CHAPTER 1

Introduction
Chapter 1: Approaches to the Study of Early Historic Urbanization

APPROACHES TO THE STUDY OF EARLY HISTORIC URBANIZATION

Urbanization, as an area of specific and intensive study in history has, in recent years, attracted the attention of scholars, all over the world. The growing realization of the necessity to study different aspects of urbanization in different periods of history including contemporary and ancient ones, is due to more than one reason and that too beyond simplistic explanations. Urbanization whether associated with the historical period or earlier phases of human civilization, has often been styled as revolution. V.Gordon Childe, while using the term "revolution", has been himself very much conscious of the limited application of the term, as he clarifies, the word revolution must not of course be taken as denoting a sudden violent catastrophe, it is here used for the culmination of progressive change in the economic structure and social organization.

To Gordon Childe, a city is understood as a socio-economic structure distinct from its rural surroundings and as presupposing an agrarian base of surplus production which in turn was revolutionized from an earlier simple state of agricultural production because of the use of metal technology. Further, it is postulated that the change from self-sufficing food production to an economy based also on specialised manufacture and external trade would constitute the essential pre-requisite for urban growth. Other features that emerged as the outward manifestations of city life are listed as an increase in population, emergence of social and political system, evidence of writing, monumental art, an increase in knowledge of exact and predictive sciences and so on.

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It may be pointed out that various objections have been raised against Childe's use of the word 'revolution'. Mumford thinks that though the term does justice to the active and culturally important role of the city, it does not accurately indicate the process, for a revolution implies "turning things upside down" and a progressive movement away from outworn institutions that have been left behind. Contrarily, "the role of the city", he observed, "so far from wiping out earlier elements of the culture actually brought them together and their efficacy and scope", a process leading to what he terms as 'Urban Imposition', a much happier connotation than the 'Urban Revolution', Childe's coinage

Frankfort thinks that the term connotes a purposeful violent change, which facts do not suggest. Daniel prefers to use the Greek word 'synoecism'. This term is an English adaptation of the Greek word, synoecismus (meaning coming together) cited by Thucydides and meant the union of several villages under one capital city. And in Daniel's view the process of synoecism was "not a revolution but an evolution". Childe himself admits that urban growth process is finally divided into the archaeological sequence, that it is difficult to locate the precise point at which the revolution took place, and that quantity passed over into quality. Childe propounded his views largely on the basis of empirical data on west Asia and highlighted dramatically the technological variables. Though earlier he had equated the processes of becoming civilized with the process of becoming urbanized, he subsequently realized that it need not be so. In the west Asian context itself however new empirical research has made James Mellart raise the fundamental question whether we can determine urbanism only after the dispersal of a metal technology in defining Catal

1 L. Mumford, *The City in History*, London, 1961, p. 31-34
3 The term in our opinion seems to have a considered applicability for the Graeco-Roman city-states, rather than universal one.
5 V.G. Childe, "The Urban Revolution", pp.3-17.
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Huyuk as a Neolithic town\(^1\). In the context of Egypt, J.A.Wilson\(^2\) has gone to the extent of saying, "One may accept the truth in Childe's urban revolution' provided it is understood that it was not 'urban', and it was not 'revolution'.

These controversies may be considered purely academic unless the phenomenon of urbanization is tested empirically and in terms of variables in specific contexts. Childe's use of the term Neolithic revolution and urban revolution is in analogy of the Industrial revolution in England; there was not merely a marked technological expansion in England then, but also a notable increase in population. The two features, which are equally applicable to the period of neolithic revolution and urban revolution.

Childe was one of the first scholars, who attempted to identify some of the characteristic features of an urban centre and thereby formulate its crucial determinants of towns in the form of ten rather abstract criteria\(^3\).

Seminally, Childe's ten criteria are as follows:

1. Increased size and population.
2. Non-food producing population.
3. Divine king and system of taxation.
5. Elaborate bureaucracy.
6. The art of writing and notation.
7. Development of science.
8. New direction to art expression.
9. Long distance trade.
10. Sense of community among craftsmen.

Though not applicable in all the cases and not acceptable by all scholars, Childe's ten criteria form a set of tangible features that characterizes an urban

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\(^3\) V.G.Childe, "The Urban Revolution", p.3-17.
centre to a considerable degree. In the ancient context society was pre-
dominantly rural and rural element was quite strong even within the city walls. Mumford has clearly shown that even the Greek cities of the sixth-fifth century BC were quite close to rural way. This however should not be taken to mean that "the full urbanite antiquity was semi-peasant", as Max Weber suggests. Adams points out that in the long term evolutionary perspective, the growth of cities very closely followed the introduction of agriculture. The relationship between urbanization on the one hand and economic development on the other has evoked a great deal of discussion. But to determine the typology of urban forms, we have to take cognizance of the changing place occupied by modes of economic integration in the society as a whole.

Paul Wheatley (who has worked on the Chinese city) feels that there could be five conceptually distinct, though in practice practically overlapping, approaches to the investigation of urban forms:

1. reliance on ideal type construct,
2. formation of ecological theories,
3. Delineation of trait complexes,
4. conceptualization of city as the centre of dominance and
5. an operational approach usually based on the size of the urban settlement.

Viewed against these approaches, Childe's ten indices to signify the advent of urban forms should be considered delineatory rather than explanatory. Not all the theoretical criteria for determining the urban forms occur in all early cities. The attributes of each have varied from culture to culture.

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1. L. Mumford, *The City in History*, p. 31
In the study of an urban settlement, it should be important to know how its different segments are related to one another. Anuradhapura which was the capital of Sri Lanka for centuries and which in certain respects represented the demarcation of space on the basis of social criteria provides an excellent example of how different segments of a city and their inter-relationship can be studied by historians.¹

In the writings about the history of urban centres one is confronted then by a sea of definitions and possibilities and plagued by a myriad of generalizations about the role of town in society.

Despite the multiplicity of such definitions the concept of the city can be best seen as a unit of a human settlement sharply distinct from a village. The difference between a city and a village is marked by the oldest and the most revolutionary division of labour, between the work in the fields on the one hand and the activities described as urban on the other.² To understand the process of urbanization, it is then necessary to understand what is urban. Though the tradition of historiography on the theme is decidedly rich, the uncertainty is present not only in the context of classical European urban Centres³, but it characterises even 15th-16th century France⁴.

