequacy of demand. The interests of the colonial administration and those of the nationalists in most instances simply clashed.

A glance at the development during the first quarter of 20th century will indicate that this period was characterised by a conflict something like small vs. big, traditional vs. modern. When M.K.Gandhi started his campaign for cottage industries, varying notes were heard at the annual sessions of the Indian Science Congress. P.C. Ray, for example, held that general progress through elementary education and traditional industries was a necessary precondition for scientific progress. But many differed with him. M.N. Saha and his Science and culture group opposed the Gandhian method of economic development and supported industrialisation on a large scale. The socialist experiments in Russia had unveiled the immense potentialities of science for man in terms of economic and material progress. The national leadership was veering towards heavy industrialisation and socialism, both of which stood on the foundations of modern science and technology. Saha found his 'Lenin' in Subhas Chandra Bose when the latter became the Congress President in 1938. On Saha's persuasion, Bose agreed to accept national planning and industrialisation as the top item on the Congress agenda. The result was the formation of the National Planning Committee in 1938 under the chairmanship of Jawaharlal Nehru. This Committee appointed 29 sub-committees, many of which dealt with such technical subjects as irrigation, industries, public health, and education. The University sub-committee on technical education worked under the chairmanship of M.N.Saha and had distinguished members such as Birbal Sahni, J.C.Ghosh, J.N.Mukherjee, N.R.Dhar, Nazir Ahmed, S.S.Bhatnagar and A.H.Pandya. The sub-Committee reviewed inter alia, the activities of the existing institutions and sought to find out how far the infrastructure of men and apparatus was sufficient in turning out technical personnel.

The outbreak of the second world war made it essential for the colonial government to work for industrial self-reliance to meet the challenges posed by war conditions. It was, therefore, felt necessary to establish a Central Research Organisation and this was eventually followed by the establishment of the Council of Scientific and

Industrial Research in 1942. As part of the post-war reconstruction plan the government invited A.V. Hill of the Royal Society. In 1944 he prepared a report that identified various problems confronting research in India. These developments offered greater opportunities to Indian scientists in policy-making and management of scientific affairs. In fact the origins of the science policy of free-India and of the whole national reconstruction can be traced in these activities.

37.10 SUMMARY

The foregoing analysis of British India illustrates that it is futile to expect the emergence of science under an alien administration obsessed with one-sided commercial preferences. In such a situation field sciences may be developed through imported scientists as an economic necessity but no fundamental research was possible. A few colonial scientists made important contributions that no doubt enriched science in general, but their activities hardly succeeded in introducing science to the Indian people. Colonial science did, on the whole, help to sustain exploitation and underdevelopment.

To these developments Indian response was not passive. Science course in the universities got good response, and the medical and engineering colleges attracted good students. For a long time Indians were denied access to scientific departments. The rising Indian middle class took up the challenge. Several Institutions were established and numerous popular science tracts and journals were published. Even the so-called conservative farmers were found amenable to change. They had no objection to the new tools provided these brought profits and were within their means. The problems was not cultural stagnation or social conservatism of the Indians, rather it was finding economically viable appropriate technological solutions and inculcating scientific temper. This search is still on in free India.

37.11 GLOSSARY

Jesuits

The Jesuits belong to the Society of Jesus founded by Ignatius of Loyola and his nine companions in 1540. The history of the Jesuits in India dates back to the time of Saint Francis Xavier, a Spanish Jesuit. Ignatius sent him to Portugal's colonies in South Asia. He arrived in Goa on the west coast of India in 1543.

Manchus

Manchu was originally a tribal group of the Jurchen. The Manchus were able to set up their own dynasty, Jin (1115-1234) by overthrowing Liao dynasty in Manchuria. However, their dynasty was shortlived. Soon they were defeated by Ogetai Khan and became part of Yuan dynasty. In 1616 Manchu leader, Nurhaci (1559-1626) established the Qing (Later Jin) dynasty. Beijing was captured by Li Zicheng in 1644 and the Qing empire moved the capital from Mukden to Beijing. The Qing dynasty lasted till 1911.

Ottomans

The origins of the Ottoman dynasty can be traced back as far as the thirteenth-century. The founder of the dynasty was Osman, leader of a branch of the Qayigh clan that inturn was part of the Turkic Oghuz

tribe of Central Asia. The Oghuz was amongst those Turkic groups who had fled west with the Mongol invasions of the thirteenth century and threatened the ailing Byzantine empire. Ottoman ruler Mehmet finally captured Constantinople (Istanbul) and defeated the Byzantine ruler in 1453. With the siege of Vienna (1683) their military power reached its zenith but at the same time their defeat marked the beginning of an irreversible decline.

Safavids

The founder of the Safavid dynasty was Ismail I. In 1502 Ismail was enthroned as shah of Iran. The Safavids established Shi'ite Islam as a state religion of Iran. Their greatest ruler was Shah Abbas I (1588-1629). He made Esfahan as his capital in 1598. After the death of Shah Abbas I (1629) the Safavid dynasty lasted for about a century, but except for interlude during the reign of Shah Abbas II (1642-66) it was a period of decline.

37.12 EXERCISES

- 1) Critically examine the colonial policy towards science education in India.
- 2) Analyse the Indian response towards colonial interventions in the field of science and technology
- 3) Examine the impact of swadeshi movement on the development of science and technology in India.
- 4) To what extent did colonial policies influence the development of science and technology in India.
- 5) Analyse the development of scientific knowledge during the British period.

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UNIT 38 FROM PLANNED ECONOMY TO GLOBALISATION*

Structure

- 38.1 Introduction
- 38.2 Nehru and the First Three Plans
 - 38.2.1 On the Path of Planned Economy
 - 38.2.2 Five Year Plans
- 38.3 Growth in the Post Nehru Era: 1965-1990
- 38.4 Structural Constraints and the Need for Reform
 - 38.4.1 Constraints
 - 38.4.2 Need for Reform
- 38.5 Economic Reforms Since 1991 : Liberalisation and Globalisation
- 38.6 Summary
- 38.7 Exercises
- 38.8 Suggested Readings

38.1 INTRODUCTION

Any attempt to evaluate India's journey after independence from planned economy to globalisation and liberalisation will have to place the Indian experience both in a historical and comparative context. We have to evaluate the experience taking into account the level and stage from which the beginning was made, the uniqueness of the effort to undertake an industrial transformation within a democratic framework and compare our achievements with other countries at a comparable stage of development.

First, what was the India we inherited at independence in 1947 after colonialism, for nearly two hundred years, had ravaged our economy and society and deprived it of the opportunity of participating in the process of modern industrial transformation occurring in other parts of the world?

Various estimates show that by the end of colonial rule, i.e., between 1914 to 1946, India's national income grew at a paltry rate ranging between 0.73 to 1.22 per cent per annum. The per capita income during this period showed stagnation if not decline, the estimates ranging between 0.26 and -0.26 percent per year.

Agriculture, the largest sector of the Indian economy, was in a state of ruin. Per-capita agricultural production decreased at 0.72 per cent per year during 1901-1941. All crop yields per acre declined by 0.02 per cent per year and food grain yields declined much more sharply, by 1.15 per cent per year, over the same period. Between 1901 and 1941 per-capita food grain output declined by a dramatic 24 per cent. The share of modern inputs (fertiliser, pesticide, electricity, diesel) in total input in agriculture in 1950 was a meagre 1.71 per cent, a share which was to rise to over 30 per cent in the early 1980s. No wonder, at independence India was faced with acute food shortage creating near famine conditions in many areas. Between 1946-53 about 14 million tons of food grains worth Rs. 10,000 million had to be imported, seriously affecting India's planning programme.

* The chapter is based on my chapters in Bipan Chandra, Mridula Mukherjee and Aditya Mukherjee, *India After Independence*, Penguin, New Delhi, 2000, particular Chapters 25 – 31.

The greatest damage, of course, was done to Indian industry. India, the world's largest exporter of textiles in the pre-British era, became a major importer of textiles and faced all round 'de-industrialisation' under colonialism. Despite a major effort made by Indian entrepreneurs in the sphere of industry in the twentieth century, especially since 1914, at independence India's industrial capacity was woeful. In 1947 only about 2 % of the labour force was employed in modern factory industry. Even the narrow industrial structure was distorted. At independence India was totally dependent on the advanced countries for its requirements of capital goods of equipment and machinery. Equally important was the near total dependence on foreign technology.

The situation regarding health, education and other social indicators was also very poor. The average life expectancy at independence was barely thirty-two years! The overwhelming majority of the people, about 84 per cent, were illiterate. The availability of modern scientific and technical education was pitifully limited.

Finally, the colonial economy as a whole had acquired a distorted or disarticulated character. Sectors of the economy had developed colonial linkages with the metropolis rather than to each other, i.e., inter-sectoral exchanges within the economy declined. For example, the link and balance between indigenous agriculture and industry was destroyed. The structural distortions made the future transition to self-sustained growth much more difficult.

It is this legacy of colonial structuring which independent India had to undo so that conditions could be created for rapid industrial development. The task of attempting a modern industrial transformation, two hundred years after the first industrial revolution and nearly hundred years after several other countries had industrialised, was a stupendous one. Apart from the handicap created by colonialism and the several built-in disadvantages faced by the late comer, the world political and economic conditions had also changed radically, calling for new innovative strategies if success was to be achieved.

38.2 NEHRU AND THE FIRST THREE PLANS

India was to attempt to break out of its colonial structuring through planned economic development. But this was to be done within a democratic and civil libertarian framework. This was a very challenging and uncharted path with no example from history. All the industrialised countries of the world did not have democracy and civil liberties during the initial period of their transition to industrialism or period of 'primitive accumulation'. India was able to move on this uncharted path helped by the fact that a consensus had emerged among all sections of political opinion in the country that the path of economic development chosen had to be compatible with a functioning democracy.

38.2.1 On the Path of Planned Economy

It was fortunate from the point of view of the potential for success of Indian planning that a consensus had emerged on other critical aspects of the development path to be followed, what we may refer to as the Nehruvian consensus. For example, the Gandhians, the Socialists, the capitalists as well as the Communists (barring brief sectarian phases), were all more or less agreed on the following agenda: a multi-pronged inward oriented strategy of economic development based on self reliance to be adopted; rapid industrialisation based on import substitution including of capital goods industries; prevention of imperialist or foreign capital domination; land reforms

involving abolition of zamindari, tenancy reforms, introduction of cooperatives, especially service cooperatives, for marketing, credit, etc.; growth to be attempted along with equity, i.e., the growth model must be reformist with a welfare, pro-poor orientation; positive discrimination or reservation, for a period, in favour of the most oppressed in Indian society: the scheduled castes and tribes; the state to play a central role in promoting economic development including through direct state participation in the production process, i.e., through the public sector, and so on. The last aspect, i.e., the role of the state, needs a bit of further elaboration.

It is to be noted that as early as the late nineteenth century, in the economic thinking of the early nationalists such as M. G. Ranade and Dadabhai Naoroji, the State was assigned a critical role in a strategy for economic development of India. By 1934, N. R. Sarkar, the President of the Federation of Indian Chambers of Commerce and Industry (FICCI), the leading organisation of Indian capitalists, proclaimed: “the days of undiluted laissez-faire are gone for ever.” There was in fact a wide consensus emerging around the notion that the role of the state would not only involve the proper use of fiscal, monetary and other instruments of economic policy and state control and supervision over the growth process but would also have to include a certain amount of direct participation in the production process through the public sector. The National Planning Committee set up by the Indian National Congress in 1938, with Nehru as chairperson and a very wide ranging membership, as well as the Indian capitalists’ Plan of Economic Development for India (popularly called the Bombay Plan) brought out in 1944-45 were agreed on the need for a public sector and partial nationalization.

There were however differences between the capitalists and the Left, including Nehru, on what was to be the nature and extent of the public sector. But Nehru very consciously did not push his own position beyond a point unless he could carry a wide section of society with him. Planning under Nehru was to be consensual and not a command performance. This was a critical difference between planning in India and planning in communist Soviet Union or fascist Germany.

38.2.2 Five Year Plans

It was this perspective with which the Planning Commission (established on 15 March 1950) functioned. The First Plan (1951-56) essentially tried to complete projects at hand and to meet the immediate crisis situation following the end of the War. Independence had come along with the dislocation caused by the partition, including the massive problem of refugees resulting from the largest mass migration in history in the space of a few years. It is with the Second Plan (1956-61) that the celebrated Nehru-Mahalanobis (Prof. P. C. Mahalanobis played a leading role in drafting the Second Plan) strategy of development was put into practice and it was continued in the Third Plan (1961-66). A basic element of this strategy was the rapid development of heavy and capital goods industries in India, mainly in the public sector. (Three steel plants were set up in the public sector within the Second plan period.) Import substitution in this area was seen as an imperative not only because it was seen as critical for self-reliance and reduction of external dependence but also because it was assumed that Indian exports could not grow fast enough to enable the import of the necessary capital goods and machinery- an export pessimism which has been criticised in later years, though it was quite commonly accepted at that time. The model also saw some foreign aid and investment as essential in the initial phase to finance the massive step up in investment though the objective was to do away with this need as soon as possible by rapidly increasing domestic savings. Another critical

element of the Nehru- Mahalanobis strategy was the emphasis on growth with equity and hence the issue of concentration and distribution in industry and agriculture was given a lot of attention though perhaps not with commensurate success. It may be added that the strategy did not posit equity against growth but assumed that higher growth enabled higher levels of equity and was critical for meeting the challenge of poverty and therefore gave utmost attention to rapid growth.

