THE TRANSITION FROM PRE-URBAN TO URBAN SOCIETY: A CASE STUDY OF WESTERN MALWA

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DECLARATION

Certified that the dissertation entitled "The Transition from Pre-Urban to Urban Society: A Case Study of Western Malwa" submitted by Prabhat Kumar Basant, is in partial fulfilment of the requirement for the degree of Master of Philosophy. This dissertation has not been previously submitted for any other degree of this University and is his own work.

We recommend that this dissertation be placed before the examiners for evaluation.

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Prabhat Kumar Basant

CHAPTER I THE ANTECEDENTS

I

1.1

The sixth century B.C. saw the beginnings of urbanism in the Ganges Valley and some of the outlying regions. It is usually referred to as the second urbanisation, the first one being that of the Indus Valley, much removed from the former in time and space. Systematic study of this problem has been taken up only recently.[1] The aim of the present work is (i) to study the process of urbanisation at the level of spatial segment i.e. in Western Malwa and (ii) to test the kind of generalisations that are being made about the second urbanisation by doing a detailed study of the process and structure of urbanisation at a regional level.

The focus of the present work is to study how a pre-urban society changes over to an urban one. This calls for a brief review of some of the basic issues taken up in the discussion on second urbanisation. Scholars like A. Ghosh and Dilip Chakrabarti emphasise the role of political authority in bringing about changes in the material conditions of the society leading to the emergence of urban centres. Chakrabarti says, "In fact a local agricultural base, an organised trading activity and a centralised political power structure went into the making of each of them (Rajagrha, Varanasi Kausambi and Ujjayini) as a city. Of these three factors primary emphasis sould perhaps be given on the factor of political power".[2] A.Ghosh also thinks that the economic

changes followed rather than preceded the establishment of the Janapadas by various chiefs. He emphasises the fact that technological changes such as the introduction of iron etc. did not automatically lead to the beginnings of urbanisation. Discussing the well known debate on the problem of surplus agricultural produce (which is related to the existence of non-food producing groups in the urban areas) he says, "More than a surplus or even a capacity to produce surplus what is required is a socio political institution to force or induce the farmer to produce a surplus, to divert the surplus where it is required".[3]

This attempt to give primacy to the political authority bringing about economic changes is obviously derived from the works of Sjoberg and Mumford. However, Mumford saw the emergence of political authority as a culmination of changes in the socio-economic sturcture. The king emerged at the stage of take-off into urbanism.[4] However, in the present case little attempt is made to discuss the core processes or various mechanisms which went into the formation of urban centres. The discussions tend to view the beginnings of cities as if they were the handiworks of royalties. While talking about the formation of the Janapadas, which were to become the seats of urban centres, Ghosh gives a cautious note, "The establishment of the Janpadas itself was the result of the new society

of the later Vedic age in which economic and political factors played their part with the former perhaps remaining in the background to boost up the latter"[5]. But what could be these new factors which could lead to transition from chiefdom to stratified state societies and consequent rise of the urban centres? These questions have not been properly answered as yet. Besides, the contribution of the pre-urban chalcolithic cultures, especially the BRW cultures of Rajasthan, Central India, and the Lower and Middle Gangetic Valley, has not been examined properly.

The other group of scholars like Prof.R.S. Sharma and M.C. Joshi emphasise the primacy of the economic factors and large scale technological changes in bringing about social changes Discussing the origins of Buddhism, Prof. Sharma states that the iron plough was the single most important variable which transformed the tribal society. He says, "The new agriculture (by plough in the iron age) led to the production of surplus on a scale which could not be attained with stone or copper implements. This prepared the ground for the rise of urban settlements in north - eastern India"[6]. In another publication he emphasises the importance of iron axes which were necessary to clear the hard fibre forests of the Ganges Valley.[7] Thus, the stimulant for change is reduced to certain technological innovations i.e. the change over from

the chalcolithic stage to iron age (especially iron axe and plough). These led to the production of surplus which in turn led to craft specialisation and emergence of the urban centres.

The problem of iron age and its impact on society has been discussed by quite a few writers.[8] The beginning of the use of iron go back to the 10th - 9th centuries B.C. in India.[9] In the Doab region iron age dates back to the 9th century B.C. or earlier in sites like Atranjikhera.[10] But the precise relationship of iron to the production process or for that matter social change is an issue which has still not been discussed in depth. We do have certain references to the use of iron in agricultural production.[11] However, N.R. Ray has shown that up to the second century A.D. no iron ploughshare or iron axe has been reported from any of the Ganges Valley sites excavated so far.[12] He, however, believes that from the third-second century B.C. onwards iron came in increasing use due to the Greek influence, leading to urbanisation in this area around this period.[13] However, the Greeks themselves never used iron ploughshare in antiquity.[14] In fact in Europe iron plough came in general use only in the 9th 10th centuries A.D.[15] Besides, northern Europe which developed a sophisticated iron technology in the

early centuries of the Christian era and used iron plough, did not develop cities in that period.[16] Even as late as the 16th century in the Mughal period the extremely sparing use of metal has been noted by many contemporary travellers.[17] Also, there are many regional variations in the types of implements used according to the soil type and the environment in the area. In the Mughal period a traveller reported the use of wooden ploughs without iron shares, as the normal plough in some coastal regions.[18] Even in modern times, in the Black soil region, for cotton and jowar rotation, normal harrow (Bakhar) is found to be better suited than deep cultivation with implements like ploughs.[19] The light soil of India does not require deep furrowing which would have made iron ploughs indispensable.[20]

Ester Boserup has shown that there are five types of land use in order of increasing intensity:

(a) Forest fallow cultivation having around 20 years regeneration cycle.