**Approaches to the study of Urbanization in Early Historical India**

Two distinct phases of urbanization in early India have been demarcated. The first and perhaps more readily recognised phase is represented by the planned cities of the Harappan culture, and in several ways the phase stands apart from the historical context which gave rise to the second phase i.e. second

urbanization. The term second urbanization has been used with reference to urbanization of the Ganga basin, to separate it from the Harappan or Indus valley civilization. The major part of the Indian subcontinent remained unaffected by Indus urbanism. Harappan cities were mainly distributed over the Indus drainage system, extending to what Spate calls 'One of the major structure lines of Indian History' namely the 'Delhi Aravalli Axis and the Cambay node'. The literature on Indus urbanism is extensive. The Harappan spread covered the most extensive geographical area as compared to the geographical spread of other Bronze Age civilizations in the ancient world. The urban layouts were not identical in all cases. Even then certain similarities in the Harappan urban features have been noticed. Harappan urbanization reflected a kind of spatial and social organization which would be unfamiliar on such a scale in any other phase of Indian History. The Indus urbanism, however did not continue as a legacy beyond the middle of the second millennium BC. Studies on early historical urbanization have been a relatively new theme in Indian history. Quite understandably, the subject has very few works to offer, compared to proto-historic [Harappan] urbanization. Considering the importance of developments which took place in the south Asian society during the first millennium BC and their relevance for our understanding of the whole subsequent history of Indian civilization, historians and archaeologists have at any rate, until recently devoted surprisingly little


3 B.D.Chattopadhyaya, *The Making of Early Medieval India*, p.158.

attention to them. Several specific themes of early historical urbanization attracted the attention of Indian scholars beginning in the thirties. B.B. Dutt\(^1\) was among the first authors on the subject. He concentrated on the textual evidence, regarding the location layout and planning of the towns as provided by theoreticians like authors of *Arthaśāstra, Mānasāra, Mayamata* etc. Though he has not been successful in explaining the processes of growth of towns and town planning, the value of his work cannot be undermined. The work of Stuart Piggott\(^2\) in the form of a small monograph provides formal acquaintance with some major urban centers, but this is more in the form of handbook than a historical writing. D.D. Kosambi's\(^3\) works are important for the promotion of a broad processual view of the early historical India, but his main concern was scarcely with the significance of the emergence of the cities and their role in the state formation. Amita Ray's\(^4\) work is also not able to achieve its objective. The main theme of the work is town planning and its structural features. An attempt has been made to utilise the archeaological data, yet the basis of the work is contemporary literature, i.e., early Buddhist texts particularly the *Jātakas, the Milindapañho, the Jaina Sūtras, the Agni Purāṇa, Mānasāra* and *the Epics*. U.N. Ray\(^5\) realises the importance of trade in the context of urban growth but he fails to make use of the phenomenon while demarcating the different phases of urban development in early historical India. B.N. Puri\(^6\) has followed the footsteps of Piggott and he has listed the towns more comprehensively (34 in number, including towns of both north and south India). The purpose seems to acquaint readers with major urban centres, but it fails to address any question relating to the emergence and growth of ancient

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1 B.B. Dutt, *Town Planning in Ancient India*. Calcutta, 1925.
Indian towns. V.K.Thakur\textsuperscript{1} has also examined different theoretical and ideological themes relating to the criteria of towns as well as dominant and subordinate forces behind the urban emergence and their relevance in the context of the second urbanization. He has used archaeological as well as literary sources for his work, but he is more inclined towards the use of literary sources.

The study of early historical urban structure was still in its infancy until A.Ghosh's\textsuperscript{2} monograph was published. It was the first major attempt to analyse the multifaceted phenomena of urbanization, in its varied historical dimension. Ghosh has used both literary as well as archaeological sources to establish the different aspects of urbanization. Relevance of vital questions like definition, surplus, origin, criteria, ecology etc. have been examined in the context of second urbanization. Ghosh hesitates to use the word urbanization in the Indian context. To him," in both the periods, the Indus and the early historical, there was no large scale drift to the city, as the word would lead us to expect. The vast population continued to be rural, and nothing altered the predominantly rural character of the land. The glamour of Harappa of the earlier period and Tak\={s}a\={s}ila and Kau\={s}\={a}mbi etc. of the later one should not lead us to forget the essential fact that Mohenjodaro and India has been all along a rural country.\textsuperscript{3}

Dilip Chakrabarti emphasises on the politico-economic dimensions of urbanization in early India. He has used mainly the archaeological data to prove his point. He traces the early historic urban growth to seventh-sixth century BC and it ties up with an important political-cultural phase of the country, covering at least south Bihar, central India, upper Gangetic valley, Indo-Gangetic divide and North-west India\textsuperscript{4}. Theoretically at least there should

\textsuperscript{1}V.K.Thakur, \textit{Urbanization in Ancient India}, Delhi, 1981.
\textsuperscript{2}A.Ghosh, \textit{The City in Early Historical India}, p.73
\textsuperscript{3}Ibid.
\textsuperscript{4}Dilip K. Chakrabarti, “Comments on the concept of Urban Revolution” \textit{Puratattva}, no. 6, p. 34.
be no hesitation in describing the India of this phase and these geographical zones as urban. The political, economic and cultural vicissitudes of the country from the third century BC are largely clear on the basis of textual data alone. To deny an urban status to what Dilip Chakrabarti calls "the primary settlements" of early historic India would in fact mean that the early historic civilizations of India was one which possessed no cities. A close analysis of the archaeological data alone would however warrant a complete negation of this idea. A number of points may be suggested at the archaeological level. First, one may emphasize the physical magnitude of the settlements. As has been noted, a periphery of 3-4 miles, applicable to the walled enclosure only, seems to be common, in the case of major settlements at least. As the corresponding data on the village sites are almost non-existent, it is difficult to discern how this peripheral extent stands in contrast to that of the village sites. But for anyone familiar with both these types of settlements in the field, there should be no doubt that the city sites represented a new scale of physical magnitude beyond the scope of any contemporary village settlement.

The physical magnitude is reflected not merely in the aerial spread but also in cardinal feature of city planning, the rampart and its associated details. It is not that the village may not have a defensive palisade but the city ramparts which have been excavated suggest by their massiveness, constructional care and elaborately laid out gateways, bastion, moats and other defensive measures, that they were meant to defend and mark out a type of settlement whose significance in the social, political and economic landscape was far greater than that of a village.