Considerable progress on several fronts was made during the first phase of the development effort spanning the first three Five-Year Plans, i.e., by the mid-1960s. The overall economy performed impressively compared to the colonial period. India's national income or Gross National Product (GNP) grew at an average rate of about 4 per cent per annum over the first three plans, between 1951 and 1964-65 (omitting the last year of the third plan, i.e., 1965-66, which saw an unprecedented drought and a war). This was roughly four times the rate of growth achieved during the last half century of colonial rule. It was higher than what Japan could achieve in a comparable period of its development between 1893 to 1912.

Stepping up the rate of growth required a substantial increase in the investment rate. The domestic savings and total investment in the Indian economy which were both 5.5 per cent of national income in 1950-51, rose to savings of 10.5 per cent and investment of 14 per cent in 1965-66. It has been estimated that the total investment in 1965-66 was nearly five times the 1951-52 level in nominal terms and more than three times in real terms.

Agrarian Sector and Industry

On the agrarian front, the comprehensive land reform measures initiated soon after independence, the setting up of a massive network for agricultural extension and community development work at the village level, the large infrastructural investment in irrigation, power, agricultural research, etc., had created the conditions for considerable agricultural growth in this period. During the first three plans (again leaving out 1965-66), Indian agriculture grew at an annual rate of over 3 per cent, a growth rate 7.5 times higher than that achieved during the last half-century or so of the colonial period. The growth rates achieved compared very favourably with what was achieved by other countries in a comparable situation, say China or Japan. For example, Japan achieved a growth rate of less than 2.5 per cent between 1878 - 1912 and an even lower growth rate till 1937. What was particularly creditable was that India, unlike most other countries (such as China, Japan, Korea, Taiwan, Soviet Union, Britain, etc.) achieved its land reforms and agricultural growth in the context of civil liberties and a modern democratic structure.

Industry, during the first three plans, grew even more rapidly than agriculture, at a compound growth rate of 7.1 per cent per annum between 1951 and 1965. The industrial growth was based on rapid import substitution initially of consumer goods and particularly since the Second Plan of capital goods and intermediate goods. The emphasis on the latter since the Second Plan was reflected in the fact that 70 per cent of plan expenditure on industry went to metal, machinery and chemical industries in the Second Plan and 80 per cent in the Third Plan. Consequently the three fold increase in aggregate index of industrial production between 1951 and 1969 was the result of a 70 per cent increase in consumer goods industries, a quadrupling of the intermediate goods production and a ten-fold increase in the output of capital goods. A stupendous growth of the capital goods sector by any standards. Table 1 reflects this growth pattern.

Table 1
Indices of industrial production in India: 1951-1979

1960 = 100 (for 1951-1971); 1970 = 100 (for 1978-79)

Industrial Group	1951	1961	1971	1978-79
General	55	109	153	186
Textiles	80	103	106	110
Basic Metals	47	119	209	144
Machinery	22	121	373	208
Electrical Machinery	26	110	405	162

Source: *India: A Reference Annual*, GOI, New Delhi, 1980, p. 312 Cited in B.L.C. Johnson, *Development in South Asia*, Penguin, Harmondsworth, 1983, p. 136.

Infrastructure and Other Social Needs

Apart from industry and agriculture, the early planners gave utmost priority to the development of infrastructure, including education and health, areas greatly neglected in the colonial past. The average actual plan expenditure during each of the first three Plans on Transport and Communication was about Rs 13 billion, accounting for an average of about 26 per cent of the total plan expenditure in each plan. The corresponding figures for Social/ Community services and Power were Rs 9.4 billion and 19.9 per cent and Rs 6.16 billion and 10.6 per cent respectively. Over time, Plan investment in these areas (and in irrigation) was to prove critical both in stepping up private investment and improving its productivity, as was seen so clearly in the case of agriculture with the coming in of the Green Revolution.

Table 2
Growth in infrastructure, health and education

Item	Units	1950-1	1960-1	1965-6	Percentage change between 1950-51 to 1965-6
Electricity: Installed Capacity	Million kw.	2.3	5.6	10.2	393.5
Town and Villages Electrified	Thousands	3.7	24.2	52.3	1,313.5
Railways: Freight Carried	Million tonnes	93	156	205	120.4
Surfaced Roads	Thousand Kilometers	156	235	284	82
Hospital beds	Thousands	113	186	300	165.5
Enrolment in Schools	Millions	23.5	44.7	67.7	188.1
Technical Education: Engineering and Technology (admission capacity)					
(a) Degree level	Thousands	4.1	13.8	24.7	502.4
(b) Diploma level	Thousands	5.9	25.8	49.9	745.8
Population	Millions	357	430	490	37.3

Source: J. Bhagwati and P. Desai, *India: Planning for Industrialisation*, OUP, London, 1970, p. 74.

Table 2 shows the rapid per capita increase in the availability of some of the infrastructural and social benefits as they grew several times faster than the population. In 1965-66, as compared to 1950-51, installed capacity of electricity was 4.5 times higher, number of town and villages electrified was 14 times higher, hospital beds 2.5 times higher, enrollment in schools was a little less than 3 times higher and very importantly admission capacity in technical education (engineering and technology) at the degree and diploma levels was higher by 6 and 8.5 times, respectively. This when population had increased only by a little over one third over the same period.

Science and Technology

Jawaharlal Nehru and the early Indian planners were acutely aware of India's backwardness in science and technology (an area left consciously barren in the colonial period) and therefore made massive efforts to overcome this shortcoming. Nehru's 'temples of modern (secular) India' consisted not only of steel and power plants, irrigation dams, etc., but included institutions of higher learning, particularly in the scientific field. During the First Plan itself, high powered National Laboratories and Institutes were set up by the Council of Scientific and Industrial Research for conducting fundamental and applied research in each of the following areas: Physics, Chemistry, Fuel, Glass and Ceramics, Food Technology, Drugs, Electro-chemistry, Roads, Leather and Building. In 1948 the Atomic Energy Commission was set up, laying the foundations of the creditable advances India was to make in the sphere of nuclear science and related areas. This was in addition to the unprecedented increase in the educational opportunities in science and technology in the universities and institutes. National expenditure on scientific research and development kept growing rapidly with each plan. For example, it increased from Rs. 10 million in 1949 to Rs. 4.5 billion in 1977. Over roughly the same period the stock of India's scientific and technical manpower increased more than 12 times from 190 thousand to 2.32 million. A spectacular growth by any standards, placing India, after the dissolution of the Soviet Union, as the second country in the world in terms of the absolute size of scientific and technical manpower. A major achievement despite the fact that the quality of education in general, and particularly in the university system, has tended to deteriorate in recent years and there is massive brain drain, mainly to the US, of a significant part of the best talent produced in the country. Also, it is an achievement of considerable significance, as increasingly today 'knowledge' is becoming the key factor of production and there is a global awareness of the necessity to focus on education and human resource development. That India can even think of participating in the globalisation process in today's world of high technology, with any degree of competitiveness and equality, is largely due to the spadework done since independence, particularly the great emphasis laid on human resource development in the sphere of science and technology.

Many of the remarkable achievements of the Nehru period were built upon and carried forward in subsequent years. However, some structural problems mainly born out of excessive and faulty state intervention, which had begun to emerge in the Nehruvian period but grew alarmingly in later years needed to be urgently dealt with. The sections below will briefly outline the progress in the post Nehru years, the structural problems requiring change and the nature of reforms brought in to deal with the problems as well as to avail of global opportunities.

38.3 GROWTH IN THE POST NEHRU ERA : 1965-1990

The period from the mid-1960s to the end-1980s was a period of considerable achievement for the Indian economy especially if they are evaluated keeping in view a series of formidable internal and external shocks witnessed during these years.

The Indian economy was in the grips of a massive crisis in many respects by the mid-1960s, which rapidly changed India's image from a model developing country to a 'basket case'. Two successive monsoon failures of 1965 and 1966, superimposed on an agriculture which was beginning to show signs of stagnation, led to a fall in agricultural output by 17 per cent and foodgrain output by 20 per cent. The rate of inflation which was hitherto kept very low (till 1963 it did not exceed 2 per cent per annum) rose sharply to 12 per cent per annum between 1965 and 1968 and food prices rose nearly at the rate of 20 per cent per annum. The inflation was partly due to the droughts and partly due to the two wars of 1962 (with China) and 1965 (with Pakistan) which had led to a massive increase in defence expenditure. Following the crisis of the mid 1960s there was the 1971 war with Pakistan, the genocide in East Pakistan (Bangladesh) resulting in the huge burden of over ten million refugees from that region (nearly half the population of a country like Australia!) taking shelter in India, two droughts of 1972 and 1974, the major oil shock of 1973 involving a quadrupling of international oil prices and hence of cost of oil imports, the oil shock of 1979 when oil prices doubled, the disastrous harvest of 1979-80 caused by the worst drought since independence and the widespread successive droughts of 1987 and 1988!

Concerted efforts were made after the mid 1960s primarily under Indira Gandhi's leadership to, inter alia, improve the balance of payments situation, create food security, introduce anti-poverty measures and reduce dependence on imports for critical inputs like oil. These enabled India to weather the impact of the droughts, war and the oil shocks without getting into a debt crisis and a recessionary spin as happened in the case of a number of developing countries, especially in Latin America in the 1980s, and without serious famine conditions, leave alone famine deaths by the millions that occurred in Communist China in the late 1950s.

On the **food** front the situation improved rapidly. The adoption of the 'Green Revolution' strategy of introducing a package of high yield variety (HYV) seeds, fertilisers and other inputs in a concentrated manner to some suitable select areas paid immediate dividends in creating food security and poverty reduction. Between 1967-68 and 1970-71 foodgrain production rose by 35 per cent. Net food imports fell from 10.3 million tonnes in 1966 to 3.6 million in 1970, while food availability increased from 73.5 million tonnes to 89.5 million tonnes over the same period. Food availability continued to increase sharply to 110.25 million tonnes in 1978 and 128.8 million tonnes in 1984 and food stocks had crossed the 30 million tonnes mark by the mid 1980s, putting an end to India's 'begging bowl' image and creating considerable food security even in extreme crisis situations. For example, the economy was able to absorb the massive successive droughts of 1987-88 without undue pressure on prices of food or imports.

Apart from food **self-sufficiency**, certain other features emerged in the Indian economy after the crisis of the mid-1960s that pointed towards a greater autonomy of the Indian economy and increased **self-reliance**. Net aid as a proportion of Net National Product (NNP), which had peaked to an average of 4.22 per cent during the Third plan (the last few crisis years of the plan partly accounting for this high rate), came down to 0.35 in 1972-73 and rose only slightly after the 1973 oil crisis, but yet averaged not more than 1 per cent of NNP till 1977-78. The debt-service ratio, i.e., the annual outflow of interest and repatriation of principal due to existing debt as a proportion of exports of goods and services, fell to a low and easily manageable 10.2 per cent in 1980-81 from an estimated 23 per cent in 1970-71 and 16.5 per cent in 1974-75. Further, the volume of foreign private investment remained marginal and the ratio of foreign savings to total investment fell and remained

low throughout the 1970s, at a time when the rates of domestic savings and investment increased rapidly. From an average savings rate of 10.58 per cent and a rate of Gross Domestic Capital Formation or investment of 11.84 per cent in the 1950s, the savings and investment rates nearly doubled to 21.22 per cent and 20.68 per cent respectively between 1975-76 and 1979-80. Between 1990-91 and 1995-96 the rates of gross domestic savings and capital formation were 23.8 and 25.35 respectively, rates comparable to several high growth economics.

Further, India moved a long way in reducing her near total dependence on the advanced countries for basic goods and capital equipment, which was necessary for investment or creation of new capacity. At independence, to make any capital investment, virtually the entire equipment had to be imported. For example, in 1950, India met 89.8 per cent of its needs for even machine tools through imports. In contrast to this, the share of imported equipment in the total fixed investment in the form of equipment in India had come down to 43 per cent in 1960 and a mere 9 per cent in 1974, whereas the value of the fixed investment in India increased by about two and a half times over this period. In other words, by the mid 1970s, India could meet indigenously more than 90 per cent of her equipment requirements for maintaining her rate of investment. This was a major achievement, and it considerably increased India's autonomy from the advanced countries in determining her own rate of capital accumulation or growth. It was this, and the food security India was able to achieve once the process of the Green Revolution took off, which explains India's ability to retain an independent foreign policy through the thick of the cold war withstanding enormous external pressures.

A new feature of the 1980s was the phenomenal increase in new **stock market** issues, the stock market thus emerging as an important source of funds for industry. It has been estimated that in 1981 the capital market accounted for only 1 per cent of domestic savings, whereas by the end of the 1980s this proportion had increased by about seven times. The new stock issue in 1989 was Rs. 6,500 crores, which was about 7.25 per cent of Gross Domestic Savings of 1989-90. Another estimate shows that in 1990 Indian companies raised an unprecedented Rs. 12,300 crores from the primary stock market.