(b) Bush fallow cultivation having about 6 years regeneration cycle.

(c) Short fallow cultivation having two or one year regeneration cycle.

(d) Annual cropping.

(e) Multi-cropping.

The kinds of agricultural tools needed in a given context depend upon the system of land use. In the forest fallow cultivation system trees are felled with axe or burned on the root after having been killed by ringing. Logs and other unburnt remnants of the natural vegetation are left in the field together with the ashes and the roots of the trees. Sowing and planting are done directly in the ashes without any land preparation. The land is highly productive at this stage. Plough can not be used on this kind of surface, since it is littered with unburnt objects, which will hinder its movement. The only tool that can be used is a digging stick to scratch the ashes. The plough requires a clean permanently cleared surface. In Boserup's scheme plough can be applied only when grassy land appears as a result of annual cropping. Grass can not be burnt or removed by hoeing. Since, burning of the forests can be assumed to have been the earliest form of cultivation, one expects to find neolithic communities using this method of cultivation in the Ganges Valley, prior to the emergence of plough agriculture. In fact, communities moving into forest land have been found to abandon earlier methods of cultivation and resort to slash and burn cultivation because it is more productive.[21]

Boserup's model for agricultural development can be questioned as to its universality or as to the linear succession of

various stages of agricultural practices. However, her model does indicate that while axes are primarily associated with slash and burn cultivation, ploughs are used by advanced agriculturalists. As such ploughs and axes are used in different kinds of agricultural practices and plough would have been introduced much latter in the early historical period (Prof. Sharma's hypoteses seem to indicate that they were used simultaneously): This will especially be true of the tropical forest (from where Boserup provides her illustrations), in a context in which there is a shift from pastoralism to agricultural production.[22]

Prof. Sharma's hypothesis about the role of iron in bringing about urbanisation in the Ganges Valles has one more questionable assumption. It is believed that in the middle and lower Ganges Valley agricultural communities were largely absent before the introduction of iron. It was the iron wielding Aryans who with their axes and ploughs cut down the forests and started cultivation which provided surplus leading to urbanisation. Boserup's thesis seems to be supported by the fact that besides the important sites of Kausambi, Chirand, Sonepur etc. more than one hundred neolithic - chalcolithic sites have been reported from the alluvial plains of the middle and lower Ganges Valley.[23] In the Ajay-Damodar Valley which may be taken to represent a peripheral zone of the lower Ganges

basin, 34 chalcolithic sites have been discovered.[24] The Black and Red ware (BRW) which occurs both in the pre-iron age and iron age contexts, has not been properly classified for these two kinds of occurrences. Thus, a precise idea of the number of pre-iron age sites is not possible. But it is likely that these areas had very many pre-iron age agricultural communities.

According to one experiment a neolithic stone axe could fell a tree having a diameter of 30 cm. in 30 minutes.[25] Of course, this efficiency might vary with the kind of wood that is to be cut and the quality of the stone itself, but it indicates that forest clearing even with stone or copper axes was not impossible. After all the Mayas did clear the tropical quasi - rain forests having 71" rainfall in the Peten region without having a developed metallurgy.[26] Bhardwaj writing about the phases in the development of iron concludes that upto 600 B.C. the iron metallurgy was in an elementary stage of development. This is evident from the wasteful rich metalliferous slags discovered from the strata belonging to this phase. During this phase small objects of wrought iron were made. The period between 600-200 B.C. witnessed experimentations with the processes of carburization and registered some advance, as indicated by the prolific use of this metal. Wootz or steel making process was mastered between 200 B.C. and 200 A.D.[27]

Wrought iron (in use until 600 B.C. or may be in later phases of experimentation) is tougher than other available metals, but it would not take a satisfactorly sharp edge which was obtainable only in steel.[28] One wonders if the iron tools of the early historical phase could constitute any dramatic advance over the copper and stone tools, as far as agricultural productivity was concerned.[29]

From our discussion so far the following problem areas have emerged-What was the role of political structure in bringing about urbanisation? What was the role of iron in creating potentialities for surplus? Little has been done to relate in depth political or economic changes to the social structure. This is partly because of the lack of adequate data. However, whatever data is available can be used for testing some hypotheses which have been formulated by various anthropologists regarding the process of state formation and urbanisation.

The review of the works done so far on urbanisation in ancient India indicates one interesting fact. Some writers seem to be talking about urbanisation as if the process of change was uniform all over the sub-continent. They do occasionally talk about the Ganges Valley or the Magadh region, but they never differentiate between the region they are talking about and India as such. Thus, we have the anomalous situation

where generalisations are made for the whole of India without having regional studies. One of the factors in the emergence of towns is their geographical location and site catchment areas. We do not have studies which pay adequate attention to locational factors. Thus, there is a serious need to understand the emergence of cities in terms of their ecological setting. It is only after understanding the patterns of adaptation to the local environment that we can make meaningful comparisons and generalisations about the process of urbanisation in ancient India. Besides, there has been very little concern with the broader theoretical problems in the Indian context. These hypotheses and generalisation could be useful for understanding the problem of transition from pre-urban to urban society. Thus, in the following section we shall briefly review some of the theories of the origins of civilization, because it is within this framework that the phenomenon of urbanism has to be located.