The excavated evidence is not extensive enough to permit any elaborate inference regarding the different occupational groups and other aspects of the

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2 Ibid, p. 259
3 Ibid., p. 259
social situation in an early historic Indian city. To dwell on only a few pieces of evidence, a shell worker's shop has been excavated in the Bhir mound at Takṣaśila. The evidence of bead industry is explicit in Ujjayinī. There is a goldsmith's shop in Nagarjunakonda. Arikamedu yields some evidence of dying of cloth. A house in Bhita has been called 'a house of guild' on the basis of a locally found inscribed terracotta seal.

Quite a number of antiquities from different settlements (cf. Takṣaśila, Arikamedu, Nagarjunakonda etc.) suggest foreign trade. The discovery of large numbers of coins in the city sites, may also be indicative of their general economic prosperity. What is highly suggestive is that some of the early coin types of India have in fact been grouped after the names of different cities whose good economic conditions were responsible for their circulation. It is precisely in this context that epigraphical data, also a kind of archaeological record, are more helpful. To take only a few instances, the early inscriptions from Mathurā refer to occupational groups such as bankers, ironmongers, dyers, perfumers, workers in metals, goldsmiths, actors, dancers and courtesans. The Sanchi inscriptions and inscriptions from Bharhat, Kanheri, Amaravati, Karle etc. considered as a whole, the archaeological data are suggestive enough of economy and diversity centered in the cities of early historic India.

2 *LAR*, 1957-58, p.27.
6 See above references nos., 17,18,19.20 & 21.
The issue of Iron Technology and movement towards urbanism

Use of iron technology resulting in surplus production is originally suggested by D.D.Kosambi\(^1\) and further extensively by R.S.Sharma\(^2\) as a fundamental factor which ultimately led to the birth of urbanism in north India. On the basis of archaeological evidences several important questions relating to the advent of iron in India have been raised. When, where and wherefrom did iron first appear in India? To what extent the diffusion of iron technology in north India may account for the growth of urban settlements from C.600 BC, characterized by development of trade, diversification of art and craft, the spread of NBP delux ware and the earliest use of coins? There is some controversy regarding the beginning of use of iron in ancient India. Though the term ayas often taken in the sense of iron figures in the \textit{Rg Veda}, it is difficult to prove the existence of iron tools on the basis of archaeological findings prior to 1000 BC. In the Ganga basin, although it is being claimed recently that it can date as early as 1300 BC. N.R.Banerjee\(^3\) considers the beginning of iron as early as 1000 BC which became more frequent around 800 BC. Excavations at Noh and Jodhpur (Rajasthan), at Bhagwanpur and Dadheri (Hāryana), Atranjikhera, Lal Quila, Jakhera (U.P.), yielded PGW and iron during the period 900BC-500BC\(^4\). In the middle and the lower Gangetic plains, iron makes its first appearance at the end of Chalcolithic age in around 800 BC\(^5\). The PGW and Black and Red ware assemblage with iron was followed by NBP ware with iron assemblage which is often characterized as the cause for the emergence of the second urbanization in India\(^6\).

\(^3\)N.R.Banerjee, \textit{Iron Age in India}, Delhi, 1965
Kosambi was the first scholar to make the assertion that extensive forest clearance and agrarian settlement would not have been possible in the Ganga plains without the use of iron. Archaeologists have been exploring the connection between the introduction of iron technology, settlement patterns, and political development in northern India. R.S. Sharma is of the opinion that on the basis of the iron objects that have been discovered so far in the Punjab, Haryana, western U.P. and the adjoining areas of Rajasthan in the levels belonging to c.1000-500 BC, their use in handicraft and agriculture on any considerable scale cannot be postulated. In this phase only arrowheads and spearheads supplemented by nails have been encountered; axes, hoes sickles are rare, and ploughshares are almost absent. PGW-iron period was therefore primarily an age of iron weapons and not of iron tools for productive purposes. Pre-Mauryan texts however, refers to iron tools meant for craft and agriculture.

The term ayanarigala or iron is mentioned in a later Pali text. In the prose introduction to a sutta of Suttanipāta we hear of Phāla or share being heated the whole day and making a sound when placed in water. However ayokuṭa or hammer is known to the verse portion of the Suttanipāta, an early Pali text and Pāṇini. Iron ploughshares called ayovikāra Kuṣṭī appears in Pāṇini. Iron ploughshares also seem to have been necessary for growing sugarcane which is attested as common crop by early Pali texts and Pāṇini speaks of a forest of wild sugarcane. We have no dearth of literary references to iron tools meant for craft and agriculture in pre-Mauryan texts. The difficulty

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1 D.D.Kosambi, An Introduction to the Study of Indian History, Bombay, 1956.
2 R.S.Sharma, Material Culture and Social Formations in Ancient India, Delhi, p.60.
4 Kokalika Sutta, R.S. Sharma, Material Culture and Social Formations in Ancient India, p.60.
5 Ibid.
6 Ayoghana, in the sense of an iron club, occurs in Udana, p.93 quoted s.v. ayoghana, Pali-English Dictionary.
7 V.S. Agrawala, India as known to Pāṇini, p.224
8 Panini, IV.1.42; cf.V.S.Agrawal, India as Known to Pāṇini, p.224
10 The term used is iksuvana in V.S. Agrawala, India as Known to Pāṇini, p.48
however is created by the fact that the literary references are not matched by archaeological discoveries of tools belonging to the PGW phase. Though earlier R.S. Sharma was a little skeptical about the use of iron tools in the PGW phase\(^1\) but later on formulating his theory on the basis of literary data he indicates that the iron tools played important role in the increase in the production, but the moist nature of soil must have led to oxidization of iron tools due to which the tools could not have survived for long period of time\(^2\).

N.R.Ray points out that more agricultural tools of the NBP phase have been found in Taxila than in other sites of northern India\(^3\). Sharma attributes this preservation of tools to the dry soil of that area\(^4\). N.R.Ray addressing himself to the problem of the significance of iron technology, doubts whether either the utilization or standard of iron technology before the fourth c. BC was of a level which would bring about significant changes in society and economy. He doubts whether full fledged urbanism in north India can be dated to pre-Mauryan times. When iron began to be used in the PGW horizon, there were few iron implements for tillage or tree felling; and even in the subsequent NBP ware horizon, there are few known ploughshares and socketed axes. So he objects to ‘iron-productivity-surplus-state’ equation. He points out that for PGW and NBP horizons, it is the importance of iron weaponry which is discernible. Those \textit{janapadas} who were able to command greater iron resources or a more efficient weaponry would have had advantage over others\(^5\).