The early eighties also saw a highly successful breakthrough in the **import substitution programme** for oil under the supervision of the ONGC (Oil and Natural Gas Commission), a public sector organisation. The large loan received from the IMF in this period helped this effort considerably. In 1980-81, domestic production of oil was 10.5 million tonnes and imports 20.6 million tonnes, the oil import bill taking up 75 per cent of India's export earnings! With new discoveries at the Bombay High oil fields, by the end of the Sixth Plan (1980-85), the target of indigenous production of 29 million tonnes was achieved. As a result, in 1984-85, the net import of oil and oil products was less than a third of the domestic consumption and the oil import bill was also down to a third of export earnings.

By the mid 1970s, the **industrial growth** rate also started picking up from a low of about 3.4 per cent between 1965-75 to about 5.1 per cent between 1975-85. If the crisis year of 1979-80 was omitted, then the industrial growth rate during 1974-75 to 1978-79 and 1980-81 to 1984-85 was about 7.7 per cent per annum. In the 1980s as a whole the industrial growth rate maintained a healthy average of about eight per cent per year. Again it was in the 1980s that the barrier of the low, so-called 'Hindu rate of growth' of 3 to 3.5 percent that India had maintained over the previous two decades was broken and the economy grew at over 5.5 per cent.

38.4 STRUCTURAL CONSTRAINTS AND THE NEED FOR REFORM

While on the one hand the Indian economy in the 1980s seemed to be doing quite well, on the other hand there were certain long-term structural weaknesses building up which were to all add up to a major crisis by 1991 when the country was on the verge of defaulting. It is this crisis which brought home to the country the immediate necessity of bringing about structural adjustment and economic reform.

38.4.1 Constraints

Broadly there were three sets of problems which had gathered strength in the Indian economy over time and which needed urgent reform.

First, the excessive state intervention in the so called ‘licence-quota raj’ was leading to the creation of tremendous inefficiency. Prolonged protection to Indian industry from imports by following the import substituting industrialisation (ISI) strategy led to the killing of external competition. Similarly, industrial licensing effectively prevented free internal competition. In the absence of internal and external competition Indian industry grew very inefficient. Other regulations such as the MRTP Act further inhibited industrial development. The Act went against the basic principle of economies of scale, which is at the heart of capitalist development (or for that matter of socialist production). It also punished efficiency, as any company, which expanded due to efficient production, good management and research and development (R & D), would face severe restrictions, including refusal of permission to increase capacity once it crossed a prescribed limit. Again, reserving certain areas for small-scale industries meant excluding these areas from the advantages of scale and larger resources for R & D activities. This made the sector often internationally uncompetitive, leading to India losing out to its competitors in many areas. Also, the policy towards small-scale industry forced entrepreneurs in the reserved areas to remain small, as any expansion as a result of efficient and profitable functioning would deny the enterprise the special incentives and concessions. This inhibited efficiency and innovation in this sector.

Second the large public sector in India, which controlled ‘the commanding heights’ of the economy, also began to emerge as a major source of inefficiency. The early emphasis on the public sector was critical to India’s industrial development. It is the public sector which entered the core areas, diversified India’s industrial structure, particularly with regard to capital goods and heavy industry, and reduced India’s dependence on foreign capital, foreign equipment and technology. However, over time, the political and bureaucratic pressure on the public sector undertakings gradually led to most of them running at a loss. They were overstaffed, often headed by politicians who had to be given sinecures, became victims of irresponsible trade unionism and were unable to exercise virtually any efficiency accountability on their employees. State run utilities like Electricity Boards and Road Transport Corporation were notorious for incurring enormous losses. Apart from rampant corruption and lack of accountability, these enterprises, under populist pressure, often charged rates that did not cover even a small fraction of the actual costs. The free distribution of electricity being an extreme case in point.

All these factors led to the investment efficiency in India being very low or the capital output ratio being very high. A 1965 study shows that the public sector

Heavy Electrical Limited was set up in Bhopal with a capital output ratio of between 12 to 14 - with no questions being asked or enquiry set up! Though this is an extreme case, estimates for the economy as a whole show that the capital used per unit of additional output or the incremental capital output ratio (ICOR) kept rising, it being a little over 2 during the First Plan and had reached 3.6 during the Third Plan. According to one estimate between 1971 and 1976 the ICOR had touched a high of 5.76. This explains why despite substantial increases in the rate of investment, as shown above, there was an actual decrease in the overall growth rates of aggregate output or GDP between the 1950s and 1970s. The ICOR started declining in the 1980s though it still remained around 4 in the 1990s. Even during the 1980s, one estimate shows that the (simple) average rate of financial return on employed capital in public sector enterprises was as low as 2.5 per cent. Actually, the rate of return was much lower if the 14 petroleum enterprises were excluded, as these accounted for 77 per cent of the profits in 1989-90.

Low efficiency or low productivity levels are of critical consequence as economic superiority is established and transfer of surplus from one country to another occurs not through direct political or economic domination but through processes such as unequal exchange occurring between countries with different productivity levels. Economic thinkers of the Left and the Right are agreed on placing the question of productivity at the centre of any national development. In today's context of rapid globalisation, pursuing excessively autarchic policies in search of autonomy (something a section of the Indian Left and the newly discovered Swadeshi path of the Right, such as the RSS, still argues for) may, through fall or stagnation of productivity levels, destroy precisely that autonomy and push the country towards peripheralisation.

This brings us to the third set of weaknesses that emerged in the India economy. It relates to the continuation of the inward oriented developmental path followed by India since independence. India failed to make a timely shift from the export pessimism inherent in the first three plans, a pessimism which, one must recognise, was shared widely by development economists the world over in the 1950s. The failure lay not in adopting the policies that emerged from the wisdom of the 1940s and 1950s but in the inability to quickly react to changes occurring in the international situation and to world capitalism after World War II, particularly since the 1960s and 1970s, and change course accordingly.

38.4.2 Need for Reform

Some of the important changes that needed to be taken cognisance of were, very briefly, the following: First, the nature of foreign capital and multinational corporations was changing. A process of 'internationalisation of production' had started. Multinational corporations, instead of just looking for markets or sources of raw material, now looked for cheaper production areas. Instead of creating enclaves in the backward countries, which had backward and forward linkages with the home country (this was the typical colonial pattern), they were now bringing in investments which had major multiplier effects on the local economy, including of technology transfer. It became common for multi-national companies to 'source' a large part of the components that went into the final product from all over the developing world and even shift entire production plants to the under-developed countries. Second, along with, and partially as a result of, the above process, there were massive capital transfers between countries, reminiscent of the capital transfers of the 19th century at the height of colonial expansion, but very different in character. The above two

processes contributed to the third major international development, that of an unprecedented explosion of world trade. Between the 1950s and 1970s, world output of manufactures increased four times but world trade in manufactures increased ten times. The percentage of world produce that went for export doubled between 1965 and 1990. What is most significant is that while there was a massive increase in global industrial exports, the Third World was able to rapidly increase its share of total industrial exports, especially since the 1970s, from about 5 per cent in 1970 to double the figure in 1983. (See Hobsbawm, 1994, for a brilliant analysis of the changes in world capitalism since World War II.)

The East Asian Miracle, i.e., the rapid industrialisation of the East Asian countries, beginning in the 1960s, which gradually shifted the industrial base of the world from the West to the East, took advantage precisely of these kinds of opportunities of capital and market availability. Japan's example of explosive post-World War II growth was being repeated by South Korea, Taiwan, Singapore, Hong Kong and, more recently, Thailand, Malaysia, China and Indonesia. The four Asian Tigers, South Korea, Hong Kong, Singapore and Taiwan increased their share in world export of manufactures from 1.5 per cent in 1965 to 7.9 per cent in 1990. Even the newly industrialising economies (NICs), Indonesia, Malaysia and Thailand increased their share from 0.1 per cent to 1.5 per cent over the same period.

India did reasonably well till the mid-1960s, basing herself on an inward oriented, import-substitution based strategy. However, she failed to respond adequately to the new opportunities thrown up by the changing world situation despite the availability of the East Asian experience. In fact India's share in world exports actually shrunk from about 2.4 per cent in 1948 to 0.42 per cent in 1980, rising to a still paltry 0.6 per cent by 1994. In contrast, South Korea's manufactured exports, which were negligible in 1962, amounted to four times those of India by 1980. The volume of India's manufactured exports in 1980-81 was 1/2 that of China, 1/3 of Brazil and 1/4 of South Korea.

India was thus unable to use the opportunities provided by the changed world situation, the new phase of globalisation, to rapidly industrialise and transform its economy, increase income levels and drastically reduce poverty levels, as did many of the East Asian countries.

The fourth set of problems, which overcame the Indian economy, was primarily the result of certain political imperatives, which related to the manner in which the Indian state structure and the Indian democratic framework evolved. On the one hand there was the emergence of more and more sections which made strong, articulate demands on state resources and on the other the governments were increasingly unable either to meet these demands fully or diffuse the clamour for them. This resulted in the gradual abandoning of fiscal prudence from about the mid-1970s. This in turn led to a situation where the macroeconomic balance, (such as balance between government revenue and expenditure or balance between exports of goods and services and the liabilities caused by imports of goods and services as well as foreign borrowings) which was maintained in India (unlike many other developing countries) with great caution for the first 25 years or so after independence, was being slowly eroded.

The gradual erosion of fiscal prudence was reflected in government expenditure rising consistently, mainly because of the proliferation of subsidies and grants, salary increases with no relationship to efficiency or output, overstaffing, and other 'populist'

measures such as massive loan waivers or making huge budgetary allocations which were aimed at winning over support of a particular section of society rather than at achieving best overall development.

While the response to the mid-'60s crisis was fiscal and balance of payments caution, relaxation of fiscal discipline became rampant after 1975 and particularly during the Janata regime of 1977-79. The food subsidies doubled between 1975-76 and 1976-77 from Rs. 2.5 billion to Rs. 5 billion. The fertiliser subsidy multiplied ten times from Rs. 0.6 billion in 1976-77 to Rs. 6.03 billion in 1979-80. The export subsidy multiplied by about 4 1/2 times from Rs. 0.8 billion to Rs. 3.75 billion between 1974-75 to 1978-79. During 1977-79 procurement prices for foodgrains were increased without corresponding increases in issue prices, taxes on a wide range of agricultural inputs were decreased and budgetary transfers to loss making public sector units increased. In fact, the 1979 budget has been described by eminent economists Vijay Joshi and I. M. D. Little (1994, p.58) as a "watershed marking the change from previous fiscal conservatism."

The fiscal profligacy continued through the 1980s and particularly during the second half of the 1980s reaching absurd limits where, e.g., the V.P.Singh-led National Front Government that came to power in 1989 announced a loan waiver for the farmers which would cost the exchequer more than Rs. 100 billion. The direct subsidies from the central budget on only food, fertiliser and exports in 1980-81 have been estimated to exceed Rs. 15 billion, an amount representing nearly half of the total gross capital formation or investment in manufacturing in the public sector that year! While there was this explosive growth of Government spending, the savings generated by the Government or public sector kept falling with their growing losses.

The result of fiscal profligacy was that the consolidated Government (centre and states) fiscal deficits or the revenue and expenditure gap rose sharply from 4.1 per cent of GDP in 1974-75 to 6.5 per cent in 1979-80, 9.7 per cent in 1984-85, peaking at 10.4 per cent in 1991. Governments in this period tended to seek ways and means of increasing their domestic and foreign borrowing to meet this deficit rather than either trying to increase government savings or reduce government expenditure.

The growing government saving-investment gap and the fiscal deficit had a negative impact on the balance of payments and debt situation, as the Government resorted to heavy borrowing to meet this gap. From a situation of balance of payments surplus on the current account in 1977-78 of \$ 1.5 billion (1.4 per cent of GDP), by 1980-81 there was a deficit in the current account to the tune of \$ 2.9 billion (1.7 per cent of GDP). The deficit increased to \$ 3.5 billion (1.8 per cent of GDP) in 1984-85 and rose very sharply thereafter to \$ 9.9 billion (3.5 per cent of GDP) in 1990-91.

The deteriorating fiscal and balance of payments situation had led to a mounting debt problem, both domestic and foreign, reaching crisis proportions by the end of the 1980s. Total Government (centre and state) domestic debt rose from 31.8 per cent of GDP in 1974-75 to 45.7 per cent in 1984-85 to 54.6 per cent in 1989-90. The foreign debt situation also became very precarious with debt rising from \$23.5 billion in 1980-81 to \$37.3 billion in 1985-86 to \$83.8 billion 1990-91. The debt service ratio (i.e., payment of principal plus interest as a proportion of exports of goods and services) which was still a manageable 10.2 per cent in 1980-81 rose to a dangerous 35 per cent in 1990-91.

India's foreign exchange reserves fell from \$ 5.85 billion in 1980-81 to \$ 4.1 billion in 1989-90, and in the next year they fell drastically by nearly half to \$ 2.24 billion in 1990-91, enough only for one month's import cover. The Iraqi invasion of Kuwait in August 1990, leading to an increase in oil prices and a fall in Indian exports to the Middle East or Gulf region, partly contributed to this alarming foreign exchange situation. India's international credit rating was sharply downgraded and it was becoming extremely difficult to raise credit abroad. In addition NRI (non-resident Indian) deposits in foreign exchange began to be withdrawn rapidly. In such a situation, where foreign lending had virtually dried up, the government was forced to sell 20 tonnes of gold to the Union Bank of Switzerland in March 1991 to tide over its immediate transactions. By July 1991 foreign exchange reserves were down to a mere two weeks import cover despite loans from the IMF. The country was at the edge of default.