1.2

The term 'Urban revolution' was introduced by Gordon Childe to describe the transition from pre-literate agricultural societies to more complex civilized societies.[30] It occurred in different areas of the world independently and at different times. Childe provided a list of ten criteria which, he thought, were universal to all the early urban centres. But, since then most

of these traits have been found to be missing from one or other of the early urban centres. Thus monumental public buildings were absent in China.[31] Writing was absent among the Incas.[32] In fact even the formation of cities as physical entities which has been emphasised by Childe was apparently not true of all the cases. Egypt lacked cities until late second millennium B.C.[33] Maya centres of early phase, having no resident population, can not be called cities. Various cultural characteristics express the individuality of cultures and any generalized set of traits for the identification of urbanism might be misleading.[34] Even though different cultural traditions present diverse formal characteristics, the effect of the urban revolution everywhere was to bring in a new set of social and economic institutions decisively and relatively rapidly into positions of dominance. The core trends which are universal to all the civilized societies are social stratification, urbanism, political differentiation (emergence of state) and craft specialisation.[35]

Cities are the final outcome of this process of transformation. We define cities as units of settlement which perform specialised functions in relationship to a broader hinterland.[36] This relationship of interdependence, favourable to the city, usually emanates from its advantageous geographical location (location on trade routes, control of

natural resources etc.). While numerous inhabitants of a city may engage in food production the specialised functions of a city are non-agricultural in nature. They are socially stratified, politically organised and territorially based societies. They are characterised by specialisation of activities and given to secondary and impersonal relationships.

Urban centres flourished in state societies. As pointed out earlier, urban societies were characterised by certain uniformities in the institutional structure. The locus of transformation lay in the realm of social organisation. Thus, we shall briefly review the theories which discuss the problem of organisational change in this phase of development, within the context of the emergence of states and civilization. There could be states without cities but there was no city without state. The theories of the origins of civilized societies can be broadly grouped into two set of hypotheses.(i) urban society emerged as a result of conflict inside the social structure, (ii) it originated out of conflict among different communities.

Gordon Childe was the proponent of the first type of causality.[37] He believed that the civilized societies emerged as a result of augmented food production caused by technological improvements. According to him social stratification,

and increase in population became possible only because of increased surplus which enabled people to have greater leisure time. 'Thus', he says, "each primary producer paid over the tiny surplus he could wring from the soil with his still very limited technical equipment as tithe or tax to an imaginary deity or to a divine king who thus concentrated the surplus." The idea of a surplus over and above the requirements of the peasant, as leading to stratification and urbanisation has been severly criticised by many writers. One cannot define a potential level of productivity at a given stage of technology, from which actual consumption could be substracted, to define the surplus. We have the example of the Mayan civilization flourishing on slash and burn cultivation without domestication of any draft animal, wheeled transport, or developed metallurgy. There is no inherent tendency among the farmers to produce at the highest potential level consistent with the technological advance. The introduction of more efficient methods of production need not lead to greater output, which would give an opportunity to the powerful groups to siphon off the surplus. The 'domestic mode of production' is a 'production for provisioning', meaning that more efficient tools of production will lead to greater leisure and lesser work for the peasant. Ethnographic studies all over the world have shown that the

prestate economics are under-productive. They seem "not to realise their own economic capacities, labour power is under used, technological means are not fully engaged, natural sources are left untapped.".[38] In fact agricultural suplu-ses are defined and mobilised in a particular institutional setting. The presence of urban centres in the third world countries where millions die of malnutrition and famine effectively negates this way of conceptualising the 'surplus'[39]. Besides, in many instances the basic tools of agriculture and craft work show no signs of systematic improvement before or immediately after state formation.[40]

In the Indian context the advent of iron technology has been said to have catalysed urban processes by increasing agricultural productivity. However any increase in agri-cultural productivity can be accounted for by many factors basically related to human understanding of the existing energy sources. Thus, crop rotation, introduction of new varieties of crops, irrigation, use of manures and greater input of human labour during various phases of crop production will be as important as the introduction of a tool tipped with iron.

While food production was a pre-condition for the urban revolution it was not sufficient by itself. That is why

Martin Orans has visualised 'surplus' as the 'gross amount of deployable wealth'.[41] In this kind of formulation one is not looking for the slightly higher productivety above the biological needs; Instead one has to look into a chain of socio-cultural processes which can be generated through political or religious symbols. One can conceptualise culturally defined requirements of population stimulating exchange and also technological improvements. Thus, the notion of 'surplus' becomes a part of interdependent network of cause and effect affecting social change rather than an independent variable.

Julian Steward, tried to work out a sequence of the stages of evolution of communities from the hunting-gathering level to the state level.[42] He integrated archaeological data and anthropological theory and tried to account for the specific forms of social institutions in terms of adaptation to the specific techno-environment. The locus of cultural process was in the dynamic articulation of these environmental and socio-cultural systems. Steward found that the states he had investigated were located in semi-arid areas. According to him the existence of state in such a setting was related to its organisational requirements. People needed irrigation for an assured supply of food. Irrigation in turn required organization and co-ordination by some

authority. It led to the origin of state societies. It was Karl Wittfogel who systematically propounded the theory of irrigation civilization. According to him the effective management of water for irrigation required an efficient societal organisation. In this kind of 'hydraulic economy' the state power embodied in the despot ultimately assumed the managerial functions. Adams, who has examined this hypothesis in Mesopotania, does not find any evidence in support of it. The earliest neolithic communities in the Diyala region and in Southern Mesopotamia were located along natural water channels which dissected the plains due to the natural meandering of the rivers.[43] There was no need of organisation for explioting these channels. In the early written records there are very few references to control of irrigation. Irrigation was not controlled by the king but minor officials of the temple.[44] In modern times tribesmen staying in southern Mesopotania dig the irrigation canals by themselves showing that irrigation canals do not always require state organisation.[45]