Dilip K. Chakrabarti sees no major changes in crop choice between the Chalcolithic and NBP phases in northern India. To him, if iron was in use on

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\(^1\) R.S.Sharma, \textit{Material Culture and Social Formations in Ancient India}, p.60
\(^2\) Ibid, p.93-94.
\(^3\) N.R.Ray “Technology and Social Change in Early Indian History, a note on posing a theoretical question”, \textit{Puratattva}, no.18, 1975-76, p.135.
\(^4\) R.S.Sharma, \textit{Material Culture and Social formations in Ancient India}, p. 94.
the Ganga plains centuries before the proliferation of settlement and Urbanism, iron technology could not have been a casual factor in urbanism\(^1\).

There appears to have been no particular point from where iron technology diffused and this might support the idea that it came to be used gradually in different regions. The earliest iron objects were weapons and are generally dated to the earlier half of the first millennium BC. Axes and other iron implements became more common later. There has been questioning of the theory that the clearing of monsoon forests of the Ganga plain was dependent on iron technology and that this was a crucial factor in the emergence of urban centres in this region. Makhan Lal also argues against the overemphasis on the significance of iron. Using quantified data from his explored region of Kanpur district, he shows that the mean size of NBP ware using settlements was small, and that only a few large sites were located on the Ganga. He works out that the average distance between neighbouring settlement was nine kilometres and on this basis he computes population sizes and thus land requirements and infers that large scale cutting of vegetation would not have been required for subsistence agriculture in this period in the upper Ganga plains. The theory that iron technology led to production of agricultural surplus which in turn transformed tribal societies into state system and provided the base for urbanization is viewed by Makhan Lal with a good deal of scepticism\(^2\). Some of the literary sources seem to point to the clearing of land by burning forests as is so vividly described in the burning of the Khandava-vana, in the *Mahābhārata*\(^3\). The use of an iron ploughshare which, it has been argued, would have been a major technological change in agricultural production, especially in the middle Ganga plain\(^4\), seems to be of later date and is referred to

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\(^2\) Makhan Lal, *Settlement History and Rise of Civilization in Ganga-Yamuna Doab,(From 1500 BC to 300 AD)*, Delhi, 1984, p. 87

\(^3\) *Mahābhārata*, 1.19

\(^4\) R.S.Sharma, *Material Culture and Social Formations in Ancient India*, p. 60
in the Buddhist texts. There remains a controversy as to whether references to krṣṇa ayaś in Vedic texts are to iron\(^1\). The significance of the use of an iron ploughshare in changing the economy of many parts of northern India has become a controversial question\(^2\). Clearly iron technology did have an impact on those activities where metal artifacts were used and therefore, on economic production. But whether a single technological change, even if it is major is enough to produce the kind of surplus required for a qualitative change to a state system, is doubtful. The transition to state is a complex procedure which cannot be explained by a change of technology alone\(^3\).

Some aspects of Early Historic Urbanization

Periodization

The second urbanization in India begins around the sixth century BC. Dilip Chakrabarti\(^4\) divides the historic urban growth in India into three phases. The first phase corresponds to the sixth-fifth century BC, beginning primarily along the belt stretching from Champa and Rājagṛha through Ujjayinī and Kauśāmbī. This soon includes the upper Gangetic divide. This was also a period when the Achaemenid annexation of the North-west might have given rise to an urban nucleus there, though Ghosh\(^5\) and Thakur\(^6\) do not agree with this. The next phase in his view\(^7\) covered third-second c. BC and its basic importance perhaps was that during this period many new regions came to develop or were about to develop a clear and unmistakable urban base. These new regions consisted of the Punjab plains, Sind, Lower Ganga valley, Rajasthan, Gujrat, Maharashtra and Orissa. Chakrabarti also calls this phase as

\(^1\) Romila Thapar, The First Millenium BC in Northern India, p. 90, in idem (Ed), Recent Perspectives of Early Indian History, Bombay, 1995.
\(^2\) Idem, Ancient Indian Social History, Some Interpretations, Delhi, 1978
\(^3\) Idem, “The First Millenium BC in Northern India”, p.911.4.
\(^5\) A.Ghosh, The City in Early Historical India, p.70
\(^6\) V.K.Thakur, Urbanisation in Ancient India. p.47
\(^7\) Dilip.K.Chakrabarti, “Concepts of Urban revolution in Indian Context”, p.247
"twilight period of the early history of Mysore, Kerala, Madras and Andhra. The third and final phase of urban growth, according to Chakrabarti's periodisation seems to have developed in early centuries of Christian era, which was characterised by a general urban prosperity throughout the subcontinent.

The earliest fortified urban settlements were Rājagṛha, Vārāṇasi, Kauśāmbi and Ujjayinī. The beginning of none of these fortifications is very precisely dated but all of them decidedly go back to about 600 BC. Many of the Mahājanapada cities are also referred to in the earliest stratum of Buddhist texts, the Suttas. Here they are often linked with the states of which once they were capitals, Rājagṛha the earlier capital of Magadha, Śrāvasti capital of Kośala, Vārāṇasi capital of Kāsi, Kauśāmbi capital of Vatsa, Ahichchatra capital of Pancāla, Mathurā capital of Śūrasena, Vaiśali capital of the Vṛjīs, etc. They are referred to sometimes as nagara or mahānagara or even as Rājadhāniya nagara. There are often references to wall or ramparts (Prākarā) and to moats (Parikhā) as features of the cities. The description of the construction of forts and administrative centres in Kautilyas Arthasastra also refers to the excavation of moats and the use of soil so obtained to throw up rampart. He describes that the construction of rampart (vapra) would be made out of the dug out earth from moat (Parikhā). The parapet (Prākarā) should be built of bricks, or stone blocks, but not of wood for fear of fire and must allow the movement of chariots (rathāchāryasaṅchāram). Though there is uncertainty regarding the date of this text, there can be no doubt that it refers to a process very similar that can be inferred from the archaeological sites. There appears to be a broad consonance between the archaeological and literary evidence.