This is the situation (June 1991) in which the minority Congress government of Narasimha Rao took power and with Manmohan Singh as finance minister one of the most important economic reforms since independence were attempted.

38.5 ECONOMIC REFORMS SINCE 1991: LIBERALISATION AND GLOBALISATION

The long-term constraints building up over a few decades that were debilitating the Indian economy combined with certain more recent and immediate factors to lead to a massive fiscal and balance of payments crisis, climaxing in 1991. The crisis pushed India into initiating a process of economic reform and structural adjustment.

The need for reform had been recognised early enough in India. Manmohan Singh Jagdish Bhagwati (1970&1994) and others had been arguing for it since the 1960s and 70s. Efforts at reform and liberalisation began since the 1980s if not earlier, but, its comprehensive implementation could not occur for various reasons. Governments, especially when in a vulnerable situation (e.g., Rajiv Gandhi after the Bofors scandal, Indira Gandhi with the Punjab crisis, and later even Narasimha Rao following the destruction of the Babri-Masjid), were extremely wary of initiating or sustaining reforms which would involve introducing unpopular measures like attempts to regain fiscal discipline, change in labour laws, etc., steps which in the initial phase were bound to be painful. Also, there was (and still remains) persistent opposition to reform from vested interests such as the bureaucracy and even sections of business who benefited from the existing system of controls, using them to earn a sort of 'rent'. Last and certainly not the least, a strong ideological opposition from the orthodox Left, strangely oblivious to the changing global reality, continued to play a role in obstructing reform.

The crisis in 1991, with the country at the edge of default, enabled the Narasimha Rao government to break through the traditional mindset and attempt an unprecedented comprehensive change at a time when both the ideological opposition and the resistance of the vested interests was at a weak point. Thus, though late, nearly thirteen years after China changed course, a programme of economic reform was initiated in 1991. One reason why the shift took so long and, even when it took place, was not as sharp a turnaround as it was in China in 1978 or the Soviet Union after the mid 1980s was that in a democracy the change from one kind of societal consensus (such as the Nehruvian consensus) to a new consensus (say around reforms) is a process and not an event, and consequently it has its own dynamic,

very different from that operating in a non-democratic or totalitarian society. While arriving at a democratic consensus is more time consuming, once a consensus is arrived at it is far more durable or stable than changes brought about by force from the top.

The process of reforms started in 1991 involved, inter alia, an immediate fiscal correction; making the exchange rate more realistically linked to the market (the Rupee underwent about a 20 per cent devaluation at the very outset); liberalisation of trade and industrial controls like freer access to imports, a considerable dismantling of the industrial licensing system and the abolition of MRTP; reform of the public sector including gradual privatization; reform of the capital markets and the financial sector; removing a large number of the restrictions on multinational corporations and foreign investment and in fact welcoming them, particularly foreign direct investment, and so on. In short it was an attempt to free the economy from stifling internal controls as well as equip it to participate in the worldwide globalisation process to its advantage.

The record of the first few years of reform was creditable by any standards, though a lot of problems and challenges still remained. India performed one of the fastest recoveries from a deep macroeconomic crisis. Moreover, the process of structural adjustment, particularly the fiscal reining-in (done initially), was achieved with relatively minimal pain - without it setting off a prolonged recessionary cycle leading to massive unemployment and deterioration of the condition of the poor as was feared and as occurred in the case of several other economies in a similar situation attempting structural adjustment.

For example, the growth rate of India's Gross Domestic Product (GDP) which had fallen to a paltry 0.8 per cent in the crisis year of 1991-92 recovered quickly to 5.3 per cent by 1992-93 and rose further to 6.2 per cent in 1993-94 despite the major disturbances in 1992-93 triggered off by the Ayodhya crisis. More important, over the next three years, the Indian economy averaged an unprecedented growth rate of over 7.5 per cent, a rate closer to the high performers of East Asia than it had ever been before. Despite the crisis and the necessary structural adjustment, the Eighth Plan (1992-1997) averaged a growth rate of nearly 7 per cent (6.94), higher, and on a more sustainable basis, than the Seventh Plan (1985-1990) average of 6 per cent. Gross Domestic Savings averaged over 23 percent between 1991 and 1997, higher than the Seventh Plan average of 20.6 per cent. Gross Domestic Capital formation (Investment) and Gross Domestic Fixed Capital Formation between 1992 to 1997 also maintained a respectable average of 25.2 per cent and 22.3 per cent of GDP respectively, considerably higher than the Seventh Plan average of 21.8 and 19.8 percent.

Industrial production, which showed a dismal, less than one per cent, growth rate in 1991-92 (it was negative in manufacturing), picked up to 2.3 per cent in 1992-93 and 6 per cent in 1993-94, peaking at an unprecedented 12.8 per cent during 1995-96. The capital goods sector, which demonstrated negative growth rates for a few years, bounced back to nearly 25 per cent growth in 1994-95, allaying early fears that import liberalisation would hit the domestic capital goods industry adversely. The small-scale sector too grew faster than overall industrial growth, suggesting that abolition of MRTP did not have an adverse effect on it and perhaps encouraged its growth. Agriculture, too, after recording a fall in 1991-92, picked up the following year and by and large maintained till 1996-7 the high rate of growth of over three per cent which it had been experiencing for some years.

The Central Government fiscal deficit, which had reached 8.3 per cent of GDP in

1990-91, was reduced and averaged roughly 6 per cent between 1992-97. The important thing was that out of the total fiscal deficit of 5.2 per cent in 1996-97, 4.7 per cent was accounted for by interest payments which was a liability emanating from part fiscal laxity. The primary deficit, i.e., fiscal deficit net of interest payments, which represents current fiscal pressures or overspending was only 0.6 per cent in 1996-97, systematically brought down from 4.3 per cent of GDP in 1990-91 and 2.9 per cent in 1993-94.

The external sector also showed considerable improvement. Exports, which registered a decline of 1.5 per cent in dollar terms during 1991-92, recovered quickly and maintained an average growth rate of nearly 20 per cent between 1993-1996. Very significantly, India's self reliance was increasing to the extent that a considerably larger proportion of imports were now paid for by exports, with the ratio of export earnings to import payments rising from an average of 60 per cent in the 1980s to nearly 90 per cent by the mid 1990s. The current account deficit in balance of payments, which had reached an unsustainable 3.2 per cent of GDP in 1990-91, was brought down to 0.4 per cent in 1993-94 and rose since then to 1.6 per cent in 1995-96. Yet the average deficit between 1991-92 and 1997-98 was about 1.1 percent, significantly lower than the Seventh Plan (1985-90) average of about 2.3 per cent. The foreign exchange reserves (including gold and SDRs) had grown to a respectable \$ 30.4 billion at the end of January 1999, providing cover for about 7 months of imports as compared to a mere two weeks cover in July 1991.

The debt situation has also started moving away from a crisis point. The overall external debt/GDP ratio for India fell from a peak of 41 per cent in 1991-92 to 28.7 per cent in 1995-96. The debt service ratio also fell from the peak of 35.3 per cent in 1990-91 to 19.5 per cent in 1997-98. It is however still quite high compared to China, Malaysia and South Korea, who all had (till 1997) debt service ratios below 10 per cent.

Reforms and liberalisation of the stock market since the 1980s and particularly after 1991 produced dramatic results. The total market capitalisation on the Indian stock markets as a proportion of GDP rose from a mere 5 per cent in 1980 to 13 per cent in 1990 and, following further reforms since 1991, it rose rapidly to 60 per cent of GDP by the end of 1993. By 1995 the Indian stock market was the largest in the world in terms of the number of listed companies - larger even than the US. The amount of capital Indian companies could raise in the primary market in India increased from Rs 929 million in 1980 to Rs 2.5 billion in 1985 and Rs 123 billion in 1990. By 1993-4 the figure had reached Rs 225 billion - a nearly 250 times increase since 1980. (Ajit Singh, 1998)

The encouragement to foreign investment bore fruit with foreign direct investment (FDI) increasing at nearly 100 per cent per year between 1991 to 1996, it being \$ 129 million in 1991-92 and \$2.1 billion in 1995-96. Total foreign investment including portfolio investment increased from \$ 102 million in 1990-91 to \$ 4.9 billion in 1995-96. Considerable improvement no doubt but yet a far cry from what was being achieved by the East Asian countries. China alone had been absorbing more than \$ 30 billion of foreign direct investment every year for some years, the figure for 1996 being \$ 40.8 billion. One positive sign however was that one of the most stubborn mind sets - the xenophobia about foreign capital - seems to have been eroded, with the Common Minimum Programme (CMP) of the coalition government (following the defeat of the Congress in 1996), to which even the Communists were a party, desiring that the foreign direct investment (FDI) in India should rise to \$ 10 billion per year. However, the danger emanating from the relatively volatile nature of

foreign portfolio investments, with the possibility of their sudden withdrawal (as happened in Mexico and more recently in south-east Asia) due to often unpredictable extraneous factors, was understood by successive Governments and efforts made to control short-term capital inflows and capital flight.

Critics of reform, mainly from the orthodox Left, have made the charge that reform was anti-poor. Studies of a large number of countries have shown that barring a few exceptions, rapid economic growth has been associated with fall in poverty levels. India too witnessed significant fall in poverty levels with the relatively faster economic growth of the 1980s. The proportion of population below the poverty line (the poverty ratio) fell from 51.3 per cent in 1977-78 to 38.9 per cent in 1987-88. Countries like China and Indonesia, which had much higher poverty ratios of 59.5 and 64.3 in 1975 compared to India's 54.9 in 1973-4, were able to reduce their poverty levels to much below India's in the span of twenty years. These countries maintained a much higher rate of growth than India during this period and their poverty ratios had fallen dramatically to 22.2 and 11.4 respectively by 1995, while India's had fallen only to 36 by 1993-94. (Economic Survey 1998-99, Government of India, Tables 10.6 and 10.7, p.146.)

To the extent, therefore, that the economic reforms were designed to put India on a higher growth path, it would be expected that poverty levels would decline as well. The key question remaining was what would be the impact on poverty in the transitional phase, especially when the necessary stabilisation had to take place with the attempts to improve the balance of payments position and reduce the fiscal deficit, leading to a possible fall in Government expenditure. India's initial stabilisation programme was said to be "extraordinarily successful" causing "remarkably little suffering" when "compared with most other countries, which were forced to effect a large and rapid reduction in their current external account deficits." (Joshi and Little, 1996, pp. 222,225.) Calculations based on several different indicators of poverty show that poverty, mainly rural poverty, showed a significant rise only in 1992-93 and its causation was linked mainly to a drought and fall in foodgrain output in 1991-92, leading to a rise in food prices, and very weakly to the stabilisation programme. Even this was perhaps avoidable to a great extent and the government's failure in not anticipating the situation and maintaining expenditure on rural employment programmes, and its not refraining from making any cuts (in real terms, there being a nominal increase) in the anti-poverty Social Services and Rural Development (SSRD) expenditure in 1991-92 to achieve fiscal stabilisation, has been criticised even by the supporters of reform. However, all the poverty indicators showed that by 1993-94 there was much improvement in the poverty situation. The poverty levels, both rural and urban, were significantly lower in 1993-94 than in 1992, by nearly six percentage points, and were lower than the pre-reform average of the five years 1986-87 to 1990-91. (Tendulkar, 1998, Tables 12.1, 12.2, 12.3, pp.290-294.) Thus it may be noted that the stabilisation under the reforms had little negative impact if any on poverty levels. Other aspects of structural reform, it is generally agreed, do not threaten the poor and in fact would improve their condition by releasing the full growth potential of the economy.

The improvement in the poverty situation was helped by the fact that the government increased the overall expenditure on Social Services and Rural Development since 1993-94 - from 7.8 per cent of total Government (Central) expenditure in 1992-93 to an average of nearly 10 per cent between 1993 and 1998. Real agricultural wages, which had decreased by 6.2 per cent in 1991-92, grew in the next two years at over 5 per cent per year and had by 1993-4 surpassed the pre-reform

level. After the low of 1991-2, additional employment generated in the total economy rose to 7.2 million in 1994-95, averaging about 6.3 million jobs every year between 1992-3 and 1994-95, considerably higher than the average annual increase of 4.8 million in the 1980s. Moreover, inflation, which hurts the poor the most, was kept under control. The annual rate of inflation, which touched a high of 17 per cent in August 1991, was brought down to below 5 per cent in February 1996.

However, though on the whole the reform initiatives look quite successful, there is still a long way to go. Continued political instability, aggravated by no clear majority emerging in parliament of any political party, has made it difficult for any government to move away from populist measures and take tough but necessary decisions. That is why no serious efforts were made to increase public savings and reduce government expenditure and the problem of high fiscal deficits continued.

One of the most dangerous reversals is in the sphere of fiscal deficit, where the primary deficit which had been brought down to 0.6 per cent of GDP in 1996-97 (0.5 percent in the new series data used in Economic Survey of 1998-99) more than doubled to 1.3 per cent in 1997-98 and for the Centre and States together it was estimated to be 2.4 per cent (revised estimate). The selective acceptance of the Fifth Pay Commission recommendations by the United Front (Gujral) government in 1997, whereby the government expenditure on salaries was to increase very sharply without any compensatory savings, as the measures suggested by the Commission to achieve such savings were not accepted, put further pressure on the fiscal deficit. The situation reached a point where, “given the serious fiscal slippage”, even the Economic Survey of the Government of India of 1998-99 was constrained to argue, “the time has perhaps come to reconsider the issue of constitutional limits on the deficit.” (*Economic Survey*, pp. 11,18, emphasis mine.)