Scholars like Marvin Harris,[46] Carneiro[47] and Morton Fried[48] have propounded a model of state formation that can be called 'scarcity model'. Fried defined state as the organisation evolved to maintain the unequal access to the basic resources. This kind of organisation was preceded by stratification and emergence of private ownership. Fried posited

these changes to a growing population pressure.[49] Carneiro offers a much more elaborate and sophisticated theory of population growth leading to state formation. He believes that increasing population pressure in a naturally or socially circumscribed area led to war and subjugation of one group by another. This gave rise to social stratification and state. Environmental circumscription occurred when a population lived in an area surrounded by mountains, jungles deserts or some other natural barrier. Social circumscription occurred where a tribe was circumscribed by the existence of other groups, so that it did not have the possibilities of expansion. The population kept increasing in the centre, leading to increasing pressure on scarce resources. After a certain point the only possibility of survival was the subjugation of other groups. This process finally led to the subjugation of all other groups by one group in a particular area.[50] This group became the ruling class of emergent state societies. Neolithic societies are supposed to have a natural tendency towards population growth. It has been shown in the case of Kung bushmen that sedentarization leads to reduction in the artificially maintained longer periods of child birth.[51] Young has in fact tried to account for the origin of urban centres in Mesopotania

solely on the basis of population increase.[52] Scholars like Marvin Harris see all the pre-modern societies as developing in response to population pressure.[53]

The belief in human reproductive increase outstripping the productive ability is not well founded. Population may or may not increase. It is a social rather than a biological phenomenon. The notion of relentless population increase unresponsive to other variables is not correct. "Most of the societies most of the time do not seem to have had over-population problems, and if some societies some of the time have had these problems, then the reasons are not self evident". Demographic Variables respond to a host of economic, technological, social and ideological factors. In fact during late Roman and early Byzantine periods in both western and eastern Europe there was a sustained population decline.[54]

Certain archaeological and ethnological data also indicate the weakness of 'population increase' hypothesis. In Iran urban development followed a period of depopulation rather than population increase.[55] The Chimbu tribesmen of New Guinea have a population density of 400 persons per squre mile. Even with such high population density they do not have any social ranking or stratification.[56] Many human groups engage in various types of practices which maintain the population at a homeostatic level.[57] So, if there is a population

increase or decrease in a society, it will have ~~to be explained~~ to be explained by its social context. In Mesopotamia, during the early phase of urbanisation we have evidences of a population shift rather than any population increase.[58] The concept of carrying capacity itself is quite vague. First it is not testable. More important is the fact that the selection of the key components of natural environment at a given state of technology for deciding the carrying capacity of a delimited area is itself arbitrary. In selecting components for the subsistence system one has to find out what food sources are crucial. This selection means ignoring some important food sources.[59] There is enormous variability of survival under different diet conditions. What food item is marginal at one time may be decisive at another. A food item available only in small quantity and ususlly ignored may be the one that at critical moments prevented starvation.[60] There are no fixed variables, rather there are ranges of variables in subsistence systems. Some of the variables are technological, interactional exchange factors, ritual and dietary. Even site selection, cutting, burning, cropping, fallowing, use of different kinds of seeds, ground preparation, weeding, harvesting etc, can have significant impact on food production individually and collectively.[61]

Trade symbiosis and war have also been suggested as stimulants for state formation. But they also have been found to be

dependent variables. War has been found to occur in pre-state societies and states have been formed where there is no possibility of trade symbiosis.[62]

In order to develop an appreach which specified social determinants in evolution Adams and Flannery have suggested a multi-causal explanation. Adams attacked the simple minded technological determinism of Wittfogel. In fact he kept emphasising that urban revolution has to be understood primarily as a change in the realm of social organisation. But partially due to the lack of data and partially because of the kind of material he is handling when it comes to giving his own explanation he falls back on typical cultural materialist position So he also emerges with a generalized kind of approach emphasising environmental adaptation, population growth or trade symbiosis as instrumental causes of change. No specific social dynamic is postulated and so the causes of evolution have to be sought outside the social framework.[63] Flannery's article rejects the cultural materialist position and provides quite a few insight into the problem.[64] He uses the concept of control hierarchy applied to various societies. In this scheme the immediate production process is at the lowest level, the goals of production and distribution at the next level and the administrative and ideological maintenance at the third and highest level. He has discussed a number

of ways in which control can shift from one level to another. A special purpose institution related to lower level control hierarchy can develop into a general purpose sub-system, due to various kinds of stresses a society undergoes. A war leader might be a minor functionary in a normal situation but in the time of war he can become the most important official. Similarly, irrigation control may be taken over by higher levels of control hierarchy in certain situations. The evolution of certain institutions from system serving (special purpose) to self serving (general purpose) puts additional stress on the system. This might lead to establishment of yet another special purpose institution. This process of segregation and centralisation leads to state formation. Thus, either of the mechanisms like population growth, social circumscription, warfare, irrigation, trade symbiosis, can lead to change. Flannery's model clearly indicates the weaknesses of the cultural materialist approach by showing that evolution can be directed from above. But as in the case of Adams' model the evolutionary mechanisms that are sought to account for changes are something external to the system. Be it warfare or be it irrigation, the social system does not seem to contain in itself the social properties which would account for the actual forms of control and their evolution. "What evolves is social structure and not functional hierarchies".[65]

So far the most convincing model of state formation has been provided by Friedman and Rowlands.[66] We shall briefly describe their model.