1 Ibid.
2 Ibid.
3 Ibid.
4 Anguttara Nikāya, I.213.IV.252.
5 Arthasastra, II, 3,7-10.
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Criteria for Urban Centres

(i) G. Erdosy\(^1\) has taken hierarchy of settlements to reflect hierarchy of functions of individual settlements and propounded it as a criterion for identifying urbanization in the Ganga Valley. To him, “the role of cities in maintenance of society has a strong spatial component, both the spatial relationship of sites to each other and their location in physical landscape will help in delineation of site functions”.

According to him, "to look at cities in isolation from their hinterlands will not help in the understanding of their origins and functions. It will not be able to demonstrate their existence, since to do so we must contrast cities with contemporary settlement types of lesser complexities\(^2\)."

Based on a survey of the region Vatsa (Allahabad district), and the excavation reports he revealed that (a) all urban settlements were concentrated in a small area in the heart of the state, the overall pattern of settlement is best visualized as the aggregate of linear patterns along the major rivers draining the area, e.g. Kara is 30 kilometres from Sringaverpur which in turn is 35 kilometres from Jhusi, (b) after the initial period of agglomeration the population of the largest settlement and of the villages at the bottom of hierarchy grew rapidly at the expense of towns and minor centres (c) differentiation based on size was accompanied by a clear delineation of functions, with larger sites serving all the functions of the smaller ones in addition to their own unique roles. Villages averaging 1.5 to 2 hectares in area existed to house agricultural producers, above them sites of 3 to 5 hectares were assumed to be marketing centres, based on their locations, minor centres of 6 to 10 hectares were centres of craft production, towns of 20 to 50 hectares participated in trade and redistribution, while the capital city not only performed all the functions already listed, but

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\(^2\) Ibid, p. 22
also supported large religious establishments, elite residences and civic/ceremonial structures such as the audience hall of Pataliputra.1

(ii) Although the urban centres are mentioned in literature and other written records, the focus on early Indian urbanization, has been on urban centres as archaeological sites, and in archaeological context, the difference between urban and non urban may imply a corresponding difference in the structure of settlements. B.D. Chattopadhyaya2 refuses to accept the presence of hierarchy among the settlement sites propounded by Erdosy as the sole criterion for urbanization. Chattopadhyaya emphasises that “since the size of a settlement site cannot by itself suggest either urbanism or its urban/non urban character, one way of looking at the problem, in a situation where some information is available on the structure of a settlement, is to examine whether space in the settlement is differentiated and heterogenous. A settlement site in order to qualify as an urban centre, must have in addition to residential buildings, space utilized in other ways: for construction of roads, artisanal areas, religious shrines and community spaces of other types and so on. An archaeological site however imposing it may have been, cannot be treated as an urban centre, if it reveals only one dominant function. Nalanda of Gupta and post-Gupta period cannot be regarded as an urban centre, but Takṣaśila of north-west can certainly be regarded as one.3

The third and final point proposed by Chattopadhyaya is that a complex of mounds, constituting a single site, can further figure in what may be called a "settlement locality" constituted by a series of sites in a micro region. Such a cluster of settlements in which some evidence of cultural homogeneity may be found constituted a habitat sphere larger than a single urban centre. Early historical Mathurā in upper Ganga basin may be considered an appropriate

1 Ibid, 148-149.
3 Ibid.
example of this\textsuperscript{1}. The nodal point or points in such settlement clusters can be expected to reveal features of urban centre/centres, the nodality of the points being ascertainable in terms of their size, settlement structure and character as well as linkages across space\textsuperscript{2}.

**Types of Urban Settlements**

The word \textit{Pura} is frequently mentioned in the \textit{Rg Veda}\textsuperscript{3} and \textit{Mahāpura} in Later Vedic texts which probably denoted the fort rather than township as such. For the first time the word \textit{Nagara} used for referring to town in a more specific sense appeared in the Later Vedic text, \textit{Taittirīya Āranyakā} \textsuperscript{4}. Possibly it was the vital stage of politico-economic changes, when settlement in the form of towns had just sprouted with urbanism still in its infancy. Archaeologically, some upper Gangetic sites of the P.G.W. phase, such as Atranjikhera, Mathurā and Jakhera may be identified as representing this stage\textsuperscript{5}. We also hear of \textit{Nagaraka, Mahānagaraka} and \textit{Rājadānī} \textsuperscript{6}. Agganagaram and \textit{Putabhedanam} are the names given to Pataliputra in literature\textsuperscript{7}. The \textit{Arthasastra} \textsuperscript{8} speaks of the term \textit{Nigama} which is also mentioned in Pali texts\textsuperscript{9} denoting market town.

We may take into account the types of the sites that have been excavated so far. Administrative/commercial/craft/or religious centres such as Campa, Vaiśali, Rājagṛha, Ujjayinī, Vārāṇasi (Rajghat), Kauśāmbi, Sringaverpur,

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\textsuperscript{2} B.D.Chattopadhyaya, “Urban Centres in Early Bengal: Archaeological Perspective”, p. 170-171.

\textsuperscript{3} A.A.Macdonell and A.B.Keith, \textit{Vedic Index}, Delhi,1982

\textsuperscript{4} \textit{Taittirīya Samhita}, VI.2.3.1, \textit{Aittiriya Brahmana}, I.23.2, cited in R.S.Sharma, \textit{Material Culture and Social Formations in Ancient India}.

\textsuperscript{5} S.K.Jha, \textit{Beginnings of Urbanization in Early Historic India}, Patna,1998, p.197

\textsuperscript{6} \textit{Dīgha Nikāya}, ii,87-8

\textsuperscript{7} Ibid

\textsuperscript{8} \textit{Arthasastra}, II. 3.3

\textsuperscript{9} \textit{Anguttara Nikāya}, I, 178.
Sravasti, Mathurā, Allahabad etc. have been excavated so far. Around the sixth-fifth century BC most of the early cities of north India did function as centres of political power, yet this feature does not necessarily imply that every fortified settlement and every urban settlement was the hub of centralised power-structure. Pali literature mentions that during the time of the Buddha many places like Alāka (also read as Mulāka), Gorapadha, Vidiśā, Vanasahvya, Sāketa, Setavya and Bhoganagara were only market towns and not the headquarters of any centralised power. Similarly Veranja, Sankasya, Soreya and Prayāga Pratiṣṭhāna (Jhusi, near Allahabad) situated on trade routes were also commercial towns or townships¹.