Yet, it is a positive development of enormous significance in a democracy, that there is a broad consensus among all political parties from the Right to the Left (barring the extremists at both ends) that the reform process must continue, a consensus reminiscent of the one around the Nehruvian programme at independence.

The consensus is suggestive of the fact that economic reform or liberalisation did not mean a change of goals set at independence by the Indian people, such as rapid growth, industrialisation, self reliance, removal of poverty and so on. Liberalisation and participation in the globalisation process was not the “final surrender” to international capital or imperialism or the IMF-World Bank combine as has been argued ad infinitum by sections of the orthodox Left. On the basis of the experience with various controls and state intervention at home, of changes occurring in the world such as the collapse of the Socialist world, the new globalisation process after World War II and the experience of various fast growing economies in the recent past, the aspiration towards the same goals set out at independence required an altering of strategy.

However, this is not to say that the earlier ‘Nehruvian’ strategy was wrong. That strategy had its historical significance. As we saw, it gave the Indian economy a certain depth and spread, increased its bargaining power and independence, and lent the Indian economy and society the dignity it did not possess after the colonial experience. In fact it made the Indian economy capable of participating in the globalisation process without being swamped by it in a manner that the stronger economies in the global framework could establish a dominating or exploitative position vis a vis the Indian economy. However, over time, certain negative features

developed, and the world context changed. To achieve the earlier goals, there was now a need for a shift in strategy. To give just one example, if self-reliance and rapid growth in the 1950s required import substitution and restrictions on capital and commodity movements, today capital and technology flows and through that keeping up efficiency or productivity levels is the route to self-reliance and rapid growth.

It is no accident that so many of the very people who created, outlined or subscribed to the earlier Nehruvian strategy over time saw the necessity of reform. We have, for example, apart from Indira Gandhi herself, the radical economist of the Nehruvian era K.N. Raj, the Marxist economist Lord Meghnad Desai, the Nehruvian Narasimha Rao, Left economist Late Sukhamoy Chakravarty, C.H. Hanumantha Rao, Arjun Sengupta and Nobel laureate Amartya Sen, and practicing Communist and Chief Minister of West Bengal for the longest tenure since independence, Jyoti Basu, his successor in the Communist led West Bengal Government, Chief Minister Buddhadeb Bhattacharya all implementing or arguing for economic reform involving liberalisation and participation in the globalisation process, though with different approaches and in varying degrees. Even the BJP, despite the strong resistance of the RSS supported Swadeshi Jagran Manch, is essentially committed to pressing on with reforms.

There is, in other words, a growing recognition in India of the imperative to be responsive to the external changes and internal experience and change strategy so that this great country is able to come into its own and realise its enormous potential rather than fritter away the considerable achievements made since independence. There is today a consensus on reforms involving liberalisation and participating in the globalisation process with the same objectives of equity, growth and independence around which the erstwhile Nehruvian consensus had been constructed. The strategy to achieve those objectives was changed with the changing global and internal situation.

38.6 SUMMARY

At Independence, India inherited an economy that had suffered over two hundred years of colonial rule. In the last four decades before Independence, India's national income grew at a slow rate of 0.73 to 1.22 per cent per annum, the per capita income declined, agricultural production fell and industrial growth stagnated. The Nehruvian programme of development focussed on a policy of self-reliance, rapid industrialization based on import substitution, resistance to foreign capital, and land reforms. It was a vision that underlined the significance of state intervention and planning, and saw the need to promote the public sector and capital goods industries. In these early decades of planning, India's National Income grew rapidly at an average rate of 4 per cent per annum, agriculture grew at 3 per cent per annum, and industries at 7.1 per cent per annum. After the Nehru era Indian economy faced a variety of difficulties: successive failure of monsoons, a slowing of agricultural growth, spiraling inflation, wars and influx of refugees. A series of measures introduced since the late sixties, including those associated with the Green Revolution, helped to check the growing crises. However the economic expansion was arrested by a set of structural constraints. Prolonged protection and excessive government intervention had eliminated healthy competition – both internal and external – and inhibited efficiency and innovation. After the initial spurt till the mid-1960s, growth rates of aggregate output declined between 1965 -75, recovered after that, and dipped again by the late 1980s. An industrialization that was based on import substitution was restricted by the constraints of the internal market. Unlike the East Asian countries India had not explored the possibilities of expanding the export market. The situation of crises was aggravated by a shift from a policy of fiscal prudence to fiscal profligacy.

Expenditures outstripped revenues, fiscal deficits soared, the balance of payments situation deteriorated, debts mounted, foreign exchange reserves collapsed. The economic reforms of 1991 were initiated in this context. Reforms meant an attempt at fiscal discipline, liberalization of trade and industrial controls. The industrial licensing system was dismantled, the public sector was reformed, and Foreign Direct Investments were welcomed. In the years after the reforms the growth rate of the Gross Domestic Product (GDP) recovered quickly, industrial production picked up, fiscal deficit was reduced, the overall external debt fell, the stock market boomed, and even poverty levels declined. Indian economy entered the age of globalization.

38.7 EXERCISES

- 1) Discuss the problems that the planners faced immediately after Indian independence.
- 2) Analyze the nature of Indian economic growth in the first three five year plans.
- 3) How did the Indian economy respond to the challenges faced in the 1960s?
- 4) Was the economic crisis of 1991 caused by the structural constraints to economic growth?
- 5) Account for the shift from the economics of 'fiscal prudence' to that of 'fiscal profligacy'. What were the implications of this shift?
- 6) Discuss the consequences of the economic reforms of 1991?

38.8 SUGGESTED READINGS

Bipan Chandra, Mridula Mukherjee and Aditya Mukherjee, *India After Independence*, Penguin, New Delhi, 2000.

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UNIT 39 THE POLITICAL ECONOMY OF LIBERALISATION

Structure

- 39.1 Introduction
- 39.2 Expansion and Growth of Indian Economy
- 39.3 Economic Policy: The Background
- 39.4 The Crisis of Economic *Dirigisme*
- 39.5 The Economic Recovery of the 1980s and 1990s
- 39.6 Economic Reforms in the 1990s
- 39.7 The Political Economy of Liberalisation
- 39.8 Summary
- 39.9 Exercises
- 39.10 Suggested Readings

39.1 INTRODUCTION

Any consideration of the economic history of India over the past few decades must address some central questions. What were the causes of the crisis in the early 1970s, and how were these overcome? What caused the shift from the so-called “Hindu rate of growth” of economic activity, of around 3.5 per cent per annum, to the higher rates of around 5.6 per cent per annum achieved from the 1980s onwards? What were the political economy configurations associated with changing economic policies, especially “liberalisation”? How did these changes impact upon the material conditions of the Indian people, and did they involve corresponding changes in society and polity? This Unit briefly considers each of these questions in turn.

39.2 EXPANSION AND GROWTH OF INDIAN ECONOMY

To begin with, however, a broader look at the overall trends may be useful. Table 1 presents decadal compound rates of growth since the early 1950s, for Gross Domestic Product and per capita Net National Product at constant 1993-94 prices. It is evident that real GDP growth rates increased to a higher level in the latter two decades. Increases in per capita income were even more marked because of the fall in the rate of population growth.

Table 1: Annual rates of growth of national income

Period (year starting April)	(per cent)	
	Gross Domestic Product	Per capita Net National Product
1950-52 to 1960-62	3.9	1.8
1960-62 to 1970-72	3.5	1.2
1970-72 to 1980-82	3.5	1
1980-82 to 1990-92	5.6	2.9
1990-92 to 2000-02	5.6	3.5

Notes: 1. Both GDP and NNP are measured in constant 1993-94 prices.
2. Rates of growth are compound annual rates for the three-year averages.

Source: CSO, *National Accounts Statistics, various issues*

As Table 2 shows, this growth has been associated with some amount of structural change, although perhaps not as much as might be expected. Investment rates have increased over time, which is only to be expected in a developing economy achieving higher rates of per capita income, but the rate of increase actually slowed down, until the last decade shows almost no change in the investment rate. Meanwhile, the share of agriculture in GDP has fallen along predictable lines in the course of development, but there has been little increase in the share of the secondary sector, which has not changed at all since the early 1990s. Rather, the share of the tertiary sector has increased dramatically, to the point where it now accounts for around half of national income.

Table 2: Structural change in the Indian economy

Period (year starting April)	Investment rate	Per cent of GDP		
		Primary	Secondary	Tertiary
1950-52	15.5	59	13.4	27.6
1960-62	19.4	53.1	17.3	29.6
1970-72	23.8	46.6	20.4	33.0
1980-82	22.0	41.3	21.8	36.9
1990-92	26.0	34.4	24	41.6
2000-02	26.2	26.1	24.7	49.2

Source: CSO, *National Accounts Statistics*, various issues.

Such changes in output shares were not accompanied by commensurate changes in the distribution of the workforce. The proportion of all workers engaged in agriculture as the main occupation has remained stubbornly above 60 per cent, despite the collapse in agricultural employment generation of the most recent decade and the fall in agriculture's share of national income. It is also intriguing that the higher rates of investment of the last two decades have not generated more expansion of industry, but have instead been associated with an apparent explosion in services, that catch-all sector of varying components.

39.3 ECONOMIC POLICY: THE BACKGROUND

The economic policy regime erected in the 1950s had its roots in the freedom struggle itself. The economy had been dominated by metropolitan capital and metropolitan commodities in the pre-independence period. Freedom meant freedom from this domination; and this could not be ensured without giving the state in independent India a major role in building up infrastructure, expanding and strengthening the productive base of the economy, setting up new financial institutions and regulating and coordinating economic activity. This was necessary even for building capitalism itself, although it was proclaimed by some to be also a means of transition to socialism. State capitalism and state intervention were essential instruments for the development of a relatively autonomous Indian capitalism, displacing metropolitan capital from the pre-eminent position it had occupied in the colonial economy.

There were a number of features of India's post-Independence growth strategy that structurally limited the potential of the system. To start with, despite talk of land reform, of providing "land-to-the-tiller" and curbing the concentration of economic power, little was done to attack or redress asset and income inequality after Independence. The worst forms of absentee landlordism were done away with, but the monopoly of land remained intact in most of rural India. And while some monopolistic practices were curbed, asset concentration in the industrial sector was

never really challenged. Rather, India's monopolists were able to use state intervention as a device to consolidate and expand their monopolistic positions.

One consequence of the persistence of asset and income inequality was that there were definite limits to the expansion of the market for mass consumption goods in the country. Employment and income growth in the private sector was limited. And the large mass of peasantry, faced with insecure conditions of tenure and often obtaining only small shares of the outputs they produced, had neither the means nor the incentive to invest. The prospect of increasing productivity and incomes in rural India (which was home to the majority of its population) in order to stimulate domestic demand was therefore restricted. The absence of any radical land redistribution meant that the domestic market, especially for manufactured goods, remained socially narrowly based. It also meant that the growth of agricultural output, though far greater than in the colonial period, remained well below potential. For the country as a whole, the benefits of such agricultural growth as did occur was largely confined to a relatively narrow stratum of landlords-turned-capitalists and sections of rich peasants who had improved their economic status. Meanwhile, industrial growth was not sufficiently employment generating to create large increases in demand from this source.

Under these circumstances, continuous growth in State spending was essential for the growth of the market since it was the key element in whatever overall dynamism the system displayed. Further, given the strength and assertiveness of the domestic industrial capitalists, the government was not in a position to discipline them to the extent that would have been required to launch an East Asian style mercantilist strategy. The stimulus for growth had to be internal, even though the autonomous expansion of the domestic market was constrained by the inequality of asset distribution.

So the basic stimulus to growth during the early post independence years came from the State itself. It provided domestic capitalists with a large once-for-all market for manufactures by widening and intensifying trade protection and displacing imported goods from the domestic market. It sought to expand that market through its current and capital expenditures and it supported the domestic capitalist class by investing in crucial infrastructure sectors and directing household savings to finance private investment through the creation of a number of industrial development banks.

This strategy did pay dividends during the decade and a half immediately following Independence. In this period rates of industrial growth were creditable by international standards, India built up a diversified industrial base, and the public sector expanded rapidly enough to provide crucial infrastructural services, industrial raw materials and capital goods to sustain industrial growth even when the foreign exchange available to import these commodities was limited. (Chakravarty, 1987) By the mid-1960s, however, not only was the once-for-all stimulus offered by import substitution exhausted, but the ability of the State to continue to provide the stimulus to growth was also undermined by its inability to raise adequate resources. In consequence, aggregate growth decelerated leading to the "secular stagnation" of the late-1960s and 1970s.

DIRIGISME

An expression of French origin suggesting the policy of state direction and control in economic and social matters.

39.4 THE CRISIS OF ECONOMIC *DIRIGISME*

The interventionist regime that was set up in the 1950s had serious internal contradictions which contributed to an erosion of its social stability as well as of its economic viability. This propelled it towards a situation where, given its social base, it could not summon the will for any alternative viable responses to the changed international economic context. Thus, the development of international capital markets

and consequent access to private capital flows added tensions to a regime which had been based on certain critical assumptions relating to the binding foreign exchange constraint. This interplay between the changing external context and the accentuating domestic contradictions within the earlier regime gave rise to the totality of circumstances that permitted the overt shift in policy making in favour of neoliberal economic reforms. Thus, while the speculation-engendered crisis of 1990-91 provided the immediate occasion for the “economic reform” package, there were fundamental internal contradictions and structural features that had led up to it.