The tribal system's basic production and exchange units are local lineages. They are dependent on other similar groups for their biological reproduction. The structure linking production and exchange determine the specificity of the tribal system. Economic activity in these systems is directly related to the supernatural. A local lineage which produces a surplus is able to convert it into a community feast in which prestige is gained, because the production of such surplus is considered the bounty of the gods. As influence is defined in terms of geneological proximity, the particular lineage will be considered an older lineage, a direct descendant of the founder ancestor. Women are given to other lower status groups in exchange for a bride price which is commensurate with the high prestige of the wife giver.[67] Thus, differences in prestige are continually converted into the relative ranking of the lineage through asymmetric alliance. These alliances generate a flow of debt payments, bride price and food at matrimonial and funeral ceremonies and various other kinds of services from the lower to higher ranking lineage.

In this way surplus produced by certain lineages in turn leads to increased control over the labour and produce of other groups. In favourable circumstances the relative affinal rank turns into an absolute one, in course of time. The chief is considered a direct descendent of the territorial deity. Thus, we have the emergence of a conical clan structure. In this system all rank is defined in terms of its proximity or distance to the chiefly lineage and not is direct relationship to the founder deity. As a living lineage occupies the position of mediator between the gods and other lineages, it receives tribute and corvee as the cost of performing functions necessary for the welfare of the community as a whole. In this way the chief acquires control over the total labour of the community.

The upper strata exercise their power through the possession of valuables brought in exchange from distant neighbours. The higher the ranking the wider the exchange network. That is why the chiefs have access to valuable goods from the greatest distance. So, extension of control over local labour goes hand in hand with an expanding exchange network. Thus, we have a situation where the leadership continually generates the surplus to get these valuables in exchange. The development of rank itself becomes the development of the productive force.

The conical clan structure leads to a hierarchical ranking system which is absolute. Thus we have a typical segmented hierarchy in which the ruler has absolute monopoly of the highest deity, controlling an aristocracy dispersed throughout the region where the focus of control centres on a local deity. This has been called the 'asiatic state' by the writers. The emergent class formation is that of the commoner lineages, increasingly excluded from the rituals and slaves, produced by debt and capture, forming one group. In the asiatic state the nobles become the channels through whom the local economic surplus is transferred to the king. The growth of agricultural surplus leads to craft specialisation in the centre. Inter regional exchange develops markedly in this period for the exotic objects to be used in burials, rituals etc.

This prestige goods economy is further elaborated in the 'dualistic state, however, the prestige goods economy itself undermines the former's source of control based on geneological proximity to the deities. Monopoly over the sources of prestige items is a new form of control which is different from the older ritual economic form. The large scale increase in production for exchange requires a high demand for labour. Thus, there is large scale import of labour from neighbouring groups. That is why, we have the

evidence of some kind of population explosion in the political centres in this period. The development of political hierarchy leads to larger political units.

The next phase called territorical and city states emerges out of the expansion of the prestige good system. The increasing demand for prestige goods itself fosters the possibility of local centres, producing those items, becoming more important bases of power. Higher demand leads to increasing regional division of labour. The sub-centres might become economically more important than the politically dominant centre. Thus, the political hierarchy might break down into a number of centres competing over labour and land. This leads to conflict among the states and in this phase fortified cities appear.

The emerging administrative institutions focus their activities on long distance trade as their political structure is dependent on external trade. They have to organise production, ensure supplies of raw materials and food. The growing external trade fosters new division of labour. The increase in external trade depends upon the capacity of the system to maintain an increasing number of food producers. We have the evidence of abandonment of dispersed settlements and nucleation around the urban centres. Of course this nuclea-

-tion itself might depend on some techno-environmental factors. The emergence of urban territorial states as a whole depends on a competition for labour, land and external trade among competing units. Similarly, the possibility of intensive farming provides a spur to nucleation, emergence of territorial states is characterised by a fully developed areal economy in which the local centres become dependent upon the production of a wider area.

The general model presented above does not apply directly to empirical situations. There will be space variants according to particular geographical settings. Neverthless those variants generated by local settings should be considered regional specificities of general processes underlined in the model. In the following section we shall try to work out certain identifiable processes and traits associated with pre-urban and urban societies,

In the tribal society, settlements should be small and almost equal in size. They should be uniformly distributed without any settlement hierarchy. The individual household units are also of roughly equivalent size but there will be at least one larger structure having stronger ritual importance. Minor ritual remains like clay figurines, hearths, pottery etc. can be expected from all the houses. However, evidences for the ritual activity focussing on fertility,

prosperity and ancestor-worship are likely to be variable for various units depending on the position of the occupants in the segmentary hierarchy. The evidence for increasing control over the religious affairs of the community, can be found in redistribution and ritual feasting. There will be evidence for the exclusive control of elite over high status goods. They are used mostly for burials and ritual offerings. The art forms are generally abstract and geometric.

The 'Asiatic state' is characterised by the emergence of monumental buildings which indicates the absolute ranking and the emerging class structure of the society. A two tiered settlement hierarchy emerges. There should be evidences of increase in rural population and concentration of craft specialists in the centre. There will be evidence for long distance trade and conspicuous consumption of luxury items among the elite groups. Shang China and late Ubaid and early Uruk in Mesopotamia are examples of this type of social organisation.