The second phase of urbanization reveals stages of internal growth and of horizontal expansion. The distribution of two new and critical cultural traits, namely a multifunctional syllabic script and coinage which are associated with this phase, serves as an effective indication of the geographical spread of urbanism². Although the Brahmi and Kharosthi scripts emerged together, for the major part of India it was Brahmi which was in use. The factor adding substantially to the internal growth process was an enormous expansion of trade networks in the period when India’s early contact with central Asia and the Roman world reached its peak³. The field of trading activity in around sixth-fifth century BC covered a much larger area than the political limits of individual kingdoms. Trade, the trading groups and the extensive trade network

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¹ Suttanipāta, Vathugātha, 36-38.
² B.D. Chattopadhyaya, The Making of Early Medieval India, p.159
³ For general survey of the trade networks of this period, the following works may be consulted: G.L. Adhya, Early Indian Economics (Bombay, 1966); E.L. Warminghton, The Commerce between the Roman Empire and India (Cambridge, 1928); REM Wheeler, Rome Beyond the Imperial Frontiers (London, 1954); P.H.L. Eggermost, “The Murundas and the Ancient Trade Routes from Taxila to Ujjain”. Journal of Economic and Social History of the Orient, Vol.9, (1966), p.257-96; B.Srivastava, Trade and Commerce in Ancient India (from the earliest times to AD 300), Varanasi, 1968; H.Chakraborti, Trade and Commerce in Ancient India, Calcutta, 1966; D.N.Jha, Studies in Early Indian Economic History, Delhi, 1980; H.P.Ray, “Early Historical Trade—An Overview”, Indian Economic and Social History Review, 26, 4, 1989; H.P.Ray, Trade and Contacts, in Romila Thapar, ed, Recent Perspectives of Early Indian History: Bombay, 1995
of the period served as a major factor in accelerating the process of urban growth. The system of issue of and circulation of earliest currency in India, viz., the punch marked coins were in conformity with this kind of economic structure in which the network of commercial exchange was initially more extensive than the territorial limits of emerging states.

The urban growth in India during the early historical period is not to be merely interpreted in terms of the emergence of townships in the Ganges valley or elsewhere, it is also to be understood as an economic phenomenon which transformed the barter based rural economy of a vast area and inter linked it gradually with the international trade exchange structure of those days.

Emergence of townships or cities in North India has been generally taken as a fundamental trait for the cognizance of historical change, and various factors like surplus yield\(^1\) and growth of centralised power structure\(^2\) have been suggested for the rise of urbanism. A question may be raised as to why urbanization in its initial stages was confined only to certain specific areas of the subcontinent.

Besides, what exactly were the distinct traits of a city around sixth-fifth century BC? The remains of the so called earliest historical cities\(^3\) exposed by archaeologists show traces of neither marketplaces nor of shops and monumental buildings. Even fortifications are not available in majority of cases. Further, in the light of available archaeological data, it is not possible to verify whether the early cities in all cases were pre-dominantly non-agricultural.

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1 R.S. Sharma, Material Background to the origin of Buddhism, p. 61; A. Ghosh, *The City in Early Historical India*, p. 88
2 Dilip K. Chakrabarti, "Theoretical Aspect in Concepts of Urban Revolution in Indian Context," p. 31
3 References of cities and municipal organisations are found in Buddhist literature, in the *Kautiya Arthasastra* and in the Epics and a graphic picture of the planning and layout of an early Indian city is given in *Milindpath* (1,34 and 330); SBE XXXV, 53, XXXVI, 208-9). It speaks of a city, fine and regular, measured out into quarters with excavated moat and ramparts about it, with gate, houses and towers with market places, cross roads, with regular lines of open shops, well provided with parks, lake gardens, lotus ponds and wells adorned with many kinds of temples of God, free from every fault standing in all its glory.
in population especially in view of references in early Pali literature to prosperous *gahapatis* or householders who have been regarded as a land owning nobility by Fick\(^1\). Possibly on this account it may not be proper to style important early historical settlements like Vaiśali, Rājagṛha, Vārānasi, Śrāvasti, Kauśāmbi, Mathurā, Ujjayinī, Takṣaśila etc. in the initial stages as fully developed cities.

Two other aspects of contemporary urban centres need attention:

1) Most of these excavated sites have yielded art objects in varying quantities from the Mauryan and the Śaka-Kusāṇa period. Besides, as the donative records from many sites indicate, the city dwellers contributed to the making of contemporary Buddhist Stūpa which in their engraved scenes reflect adequately the art tradition of the period\(^2\). What is relevant here is that the art tradition of early historic India furthered the growth of urbanization, as art objects were traded from one place to another\(^3\).

(2) Early historic urban centres were religious centres.

Buddhism and Jainism seem to be closely linked with the urban centres and urban occupation groups like merchants etc. The location of important Buddhist complexes within easy reach of the cities or along the trade-routes frequented by city merchants amply corroborate this. In fact, Max Weber's assertion, "Like Jainism, Buddhism also presents itself as a product of the time of urban development, of urban kinship and the city nobles"\(^4\) is clearly borne out by archaeological data. Brahmanism too was linked to the urban centres as Jainism and Buddhism.

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\(^1\) Richard Fick, *The Social Organization in North East India in Buddha's Time*, Calcutta, 1932, p.253

\(^2\) A.K. Coomaraswamy, *History of Indian and Indonesian Art*.

\(^3\) See chapter on Economy which deals with movement of articles from one place to another.

Chapter 1: Approaches to the Study of Early Historic Urbanization

The case of Mathurā: Sources and themes

The study of urbanization in early historical Mathurā needs to be located within the framework of early urbanization in the entire subcontinent. It cannot be viewed as a phenomenon unique to the region alone. As mentioned before, the early historical phase of urbanization had its genesis in middle and upper Ganga basin. Mathurā was a part of the upper Ganga basin. The early history of an individual city Kauśāmbi has been dealt with by N.N. Ghosh. More recently contributors to a volume on Mathurā, entitled Mathurā: A Cultural Heritage, edited by D.M. Srinivasan (1989) have explored in some detail the historical background, society and economy, religious sects, numismatics, archaeology, language and literature, epigraphy, art and iconography of Mathurā, but the volume however lacks detailed treatment on the evolution of Mathurā as a city.