There were three mutually reinforcing and interrelated contradictions that aborted the objectives of this basic model. First, the state within the old economic policy regime had to simultaneously fulfil two different roles that were incompatible in the long run. On the one hand it had to maintain growing expenditure, in particular investment expenditure, in order to keep the domestic market expanding. At the same time, however, the state exchequer was the medium through which large-scale transfers were made to the capitalist and proto-capitalist groups, so that the state effectively became the most important instrument for primary accumulation by the domestic capitalist class in its various manifestations. Of course, there were other instruments as well, some of which were more direct (such as the eviction of tenants from agricultural land, private encroachment on common and publicly owned resources such as forests from whose use the poor were simultaneously excluded). But the state exchequer was the most significant via media, through mechanisms such as tolerance of fairly widespread and growing tax evasion, a variety of subsidies and transfers, and through lucrative contracts and procurement policies.

These contradictions reflected the class character of the Indian state, which was the focus of much discussion during the first three decades after Independence. Kalecki (1964) sought to explain the nature of state intervention in what he called an “intermediate regime”, that is one representing the interests of the urban lower middle class and rich peasantry. In such a regime, the conflict of these groups with feudal landlords and the large capitalist “comprador” elements in the economy, as well as the weakness of the lower middle classes in terms of their inability to perform the role of dynamic entrepreneurs on a large scale, would necessitate a form of state capitalism, with very specific internal contradictions and limits to its growth. K. N. Raj (1973) applied this concept to the Indian case, although his interpretation met with some controversy, essentially with respect to the characterisation of the state and the implications thereof.¹ Others, by contrast, recognised the nature of the state as an (uneasy) alliance between the rural landed classes and the big industrial bourgeoisie, influenced also by the interaction with metropolitan capital (Patnaik, 1974; Mitra, 1977; Chandra, 1988; Bagchi, 1991). Some analyses (such as Bardhan, 1984) moved the focus away from class to interest groups, and viewed the Indian public economy as an elaborate network of patronage and subsidies, characterised by “pressure-group politics”. Still others (Rudolph and Rudolph, 1987) treated the state as an autonomous “third actor”, with great power because of the resources it controlled, for which class politics was marginal and subordinate to other social formations such as religion, caste and language communities. The present analysis takes an incorporative view, which stresses that both the nature of the Indian state and the functioning of markets have been shaped by social and historical processes, and also affected subsequent class configurations..

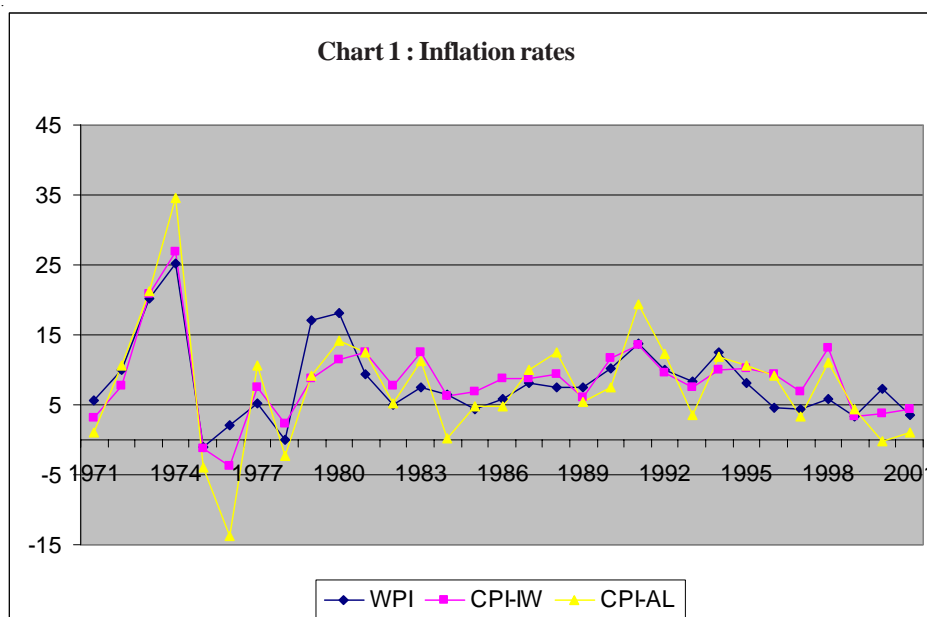
These contradictions played out directly in affecting industrial activity. After fifteen years of rapid industrial expansion in the 1950s and the early 1960s, there was a

1 For example, it was severely criticised, inter alia, by E.M.S. Namboodiripad (1973).

DIRIGISTE REGIME

A regime that indicates state controlled economic and social matters.

dramatic decline in the rate of manufacturing growth during the next fifteen years. By the early 1970s, the crisis of the *dirigiste* regime was already apparent, and there were various pressures building upon the import-substituting strategy of the earlier decades. The oil shock of 1973 added to domestic inflationary pressures to create the dramatic increases in prices of the period 1973-75, which was also a time of much enhanced socio-political unrest in the country.



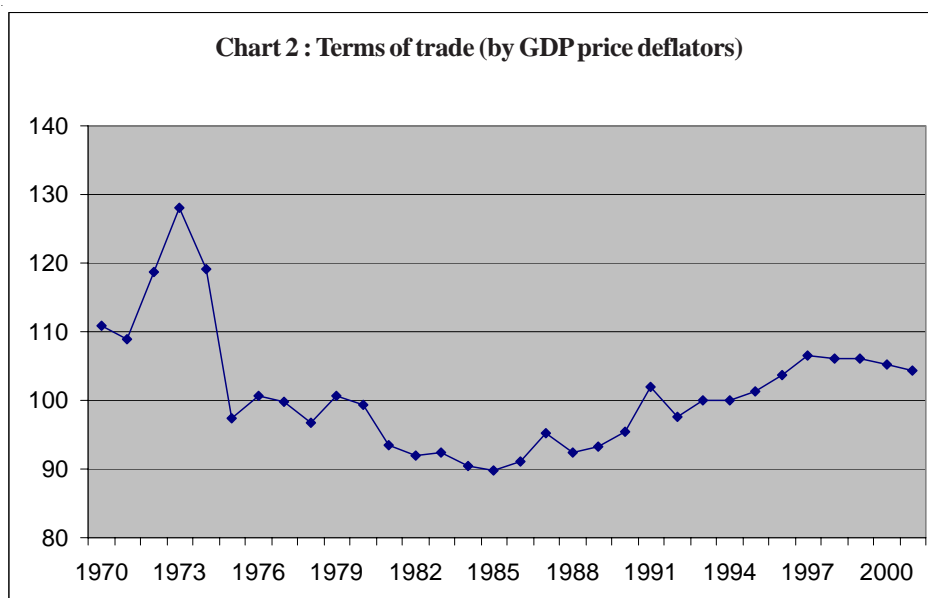
Source: RBI, *Handbook of Statistics on the Indian Economy*, 2002-03.

Chart 1 indicates the extent of extreme price volatility in the early 1970s, which has not been experienced with such intensity in any later period. The reduction in rates of inflation occurred from the beginning of the 1980s. This is noteworthy because worldwide rates of inflation were not as low in the 1980s as they were in the 1990s, and so the control over inflation in the 1980s essentially reflected changes within the Indian economy.

39.5 THE ECONOMIC RECOVERY OF THE 1980s AND 1990s

In the 1980s, the escape from the growth impasse of the earlier period was enabled by an increase in the fiscal stimulus to the economy provided by government spending, financed increasingly by external commercial borrowing. In addition, there was substantial liberalisation of imports, especially of capital goods and components for manufacturing, which imparted an impetus to final good production based on newly imported inputs. One reason why the model of public sector-led expansion could continue for some more time without generating higher inflation was of course this import liberalisation.

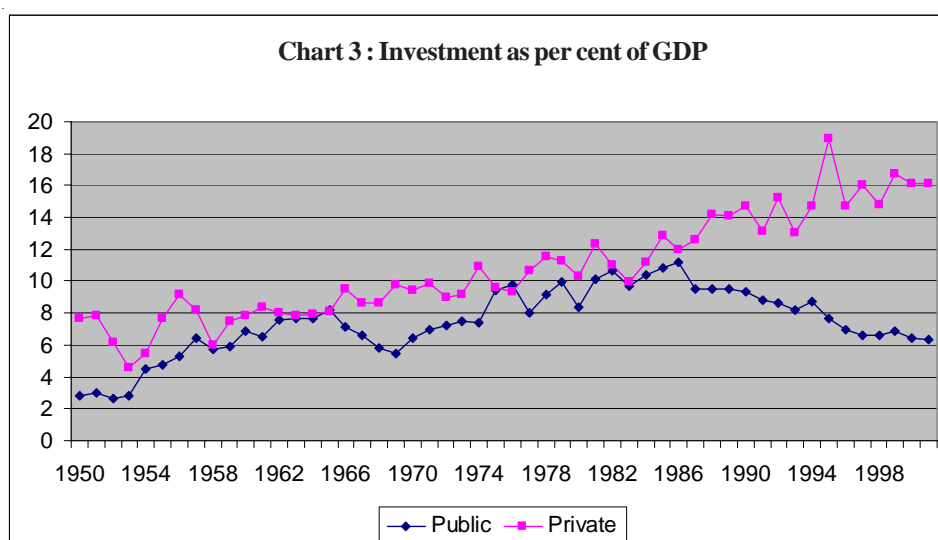
However, some role was also played by the intersectoral terms of trade, as indicated in Chart 2. The first half of the 1970s marked a peak in terms of the relative price of agricultural goods, but after 1977, and through to around 1985, such a tendency was effectively contained and the domestic terms of trade were generally favourable for industrial expansion. In turn, this pattern of the terms of trade can be partly explained by the fact that world agricultural prices were declining over the 1980s. But what was more significant was that growth after 1980 in the Indian economy generated much less employment than before, and therefore implied much less demand for food than would have been the case with more employment-intensive expansion.



Source: CSO, *National Accounts Statistics*, various issues

Thereafter, while intersectoral terms of trade for agriculture remained low compared to the early 1970s, from the mid-1980s onwards for about a decade Indian agriculturalists were relatively protected from the international movement of terms of trade against primary products. The liberalisation of imported manufactured goods that started from the 1980s, also played a role in ensuring that terms of trade improved to some extent for agriculture. The domestic relative prices for agriculture worsened again in the late 1990s, when trade liberalisation exposed farmers to declining world prices.

The 1980s experience suggests that over this period, notwithstanding the limited liberalisation, Indian economic growth still depended on the fiscal stimulus that government expenditure provided, rather than on an expansion of exports. Since such government expenditure was not accompanied by tax and other measures aimed at mobilising additional resources, but was financed through borrowing, the excess demand in the system was bound to spill over in the form of either inflation or a current account deficit. Keeping inflation under control through imports enabled by trade liberalisation, in turn required more external borrowing to finance the growing current account deficit.



Source: CSO, *National Accounts Statistics*, various issues.

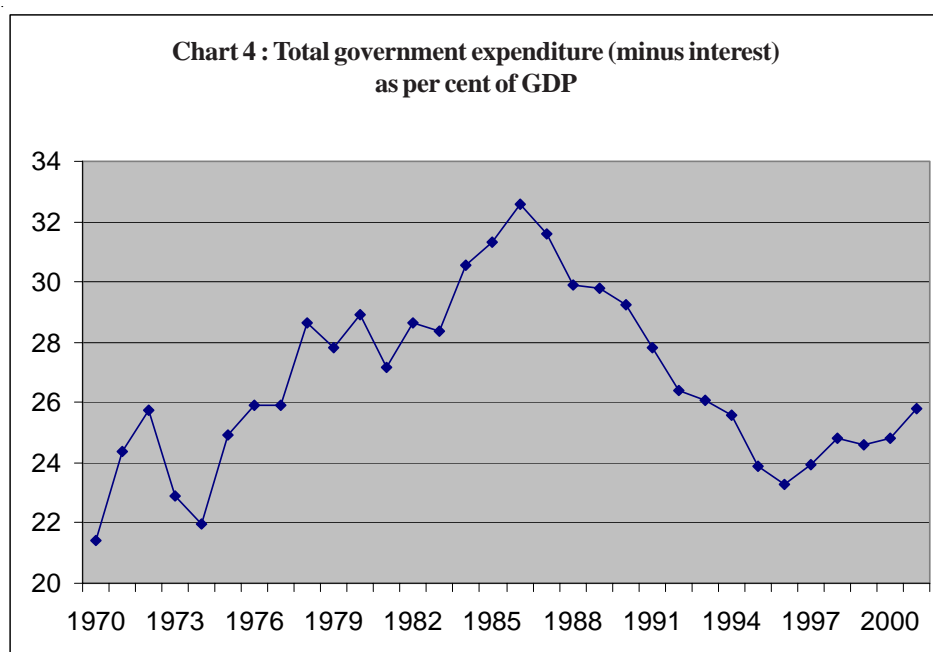
Craft Production, Technological Change and Industrialization

In the first two decades after Independence, a leading role in economic growth was played by public investment, which had strong positive linkages with private investment in both agriculture and industry. Chart 3 shows that public investment as a share of GDP continued to increase over much of the 1980s (and peaked in 1986-87), and this no doubt acted as a positive stimulus to private investment over this period. However, after 1987, public and private investment trends diverged quite sharply. Public investment declined quite sharply as a share of GDP, falling back to the levels of the early 1970s, while private investment continued to increase, such that aggregate investment rates remained broadly stable.