The next phase which sees a more clear cut separation of religious and secular structures is marked by an increase in specialised craft production. The direct control exercised by the religious political hierarchy will lead to greater uniformity in craft products. One can expect high status

items distributed throughout the political hierarchy. There will be an increase in long distance trade. There should be evidence of a reorganisation of function at the centre due to the emerging dualism in religion and polity. Along with religious architecture there will be evidences for the construction of storage, administrative and other secular public buildings. The western Chou period and middle and late Uruk period can be cited as examples of this phase of development. This phase saw the emergence of three to four tiered hierarchies of settlement.[63]

The full flowering of the city state phase shows evidences of a rapid nucleation of population. The residential areas will be divided into numerous wards having smaller temples and public buildings. Evidences of commerce, markets, mediums of exchange, secular kingship and oligarchic control over large landed estates and dependendent labour class will be found. An increased emphasis on warfare also characterises this phase. Separate administrative complexes and palaces will be found which indicate the emergence of a secular kingship. This kind of social structure is found in Eastern Chou period in China and Early dynastic period in Mesopotamia.

1.3

When such sophistication has been achieved in the theoretical understanding of urbanism and archaeology has also taken tremendous strides in the direction of identifying societal developments, where does the Indian archaeology stand? We have not even been able to work out the transition from chiefdom to urban societies, let alone divide them into various sub-phases as Friedman and Rowlands have done. From our discussion of various theoretical problems some points can be made about the Indian urbanism. (i) the introduction of iron is not the only way of increasing productivity and (ii) more importantly, higher productivity by itself does not lead to urbanisation. Thus, we have to understand the processes of change in the social structure itself. Some beginning has been made in this direction by Prof.Romila Thapar through attempts to understand the process of state formation[69] (which is likely to have been related with the process of urbanisation in ancient India). The Vedic society, according to her was a lineage based chiefdom in which stratification was reinforced by perpetual wars. This was because after victories in wars spoils were distributed differentially. With the settling down of pastoral communities, agriculture became the main occupation and land the most important form of property. The elaborate set of rituals provided the

chiefs' legitimacy for their power. The emergence of Gahapatis signified the break up of the clan and emergence of individual property owners.

The Vedic rituals helped establish higher status for Kshatriyas and Brāhmaṇas. The need for more and more surplus on the part of these groups led to extension of cultivation. Simultaneously commercial groups also emerged; large scale trade was simply the spatial enlargement of earlier inter-tribal exchange practices. Seats of political power became the urban centres. Emergence of Magadha, etc. signified full fledged state society.

The analysis offers a brilliant insight into ancient Indian literature and makes an attempt to see the changes through a structural analysis of the ancient Indian society. However, some of the problems remain. Since, the texts reflect centuries of encrustration of beliefs and ideas of a particular group of people i.e. the Brāhmiṇs, we get a biased picture of the developments. In this formulation such categories as caste are basic units of analysis in social change. One wonders if the whole of the Indian society in the 6th century B.C. was divided along caste lines or whether caste was a universal phenomenon for the whole of Indian. Besides, the transition to state society implies a

structural discontinuity which has to be explained by some newly emerging phenomenon. Prof. Thapar does talk about newly emerging agrarian society but these changes have not been adequately emphasised. Similarly, the possibility of the exchange of goods inherent in the requirements of a tribal society and its elite groups has not received full attention. This phenomenon is seen as the predecessor of the towns but it is not discussed in detail.

As stated in the beginning the present study deals with the beginning of urbanism in the Western Malwa region. In our view, in regional studies on urbanization, the proper starting point would be to understand the emergence of urban centres in a cultural ecological perspective. Cultural ecology is defined as human adaptation to natural environment and surrounding people with whom they are in contact, in the light of their historical experiences.[70] It has been observed that the cultural ecological approach does not provide explanation for changes occurring due to migration, war, disease, climatic changes and many other such factors. These variables surely can not be ignored when one is examining the process of social change. However, the historical processes by which a society acquires many of its basic traits are complementary to studies of adaptive processes. There

are extensive borrowings of many cultural traits and trait complexes from diverse sources. But every community has to come to terms with the environment.[71] Since, adaptation to the environment is a continuing process, migration or other such factors of cultural change are small episodes in the panorama of societal development. That is why a proper understanding of the environmental setting is essential to the study of social change. We shall be making an in depth study of the preceding neolithic and chalcolithic cultures in their ecological setting and try to assess their contribution to the emergence of urban centres in the region selected for study. In so doing we shall be examining the exchange networks which existed even before the coming of the urban phase. Of course the hotly debated topic of the relationship between technological change and urbanisation will not be totally ignored. Furthermore, we shall be looking into the diverse forms of adaptation to micro-environmental zones i.e. the existence of hunter gatherers, agriculturalists and pastoral - nomads and the symbiotic interaction among these communities. This will lead us to examine the evidences which may be culled from relevant literature. Finally, we shall make a structural comparison of some of the major urban centres in the Ganges Valley with the urban centres in our region.

We have, however, to concede that our sources for the study of the process of urbanisation are not too encouraging. Of course compared to the Ganges Valley, the Malwa region is better explored and we have some excavation reports from sites like Maheswar and Navdatoli which can give us some idea of the pre-urban cultures in the region. However, for the urban phase, except for the reports from sites like Ujjain, Mandasaur etc. we know very little. Whatever excacations that have been done for the urban phase are in the nature of vertical excavations which do not provide any idea of the settlement patterns within the city. Very many sites belonging to the urban phase have been explored, but their dating remains suspect. The reports do not indicate whether the sites belonged to the early or later phase of urbanisation. For a geographical perspective on urbanisation one needs an understanding of interaction among various sites and how they affect the location and size of each other. Cities do not grow in a Vacuum, rather their existence is imperative upon an articulation of a set of relationships with the surrounding areas (hinterland). Unfortunately no such study of settlement patterns exists. No attempts have been made so far for site catchment analysis.