The major issue of importance is the general limitation of the work done on the urban settlements themselves. Most of the early historical major sites appear to have a core area constituting the bulk of urban settlement which is surrounded by a wide belt of almost exclusive rural settlements. Urban prosperity depended on them. But it would be unfair to suggest that all the cities of early historical times were to be put into one bracket of agro-cities. The city of Mathurā seems to present an interesting departure from the general pattern.

Sources for the study

In dealing with the sources of early Indian history H.C. Raychaudhuri observes, "No Thucydides or Tacitus has left for posterity a genuine history of ancient India. But the patient investigations of numerous scholars and archaeologists have opened up rich stores of material for the reconstruction of ancient history of our country." Mathurā has been focus of attention for historians/ archaeologists for many years. It has a vast corpus of material to be analysed as well as Mathurā figures in the literature too as an important city.

1 H.C. Raichaudhari, Political History of Ancient India, p.1
The literary evidence relating to the early phase of Mathurā comes from the traditional accounts as given in the Vedic literature, the Epics, the Purāṇas, and the Buddhist and the Jaina sources, Pāṇini's Astadhyāyi, and Patañjali's Mahābhāṣya and from the accounts of the foreign authors such as Megasthenes.

The Vedic texts which provide evidence are the Rg Veda and what is generally termed as Later Vedic Literature (i.e. the Sāma, Yajur and Atharva Vedas together with their associated texts, the Upanishads, the Brāhmaṇas and Āryayakas). But Vedic literature makes no mention of Mathurā nor its variants such as Madhura. Yadu as a clan is mentioned in the Rg Veda, but Yādava association with Mathurā is not mentioned. The Śūrasenas, later associated with Mathurā, are also not mentioned in Vedic literature. The term Sura has been interpreted in some instances, in the sense of a warrior or a hero. The name Kṛṣṇa occurs for various teachers but none have pastoral association.

This absence of early textual reference to Mathurā and its inhabitants has to be carefully examined and further analysed in the light of later literary references to reconstruct the hypothesis of the Yādava association with Mathurā.

The Buddhist Pali texts which reflect socio-economic changes with certain fundamental ideological transformations, are very relevant from our point of view in identifying the features of urbanism. Of these the Vinaya and its Suttas throw light on the state of affairs at the time of Buddha. The Vinaya Pitaka and the Digha Nikāya were compiled before the middle of the third century, as certain Sutta texts in them are mentioned in the Aśokan edict (Bhabru). The Jātakas are also valuable source for the socio-economic history of Mathurā.

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1 A.A.Mcdonell and A.B.Keith (ed.) *Vedic Index*, vol. II, Delhi, 1967, p.185
2 Ibid. vol. II, p. 392.
Though not forming the earliest statum of the Pali literature, the substantial part of it nevertheless, was being compiled during the early historical period.\(^1\)

The two grammatical treatises, Pāṇini's \textit{Aṣṭadhyāyi} and the commentary on it by Patañjali known as \textit{Mahābhāṣya} corroborate many of the socio-economic features reflected in the Buddhist literature. The \textit{Arthaśāstra} is a highly relevant non-religious source material, dealing with the social, political and economic history from the fourth century B.C. to second century A.D., though there is controversy regarding the date of compilation of \textit{Arthaśāstra}.\(^2\)

The two Epics, the \textit{Mahābhārata} and the \textit{Rāmāyana} are quite evidently compiled at various periods and even the critical editions of both admirable as they are, have not been able to prune the texts to the original and approximate epics.\(^3\) The \textit{Mahābhārata} links the region of Mathurā with the Yādavas and Śūrāsenas and the Andhaka Vṛṣṇi tribes. The \textit{Rāmāyana} too links the city with the Yādavas and the Śūrāsenas.

Though some scholars are divided in regard to the genuineness of the historical data supplied by the Puranic texts, others are inclined to regard the Puranic accounts as genuine and substantially trustworthy. They are sometimes corroborated by other works. For instance, the founding of the city of Mathurā is mentioned in the \textit{Viṣṇu Purāṇa} and the \textit{Bhāgavata Purāṇa} and is corroborated by the \textit{Rāmāyana}. Similarly, the \textit{Vāyu Purāṇa} and the \textit{Brāhmaṇa Purāṇa} mention the Nāga kings of Mathurā which is corroborated by the fact that substantial evidence of Nāga presence has been discovered in Mathurā. Thus it is abundantly clear that not withstanding the defects, gaps and errors of various kinds, the \textit{Purāṇas}, when properly collated and carefully compared

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\(^1\) S.K. Jha, \textit{Beginnings of Urbanization in Early Historic India}, p. 9-10.


with other sources, non-Puranic, literary and archaeological, yield information which though fragmentary, incomplete and disjointed, is historically important.

Mathurā finds place in the accounts of the Greek and Latin writers i.e. Arrian and Megasthenes in the Mauryan period, Pliny and Ptolemy in AD first-second century, Fa-hien and Huen-Tsang in AD fifth and seventh century respectively. Though they were not written from any historical angle they are valuable source material for the reconstruction of the socio-economic history of Mathurā.

The archaeological sources are more likely to give us more accurate information, especially in terms of chronological and material content. Early explorations and excavations and a series of further excavations from 1973-77 at Mathurā and during 1967-69 at Sonkh give us information of the aspects of social transformations, which the problem of settlement pattern essentially relates too. But the archaeological sources too have got their own limitations. Due to the absence of horizontal excavations, we do not get clear pictures of the most crucial issues pertaining to town planning, settlement pattern, demographic profile and the possible pattern of interaction in between different social groups living in the same settlement. The other problem is that the major bulk of excavated materials of Mathurā remain inaccessible to us in the absence of detailed publications of excavation reports. The only consolation is the excavation report of Sonkh which has been published by H.Hartel.

An imposing series of epigraphical records of great palaeographical, linguistic and historical interest has come to us mainly from early historical Mathurā. There is no inscription referring to the Mauryan existence in Mathurā, but the Mathurā inscriptions have supplied the dates for the Śakas and the great Kusāṇa rulers of India, and thus enabled us to fix their order of succession and the approximate duration of their reigns.
To anyone familiar with the epigraphic material bearing on Kuśāṇa rule in India, it is well known that the largest concentration of epigraphs containing the names of Kuśāṇa rulers is found in Mathurā. This fact is obviously of great political significance. Śaka-Kuśāṇa period epigraphs have been found in large number in Mathurā in the excavations. The inscriptions of Mathurā are mostly engraved on stones and occasionally betray serious errors, which sometimes have rendered the interpretation of the texts difficult. Sometimes the inscriptions are found in a damaged condition making it impossible to restore their contents; sometimes there is difficulty in deciphering illegible passages occurring in inscriptions thus giving rise to a series of speculations on their restoration and interpretation.