Some observers have interpreted such a tendency to mean that Indian entrepreneurs have broken out of state dependence, and that economic liberalisation has created a surge of animal spirits such that private investment no longer requires state activity to be buoyant. The combination of deregulation and trade liberalisation, according to this view, has created a virtuous pattern of growth whereby the state can reduce its expenditure and allow private investors to fill the gap in investment.

There is no doubt that the process of import liberalisation (which began in the mid-1980s and was accelerated in the 1990s) did lead to some increase in manufacturing activity in particular, as the pent-up demand for a range of consumer goods was sought to be met through increased import-intensive production. However, this really reflected a once-for-all increase in the domestic market, which tapered off over time, especially because it did not involve large increases in employment in these sectors.

However, just looking at public investment alone may give a misleading sense of the full nature of the fiscal stimulus, especially in the 1980s. Government expenditure of all kinds has played a crucial role in generating more employment and therefore more direct and indirect demand for private activity. These linkage and multiplier effects were especially strong in the period from 1975 to 1986. Chart 4 indicates that this was a period of very large increases in the share of total government



Sources: Ministry of Finance, *Public Finance Statistics of India*; and CSO, *National Accounts Statistics*, various issues

expenditure (minus interest payments from which it is assumed that the marginal propensity to consume is low) to GDP.² This was clearly the basis for the high growth rates observed in the 1980s, since the positive effects of such expenditure operate immediately as well as with a time lag.

The effects of state expenditure were particularly marked in rural India in the second half of the 1980s. This was a period when, along with a rapid increase in all sorts of subsidies and transfers to households from government, there was a very large increase in expenditure on the rural sector by State and Central governments. More generally, throughout the period political developments tended to give rural interests greater power and they were able to command an improvement in the historically low share of government expenditure benefiting rural areas. This flow of resources involved an expansion of 'rural development' schemes with an explicit redistributive concern, as well as the greater accessibility of the rural elites to the varied benefits of aggregate government expenditure. There were various rural employment and IRDP programmes as well as a plethora of special schemes for a variety of identifiable 'target' groups. While these programmes were less than entirely successful in reaching target groups, they still represented a fairly massive net transfer to rural areas. This was instrumental in causing the rural employment diversification of that period as well as allowing for a greater spread of economic growth in the country than has been achieved subsequently.

Chart 4 suggests that this positive fiscal stimulus declined after 1986. In the 1990s, while the proportion of state expenditure to GDP decreased, economic liberalisation measures such as reduced import tariffs and domestic duty rates, caused the total tax-GDP ratio to decline, so the fiscal deficit still remained high, albeit with a lower positive stimulus. Further, in the early 1990s, financial liberalisation measures significantly increased the cost of government borrowing, such that total interest payments of central and state governments became ever more significant, and accounted for as much 7.3 per cent of GDP on average by the turn of the decade.

The question that arises is, what allowed the rate of growth in the period after the mid-1980s to be maintained despite the apparent decline in the fiscal impetus after 1986? First, while the fiscal stance was reduced, it was still quite significant, above 26 per cent of GDP, until around 1993. Thereafter, there was high growth for a period in the mid-1990s, caused in particular by the once-for-all spurt provided by import liberalisation, as discussed below. This is also indicated by the spurt in private investment in the mid-1990s, as evident from Chart 3. Private investment as a share of GDP reached a peak in 1995, and thereafter stabilised at around 16 per cent of GDP. Meanwhile, the fiscal stimulus, which had been falling continuously, started increasing again around 1998, although it still remained below the levels of the early 1980s. The tapering off of growth in the latter part of the 1990s (from a compound rate of 5.8 per cent per annum in the period 1989-91 to 1995-97 to a lower compound rate of 4.6 per cent in the period 1995-97 to 2000-02) should be seen in this context. What this essentially shows is that the Indian economy remains critically dependent upon levels of state expenditure to ensure growth, despite the periodic stimuli provided by liberalisation, exports and so on.

2 There are several reasons for believing that increases in interest payments by government are likely to have lower multiplier effects. Most government securities are held by economic agents whose marginal propensity to consume is very low. In India, a significant proportion is held by banks, whose increased returns from such investment do not tend to translate into greater spending by the system as a whole.

The explicit aims of the neoliberal economic reform process adopted from 1991 onwards were: (i) to do away with or substantially reduce controls on capacity creation, production and prices, and let market forces influence the investment and operational decisions of domestic and foreign economic agents within the domestic tariff area; (ii) to allow international competition and therefore international relative prices to influence the decisions of these agents; (iii) to reduce the presence of state agencies in production and trade, except in areas where market failure necessitates state entry; and (iv) to liberalise the financial sector by reducing controls on the banking system, allowing for the proliferation of financial institutions and instruments and permitting foreign entry into the financial sector. These were all based on the notion that greater freedom given to private agents and market functioning would ensure more efficient and more dynamic outcomes. The government's aim was also to restructure production towards areas of international "comparative advantage" (defined in static rather than dynamic terms). These areas were also seen as inherently more labour-intensive, which led to the further prediction that, after an initial brief period of net job loss, such a strategy of trade liberalisation would actually create more employment over time in more sustainable ways.

These aims translated into successive changes in the pattern of regulation in different sectors as well as in aggregate macroeconomic policies. By the early years of the current century, therefore, the Indian economy had undergone the following policy changes:

- very substantial reduction in direct state control in terms of administered prices and regulation of economic activity;
- privatisation of state assets, often in controversial circumstances;
- rationalisation and reduction of direct and indirect tax rates, which became associated with declining tax-GDP ratios;
- attempts (typically unsuccessful) to reduce fiscal deficits which usually involved cutting back on public productive investment as well as certain types of social expenditure, reducing subsidies to farmers and increasing user charges for public services and utilities;
- trade liberalisation, involving shifts from quantitative restrictions to tariffs and typically sharp reductions in the average rate of tariff protection, as well as withdrawal of export subsidies;
- financial liberalisation involving reductions in directed credit, freeing of interest rate ceilings and other measures which raised the cost of borrowing, including for the government;
- moving to market determined exchange rates and liberalisation of current account transactions;
- allowing a significant degree of capital account liberalisation, including easing rules for Foreign Direct Investment, allowing non-residents to hold domestic financial assets, providing easier access to foreign commercial borrowing by domestic firms, and even allowing domestic residents to hold foreign assets.

It has already been observed that the transition to a higher economic growth trajectory was associated in the 1980s with the fiscal stimulus provided by the state in a context of import liberalisation. In the 1990s, this fiscal stimulus was much weaker, declining

in the first part of the decade and only increasing somewhat from 1997 onwards (Chart 4). The growth performance was more uneven, with deceleration in agricultural output growth and fluctuating performance in manufacturing. Since the 1990s liberalisation was not accompanied by any new dynamism in the commodity-producing sectors of the economy³, the expansion of services proved to be crucial over this later period, as evident from Table 3.

Table 3: India: Growth rates by sector

(Average annual rates of output growth)

	Primary	Secondary	Tertiary
1971-72 to 1979-80	2.22	4.64	4.87
1981-82 to 1989-90	3.37	6.95	7.04
1991-92 to 1999-2000	3.30	6.98	8.35
1985-86 to 1989-90	5.72	8.66	8.83
1991-92 to 1994-95	3.77	8.04	6.40
1995-96 to 1999-2000	1.95	4.99	7.20

Note: The figures are based on data with 1993-94 as base year.

Source: CSO, *National Accounts Statistics*, various issues

Despite the weakened fiscal stimulus, both in terms of public investment and aggregate expenditure, the role of the state remained crucial, since it was the state that determined the contours of tax reductions, deregulation and other policies that allowed for economic growth based on a relatively small and dominantly urban section of the population. The explosion in consumption by the upper quintile of the population (discussed below and shown in Chart 5) fed this growth, and meant that it involved increased inequality, both across regions of India and within regions across different economic and social categories. There was also a widening gap between incomes in agriculture and non-agriculture, such that the ratio of per worker domestic product in non-agriculture to that in agriculture increased from about 2 in the 1950s to well over 4 in the 1990s.

The period since 1990 was marked by very low rates of employment generation. Rural employment in the period 1993-94 to 1999-2000 grew at the very low annual rate of less than 0.6 per cent per annum, well below the rate of growth of rural population. Urban employment growth, at 2.3 per cent per annum, was also well below that of earlier periods, and employment in the formal sector stagnated. The Census of India also suggests that there was dramatic deceleration in employment defined in terms of the number of main workers, with greater increases in the number of “marginal workers” (that is, those having employment for less than 183 days in the year). Further, the quality of employment deteriorated, with increases in casual and part-time work rather than regular, as well as greater fragility of contracts.

3 This lack of dynamism was despite the fact that the revision in base years for the national income accounts led to substantial increases in estimated income. The new series of national income, with 1993-94 as base, not only increased the GDP estimates but also pointed to a higher rate of growth than in the old series for both overall and agricultural incomes. Thus, the GDP estimate for 1993-94 was about 9 per cent higher according to the new series than the old, both overall and in agriculture. Also, between 1993-94 and 1997-98 (the last year for which old series estimates are available), agricultural GDP as per the new series rose by a total of 14.2 per cent as compared with 8.37 per cent according to the old series. Total GDP between these years increased by 31.3 per cent as per the new series as compared with 30.4 per cent in the old series.

Table 4: Growth rates of employment

(per cent change per annum)

	Rural	Urban
1983 to 1987-88	1.36	2.77
1987-88 to 1993-94	2.03	3.39
1993-94 to 1999-2000	0.58	2.27

Note: Employment here refers to all workers, Principal Status plus Subsidiary Status

Source: Based on NSS employment rates and Census population figures

Agricultural employment showed the sharpest deceleration of all, with absolute declines in the number of people usually employed in agriculture over the 1990s. Part of this was due to technological and cropping pattern changes that reduced labour demand in agriculture. In addition, the growth of landlessness (as cultivation became less viable given the squeeze on the peasantry because of rising input costs and falling or stagnant crop prices) also had an impact, since peasants using family labour tend to use labour more intensively than farmers using hired labour.

For urban India, the deceleration and even decline in organised sector employment was one of the more disturbing features of the period after 1990, especially given that industrial output increased manifold and the service sector (in which much of the organised employment was based) was the most dynamic element in national income growth.⁴ This was due to the collapse in public sector employment, since private organised sector employment did not increase fast enough to compensate.

The formal feminisation of work was still relatively less developed in India compared to many other Asian countries, although there is evidence that there was some increase during the peak period of the 1990s. Women's urban employment was mostly in services and to some extent in home-based work as part of subcontracting networks that extended all the way from large (even multinational) companies down through various subcontracted units to women working on a piece-rate basis at very low wages. (Ghosh, 2004)

There are several reasons why the pattern of growth over the 1990s did not generate sufficient employment even in the urban areas. Several "economic reform" measures worked against the interests of most small producers, who accounted for not only the most labour-intensive forms of urban production but also the dominant part of urban manufacturing employment. The reduction of priority sector credit allocation, the shift in emphasis in terms of financing investment from banks to the stock market and the removal of various export subsidies from which small-scale exporters benefited, all militated against the interests and viability of such enterprises. Meanwhile public investment in vital urban infrastructure declined considerably both as share of GDP and in per capita terms, and public sector "cost-cutting" and other practices reduced the efficiency and accessibility of the infrastructure because of inadequate maintenance. These not only created important bottlenecks for all producers, they also added to costs in general, which affected the economic viability of small enterprises.

4 The only positive feature in employment patterns was the increase in opportunities for the educated groups, largely related to the expansion of IT-enabled services in metropolitan and other urban areas. However, while this feature, along with that of software development, received much international attention, it still remained too insignificant in the aggregate economy to make much of a dent in overall employment.

In addition, there was the pressure coming from newly freed imports becoming available at lower average rates of tariff. Such import competition was particularly difficult for small scale producers to meet, not only because of the greater control of many large companies over distributive networks, but also because small companies were typically unable to match the huge advertising budgets of larger companies and multinationals in particular. Meanwhile, as manufacturing exporters strove to become or remain competitive in an increasingly difficult international environment, they were forced not only to find various ways of making labour more “flexible” than ever (through lower wages and more insecure working conditions), but also to adopt relatively capital-intensive new technologies that could ensure the quality and consistency that were required in world markets. This meant that even relatively small producers who were earlier the most labour-intensive employers, were no longer large sources of potential employment generation.

From the early 1970s until the late 1980s, there was a secular trend towards declining incidence of poverty (in terms of the proportion of population with consumption below the officially determined poverty line). Subsequently, the evaluation of trends in poverty was made more complex by certain changes in methodology in the main official consumer expenditure surveys, which have made the recent survey data non-comparable with earlier estimates. Nevertheless, the basic conclusion appears to be that the rate of decline of poverty has slowed down and become much more uneven. Other indicators point to disturbing changes in patterns of consumption. Thus, per capita foodgrain consumption declined from 476 grams per day in 1990 to only 418 grams per day in 2001, and even aggregate calorific consumption per capita declined from just over 2200 calories per day in 1987-88 to around 2150 in 1999-2000.⁵ Meanwhile, declining capital expenditure by the government was associated with more infrastructural bottlenecks and worsening provision of basic public services. All these features: decelerating employment growth, declining access to food for ordinary people, and worsening coverage and quality of public services, had particular impact upon the condition of ordinary women.