We face similar problems in discussing the literary sources. References to the Malwa region are very few in the early literature. Besides, the dating of these texts is suspect.

In the later phases there are very many references to cities like Ujjain. Especially Kalidāsa's Meghdūtam, Skanda and Śivapurāṇas have glowing descriptions of this place. But they belong to a much later period and can only be of partial use to us. We shall also be using ethnographic studies done for the region. They are very few. So far, little attention has been given to studying the patterns of interaction among the various tribal groups and the peasant communities.

With all the handicaps which we face, in formulating hypotheses for the beginnings of urbanism, in the Western Malwa region, an attempt in this direction is overdue. The phase of 'sherds and patches' archaeology has lasted too long and there is a need to come out of 'Wheeler's trenches'. One has to make a beginning with whatever little data one has. After all, data collection and their interpretation are inseparable processes.

1. A. Ghosh, (1973), The city in early historical India, Simla; V.K. Thakur, (1981), Urbanisation in ancient India, Delhi, and a few articles in the Puratattva exhaust the list of publications on this problem. Some of the earlier books and articles on ancient Indian cities mostly catalogue the descriptions of towns mentioned in various literary sources. See B.B. Dutt, (1925), Town-Planning in ancient India, Calcutta and B.N. Puri, (1966), Cities of Ancient India, Delhi, Even the latest book on urbanisation in ancient India by V.K. Thakur straddles across such a long period that it loses its thematic unity. It has turned into a rehash of everything that has been said by various scholars. This kind of jumbling of facts covering a period of more than fifteen hundred years and claiming to encompass the whole of the Indian sub-continent, will add little to our understanding.
2. D.K. Chakrabarti (1972-73), "Concept of urban revolution and the Indian context" Puratattva, 6.
3. A. Ghosh (1973), pp.20-21.
4. See Mumford's concluding address in the symposium on urbanisation in Karl Kroeling and R.M. Adams (eds) (1960), City invincible, Chicago.
5. Loc. Cit. p.22.

6. R.S. Sharma, (1968), "The material background of the origin of Buddhism" in Mohit Sen and M.B. Rao, (Eds.) Das Capital Centenary Volume, New Delhi.
7. R.S. Sharma, (1974), "Iron and urbanisation in the Ganga basin", Indian historical review, 1.1.
8. See for example Dilip Chakrabarti, (1973), "Beginnings of iron and social change in India" Indian Studies: Past and Present, XIV.4. Dilip Chakrabarti, (1976), "Beginnings of iron in India", Antiquity, 50. and N.R. Ray, (1975), "Technology and social change in early Indian History: a note posing a theoretical question" Puratattva, 8.
9. Chakrabarti, (1976).
10. Ibid.
11. Ibid. Chakrabarti quotes many of these examples.
12. The absence of iron ploughshare and axes is surprisingly true. So far only one site has yielded iron axes and plough shares at the PGW levels. That site is Jakhera (Etah district, U.P.) See IAR, 1974-75.
13. N.R. Ray, (1975).
14. See T.K. Derry and Trevor Williams, (1960), A short history of technology, O.U.P. London pp. 55-56. Also see Henry Hodges, (1970), Technology in the ancient world, Penguin, pp.142-145.

15. See Lynn White,(1962), Medieval Technology and social change. O.U.P. London.
16. Henry Hodges,(1970), pp.206-214.
17. Irfan Habib,(1972), "Potentialities of capitalistic development in the economy of the Mughal India", "Enquiry.
18. Irfan Habib,(1963), The Agrarian system of Mughal India, Bombay, p.25.
19. S.P. Ray Chaudhary, B.B. Ray et al., (1963), 'Black soil in India, NISI monograph, Delhi.
20. Irfan Habib, (1963). p.24.
21. Ester Boserup,(1965), The conditions of agricultural growth, London.
22. The famous Mahābhārata story of the burning of the Khāṇḍava forest by Arjuna and Kṛṣṇa does indicate a practice of slash and burn cultivation in the early phases of the Aryan expansion into the Doab region.
23. Data gathered from IAR - 1953-54 to 1978-79. Also see G.R. Sharma et al., (1980), Beginnings of agriculture, Allahabad.
24. Arun K. Nag, "Spatial analysis of pre and proto-historic sites in Ajay-Damodar Valley", Unpublished article.
25. A stone-axe was reconstructed by mounting the neolithic flint head on a copy of a neolithic haft preserved at the bottom of a bog in Denmark-Using short rapid strokes

the experimenters learnt to fell trees having a diameter of more than 30 cm is 30 minutes. See M.S. Randhawa, (1980), A history of agriculture in India, vol.1. New Delhi.

26. See Marvin Harris,(1977), Cannibals and kings, Fontana pp.96-101 also Rene Millon "Early Civilization of the new world" in International encyclopedia of the social sciences, Vol.16.

27. H.C. Bhardwaj,(1979), Aspects of ancient Indian technology, Varanasi.

28. T.K. Derry and Trevor williams, (1960).

29. That there was no dramatic transition from the copper age to iron age is indicated by the fact that in Prakash, the phase which saw the beginnings of the use of iron also witnessed the use of copper tools in largest number. See B.K. Thapar, (1964-65), "Prakash 1955", Ancient India, 20-21.