In spite of all these shortcomings it has been possible to derive substantial evidence on the (i) succession of the rulers in Mathurā, (ii) nature of professional groups residing in the city mainly during the Śaka-Kuśāṇa period (iii) list of territorial and administrative units in the region, (iv) list of Buddhist Vihāras, (v) various Jaina social divisions and (vi) various religious groups existing in Mathurā.

Discovery of many images and architectural fragments in stone, of a devakula and of Vihāras and Stūpas in Mathurā and Sonkh, belonging to different sects, brings to light the range of religious beliefs, practices and institutions in the area concerned. These images and sculptures, provide us with information concerning the thoughts, aspirations, activities and life pattern of the common and upper class people. But the picture we get of society, based on architectural and sculptural evidence is not adequate for the specimens of architecture and sculpture that have survived till date are of religious nature, while those that may be termed as secular may have been built or carved on perishable materials and have mostly succumbed to the ravages of time. Second, since most of these architectures and sculptures are undated, any suggestion based on stylistic grounds alone in regard to chronology will never be certain. Third,
while carving a figure and depicting scenes of mundane life, the artists have often sacrificed naturalism for the sake of embellishment or ornamentation, thus rendering our task more difficult.

Literature and archaeology as sources for the study of the early historical period have both their advantages and limitations. But the actual problem lies in discrepancy found between the pictures that we get out of inferences drawn from the two sources, which may not be mutually compatible. So here we have given emphasis on the archaeological sources and have compared them with literature. We have tried to fill the gap between the inferences drawn from literature and the archaeological data by integration of the two, where possible.

Mathurā was geographically divided into two parts – cis-Yamuna and trans-Yamuna tracts. Cis-Yamuna tract was fertile but it was not capable of raising substantive agricultural surplus for the population of Mathurā as well as trade. Trans-Yamuna tract was a pastoral region. Mathurā appears to have thrived on transit trade. It emerged as a nodal point where several important overland routes converged. The excavated materials do not admittedly tally with the glorified accounts of sites in Buddhist texts, one has to take into serious consideration the emergence of a large number of non-rural settlements where people earned their livelihood by various professions other than cultivation. Mathurā had the advantage of being situated on a navigable river Mathurā was, as mentioned earlier, one of the craft and commercial centres of the time and also the political headquarters of the Śūrasena Mahājanapada.

In Mathurā, reference to the social background of different individuals indicate a kind of urbanism where patrons of religious and cultural activities rarely referred to their varṇa affiliations but indicated their occupational standings. This may be illustrated by a number of donative records of the early centuries

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1 For details see in Chapter II, Geography of Mathurā.
2 Moti Chandra, *Trade and Trade Routes in Ancient India*, Delhi, 1977, p.5.
3 *Anguttara Nikāya* mentions Mathurā as a capital of Śūrasena Mahājanapada, 1.213; IV.252.
of Christian era, when donors almost invariably recorded their occupations/professions, but very rarely their caste status\(^1\), though it violated the orthodox Brahmanical norm. At Mathurā the majority of the population, especially the residents of the city as well as the residents (monks) of the monasteries, were not directly involved in production. The items they consumed came mostly from outside. Does it mean that Mathurā would fall in the category of a "Consumption city"? Mathurā's resources were derived mainly from trade and commerce. So it cannot in all fairness be marked as a consumption city of the classical type to which Hoselitz\(^2\) applied the colourful label "the parasitic city", a city which hampered the development of the surrounding hinterland by draining it of its resources. Mathurā like Anuradhapura was not a 'parasitic city', but a city, which encouraged the development of craft, trade and commerce.

Evidence of the existence of various professionals from the inscriptions of Mathurā suggests that there must have been several satellite settlements of craftsmen including not only carpenters, potters and brick makers, but also lapidaries who by processing and adding value to precious stones from the interior of the country produced commodities of high value meant for circulation within the prestige sphere in the local economy and for export.

With the availability of a vast corpus of source material, literary as well as archaeological, the Mathurā region thus affords excellent opportunity for investigating the evolution of Mathurā as a city. Mathurā as a site corresponds to a complex of mounds, can actually corresponds to what may be called 'a settlement locality'\(^3\). Donative records reveal that the donations were made for Vihāras, religious shrines, Stūpas, tanks gardens, roads and community space

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1 See chapter on Economy, List of occupations.
3 For the use of this idea see B. D. Chattopadhyaya, "Urban Centres in Early Bengal: an Archaeological Perspective, *Pratna Samiksha*, no 1 & 2.
for other types and so on.\(^1\) Also in archaeological excavations, Katra has been identified as a market place.\(^2\) The excavations at Mathurā during the four seasons (1973-77) reveal that the settlement started in sixth century BC and became substantial by 300 BC. Coins and inscriptions and archaeological remains show that Mathurā became an important centre in the first century AD. This is attested by brick structures and roofing tiles, fortifications etc.\(^3\)

The urban dimensions of the region of Mathurā appear to been quite extensive, if we consider the distribution of Mathurā mounds, which if Sonkh is an indicator, where habitational units are with both secular and non secular contents. The mounds, some of which may have been located across the Yamuna on its left bank, suggest that the urban settlement of Mathurā was not nucleated\(^4\). This would imply that the urban settlement of Mathurā had come to develop a numerous foci. Lastly, it would be difficult to treat early Historical Mathurā in terms of a single chronological span, and the various aspects of the city have to be seen from the perspective of thematic and chronological change, such as settlement pattern, social, economic and political history. These are some of issues relating to early historical Mathurā that we are going to discuss in the chapters which follow.

\(^1\) It has been discussed in the chapters IV and V.
\(^2\) See IAR; 1973-77.
\(^3\) IAR, 1974-75, p.50, 1975-76, p.55.
\(^4\) For the preliminary impression of the distribution of the Mathurā mounds, see A. Cunningham, Archaeological Survey of India Report, Vol.XX, 1885, p.385; J. Ph.Vogel, Catalogue of Archaeological Museum at Mathurā, p. 6-19.