The external sector appeared to provide the most positive indicators over the later period, with overall stability in the balance of payments and a relative absence of the boom-and-bust cycles that marked some other emerging markets. To some extent this reflected the relatively limited extent of capital account liberalisation over much of the period, and the fact that the Indian economy was not really “chosen” to be a favourite of international financial markets until the very recent period from 2002. Meanwhile, the greatest stability to the balance of payments was imparted by the substantial inflows of workers’ remittances from temporary migrant workers in the Gulf and other regions, which amounted to more than all forms of capital inflow put together.

39.7 THE POLITICAL ECONOMY OF LIBERALISATION

There is no doubt that, whatever the external pressures upon the state, the neoliberal reform process could not have occurred without what was at first conditional and

5 Of course, it has been argued that this can represent a positive diversification of consumption away from foodgrain that is associated with higher living standards. But in other countries it is typically the case that aggregate foodgrain consumption did not decline because of indirect consumption of grain (for example, through meat and poultry products that require feed). In any case, the overall decline in calorific consumption (covering all food products), even for the bottom 40 per cent of expenditure categories in population, suggests that the optimistic conclusion may not be warranted.

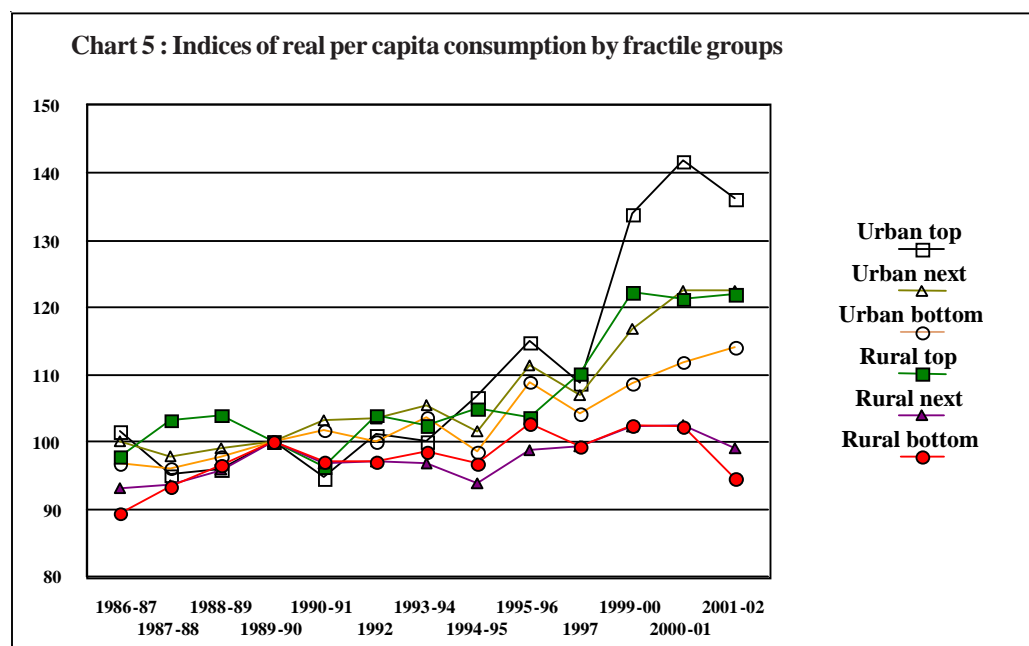
subsequently more unqualified support extended to it by various elements of the domestic large capitalist class, along with other social groups with substantial political voice, such as the middle classes. To some extent this can be explained by the proliferation and diversification of the Indian capitalist class that took place during the years of import-substituting growth and later. The emergence of new capitalists operating outside the traditional bases of existing monopolistic groups, such as trade, finance, services of various kinds and operations abroad by Non-Resident Indian groups, was an important factor. These new entrants sought to diversify into manufacturing, and therefore welcomed deregulation and also, because of access to newer technology, were less averse to import competition.

This created a direct challenge for several of the traditional monopolies, which had in the past been protected by the barriers to entry created by the state's industrial and trade policies. Such established large capital found its relative position worsening in the economy over time. To reverse this decline, it looked for new avenues, including expansion abroad through the export of capital and by moving into areas previously reserved for small-scale entrepreneurs. So even the established big businesses that were, to start with, the beneficiary of state controls of various kinds, began to chafe against these controls at a certain stage. Among certain other sections such as the agricultural capitalists the economic regime change met with qualified approval. Rich farmers were hostile to the withdrawal of subsidised inputs and directed credit, but still favourably anticipated the prospect of exporting at favourable prices in the international market. This meant that a substantial section of domestic capital was willing to make compromises with metropolitan capital, in the hope of being able to better its own prospects as a junior partner, both in the domestic as well as in the international market. It was therefore in favour of import liberalisation and a retreat from state interventionism.

In addition, there was support for economic liberalisation from other quarters: from new businessmen involved in what were essentially "parallel market" transactions; a section of the top bureaucracy; and perhaps more significantly, the large and politically powerful urban middle classes, along with more prosperous rural farming groups, whose real incomes increased in the consumption-led boom of the 1980s. The latter groups actively began to desire access to international goods and gave potency to the demands for trade liberalisation. And of course the technological and media revolutions, especially the growing importance of satellite television, imparted a significant impetus to the international demonstration effect, which further fuelled liberalising and consumerist demands. This process was given further stimulus by the accelerated globalisation of a section of Indian society. Apart from the media, one major instrument of this was the postwar Indian diaspora. The "NRI phenomenon", by means of which a qualitatively significant number of people from the Indian elites and middle classes actually became resident abroad, contributed in no small measure to consumerist demands for opening up the economy. The important of Non-Resident Indians was not only because they were viewed as potentially important sources of capital inflow, but also because of their close links with dominant groups within the domestically resident society.

Despite (or rather, because of) the imbalanced and unequal economic growth pattern of these years, there was a definite improvement in material conditions for a substantial section of the upper and middle classes. Since these groups had a political voice that was far greater than their share of population, they were able to influence economic strategy to their own material advantage. So the local elites and middle classes were not only complicit in the process of integration with the global economy,

but active proponents of the process. This becomes clear even from data on the distribution of consumption expenditure by different fractile groups. As Chart 5 suggests⁶, in the 1990s and until 2002, the urban top 20 per cent of the population (in terms of per capita household consumption categories) experienced increases in per capita consumption which were the most rapid in post-Independence history. The other groups that also appear to have increased per capita consumption significantly were the next 40 per cent of the urban population and the top 20 per cent of the rural population. By contrast, the per capita consumption of the bottom 40 per cent of the rural population actually declined over this same period. Such patterns not only give some idea of the spread of the “gainers” of the economic growth process, but also indicate the political constituency for the liberalising reforms of the 1990s.



Source: Abhijit Sen and Himanshu (2004) based on NSSO, various rounds.

While the neoliberal economic reform programme entailed a changed relationship of government interaction with economy and polity, it was not a “withdrawal of the state” so much as a change in the character of the association. Thus, while the state effectively reneged on many of its basic obligations in terms of providing its citizens access to minimum food, housing, health and education, it was still the case that state actions were essential in determining the way in which markets functioned and the ability of capital to pursue its different goals. Government and bureaucracy remained crucial to economic functioning; in fact the overall context became one of greater centralisation of economic and financial power. Many had believed that a “retreat of the state” and the exposure of the economy to the discipline of the market would cut out arbitrariness of decision-making and the corruption that is inevitably associated with it. What happened instead in the Indian economy during this period of neoliberal structural adjustment was an increase in the levels of corruption, cronyism, and arbitrariness to unprecedented levels. For example, the privatisation exercise became another vehicle of primitive accumulation by private capital as it acquired public assets cheaply. With the wider corruption that increasingly pervaded the system, the “discipline of the market” proved to be a chimera.

6 This chart is based on NSS data. However, data for 1999-2002 used a 30day/365 day mixed recall while the uniform 30 day recall was used in previous years. Data have been made comparable using linking factors from those surveys for which data were available by both recalls.

The increased income inequalities over this period have accentuated certain longer-term structural features of Indian society, whereby more privileged groups have sought to perpetuate and increase their control over limited resources and channels of income generation in the economy. This in turn has involved the effective economic disenfranchisement of large numbers of people, in rural India as well as among the urban poor.⁷ These concomitant trends of greater economic and financial centralisation and increased income inequality in turn operated to aggravate various regional, fissiparous and community-based tensions. While the roots of such tensions are obviously complex, these conflicts both emerged from the prevailing material contradictions and contributed to them.

This situation was neither inevitable nor permanent. The economic context of India in 2004 was one in which the need to rethink, modify and revise at least some of the economic strategy of the recent past, was becoming increasingly obvious. In particular, the supposed emphasis on fiscal discipline, which had not been reflected so much in actual declines in the fiscal deficit to GDP ratios, but in compression of important productive public expenditure with high linkage and multiplier effects, required reversal. The neglect of important policy issues with respect to agriculture could not continue. In addition to greater emphasis on public expenditure with high direct and indirect effects on employment generation, addressing the issue of higher resource mobilisation from the rich had become urgent. Further, it was necessary to counter some of the adverse effects of trade liberalisation on employment, apart from more directly addressing the basic structural issues of asset and income inequality and the persistence of low-productivity employment mentioned above, which remained so significant in the Indian economy.

39.8 SUMMARY

This module considers the political economy configurations associated with changing economic policies in the Indian economy, especially “liberalisation”. While real national income has grown at a faster rate since the 1980s compared to the earlier decades, there has been less structural change than might have been expected. Some features of economic backwardness persist, such as substantial poverty, a high dependence upon agriculture as the largest employer, and continuing underemployment in the economy.

In Independent India, the persistence of asset and income inequality meant that there were definite limits to the expansion of the market for mass consumption goods in the country, so continuous growth in government spending was essential for the growth of the system. This was effective in the first two decades after Independence, but the interventionist regime that was set up in the 1950s had serious internal contradictions. While the state had to increase its own expenditure, it could not really tax the rich and also became the most important instrument for primary accumulation by the domestic capitalist class. By the mid-1960s, the once-for-all stimulus offered by import substitution was exhausted, and government spending could not increase because of the state’s inability to raise adequate resources. In consequence, aggregate growth decelerated leading to the “secular stagnation” of the late-1960s and 1970s.

In the 1980s, the escape from the growth impasse of the earlier period was enabled by an increase in the fiscal stimulus to the economy provided by government spending, financed increasingly by external commercial borrowing. In addition, there was substantial

⁷ By the middle of 2004, the resentment created by these inequalising processes was already finding electoral expression, in elections to the national parliament as well as to several state assemblies.

liberalisation of imports, especially of capital goods and components for manufacturing, which imparted an impetus to final good production based on newly imported inputs.

The neoliberal economic reforms of the 1990s were based on the notion that greater freedom given to private agents and market functioning would ensure more efficient and more dynamic outcomes. The government's aim was also to restructure production towards areas of international "comparative advantage". By the early years of the current century, therefore, the Indian economy had undergone the following policy changes: very substantial reduction in direct state control in terms of administered prices and regulation of economic activity; privatisation of state assets; reduction of tax rates; cutback of public productive investment as well as certain types of social expenditure; trade liberalisation; financial liberalisation; liberalisation of current account transactions; and a significant degree of capital account liberalisation.

The transition to a higher economic growth trajectory was associated in the 1980s with the fiscal stimulus provided by the state in a context of import liberalisation. In the 1990s, liberalisation was not accompanied by any new dynamism in the commodity-producing sectors of the economy, and so the expansion of services proved to be crucial.

While the neoliberal economic reform programme entailed a changed relationship of government interaction with economy and polity, it was not a "withdrawal of the state" so much as a change in the character of the association. But by 2004 the need to rethink some elements of that strategy were becoming increasingly evident.

39.9 EXERCISES

- 1) Analyze the contradictions that paralyzed the interventionist regime set up in the 1950s.
- 2) Why has state spending been so important in sustaining rates of economic growth in the post-independence period?
- 3) Examine the process of economic recovery in the 1980s.
- 4) Critically assess the impact of liberalization on the Indian Economy.

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Notes

M.A. History

List of Courses

Course Code.	Title of the Course	Credits
MHI-01	Ancient and Medieval Societies	8
MHI-02	Modern World	8
MHI-03	Historiography	8
MHI-04	Political Structures in India	8
MHI-05	History of Indian Economy	8
MHI-06	Evolution of Social Structures in India Through the Ages	8
MHI-07	Religious Thought and Belief in India	8
MHI-08	History of Ecology and Environment: India	8

MHI-05 History of Indian Economy

Block-wise Course Structure

- Block-1** : Historiography, Environment and Economy
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- Block 3** : Early Medieval Economy and Its Continuities
- Block 4** : Expansion and Growth of Medieval Economy-1
- Block 5** : Expansion and Growth of Medieval Economy-2
- Block 6** : Trade and Markets
- Block 7** : The Rural Economy
- Block 8** : Craft Production, Technological Change and Industrialization