30. V. Gordan Childe,(1950), "The urban revolution" Town planning review, 21.

31. K.C. Chang,(1974) "Urbanism and the king in ancient China" World Archaeology, 6.1.

32. Rene Million, "Early civilization of the new world" International encyclopedia of the social sciences, vol.16.

33. R.M. Adams, "Urban revolution" in International encylopedia of the social sciences, vol. 16.

34. Many scholars especially the Indian scholars tend to use the ten criteria given by Childe as some kind of monolithic identification mark for the emergent urban centres. They tend to forget that with all these criteria Childe was primarily trying to identify certain societal processes (which he outlines in the beginning). Thus, what one has to find out, is these processes and not certain archaeological criteria, taken as ends in themselves. The archaeologically identifiable traits are necessary to understand these processes but they are not 'the processes' themselves.

35. R.M. Adams,(1966), The evolution of urban society, Chicago.

36. Bruce Trigger,(1972), "Determinants of urban growth in pre-industrial societies" in P.J. Ucko, R.Tringham and G.W.D. Dimblel,,(eds). Man settlement and urbanism, Duckworth.

37. op.cit.

38. M. Sahlins,(1972), "The domestic mode of production: the structure of under-production" in M. Sahlins Stone age economics, London.

39. See Marvin Harris,(1959) "The economy has no surplus"? American Anthropologist, 61.

40. See Ronald Cohen,(1979), "State origins: a reappraisal" in H.J.M. Claessen and Peter Skalnik (eds). The early state, Hague.

41. Martin Orans (1968) "Surplus" in Y.A. Cohen (ed.) Man in adaptation: The cultural present, Chicago.

42. Julian Steward, (1955) Theory of culture change, Illinois. Interestingly enough five out of the seven stages linked to levels of socio-cultural integration are not due to any evolving form of techno-ecological adaptation. This goes against the general hypothesis of techno-ecological adaptation being the determinant of social change. For a review of Steward's formulation see J. Friedman and M.J. Rowlands, (1978) "notes towards an epigenetic model of the evolution of 'civilization'", in J. Friedman and M.J. Rowlands (eds) The evolution of social systems, Pittsburgh.

43. R.M. Adams and H. Nissen, (1972), The Uruk countryside, Chicago and R.M. Adams, (1965), Land behind Baghdad: A history of settlements on the Diyala plains, Chicago.

44. R.M. Adams, (1966).

45. Carl Kraeling and R.M. Adams, (eds.) (1960), City invincible, Chicago, 1960. See the paper read by Prof. R. Fernea.

46. Marvin Harris, (1977), Cannibals and Kings, Fontana.

47. R.L. Carneiro, (1970), "A theory of the origin of the State" Science, 169.

48. Morton Fried (1967), The evolution of political society New York.
49. ibid. p.204.
50. Carneiro (1970)
51. R. Cohen (1979)
52. T.C. Young (1972) "Population densities and early Mesopotamian urbanism" in P.J. Ucko, R. Tringham and G.W. Dimbeby (eds.) Man settlement and urbanism, London.
53. See Marvin Harris (1977)
54. George L. Cowgill, (1975) "On Causes and consequences of ancient and modern population changes" American Anthropologist, 77.
55. H.T. Wright and G. Johnson (1975) "Population exchange and early state formation in South western Iran" American Anthropologist, 77.
56. K.V. Flannery (1979), "The cultural evolution of civilizations" in G.L. Possehl (ed.) Ancient cities of the Indus, Delhi.
57. ibid.
58. See R.M. Adams, (1972), "Patterns of urbanisation in early southern Mesopotamia" in P.J. Ucko et al. Loc.cit.
59. Stephen B. Brush (1975), "The concept of carrying capacity for systems of shifting cultivation" American Anthropologist vol.77.

60. Ibid.

61. Ibid.

62. See Flannery, op.cit.

63. See R.M. Adams, (1966), for a criticism of his hypotheses see the review by Karl Wittfogel in American Anthropologist, 69, 1967 and the introductory chapter in J. Friedman and M.J. Rowlands, (1978).

64. Flannery Loc.cit.

65. J. Friedman and M.J. Rowlands, (1978), Introductory chapter.

66. J. Friedman and M.J. Rowlands, (1978), "Notes towards an epigenetic model of the evolution of 'civilization'" in J. Friedman and M.J. Rowlands, (eds), The evolution of social system.

67. A partilineal and patrilocal model has been assumed to be the form of family organisation as a starting point.

68. Wright and Johnson, (1975), have taken the formation of three to four tiered hierarchy as indicative of state formation. They have shown that there was a decline of population before the emergence of urban society. The present interpretation indicates that the callapse of population itself was the result of increased warfare and demand for labour by the emergent state authority.

69. Romila Thapar, (1980), "State formation in early India", ISSJ vol.XXXII No.4. 1980. See also Romila Thapar, (1978), Ancient Indian Social History, Orient Longman.

70. Elman Service, (1971) 'Cultural evolutionism, Holt Rinehart inc. pp. 5-14.

71. Julian Steward, "Cultural ecology" in International Encyclopedia of the Social Sciences, Vol. 3-4 pp.337-344.

CHAPTER II THE GEOGRAPHICAL BACK-GROUND

2.1

The Malwa region lying in the middle of India (20° 10' N-25° 10' N and 73° 45' E-79° 14' E) forms a distinct geographical unit.[1] In the west it is girded by the Vindhyan ranges and its off-shoots running from Jhabua to Pratapgarh. The Mukundwara range, dissected by many channels forms its northern boundary. The eastern limits of this region are defined by the Sagar plateau and Rath Bagar. To the south it is surrounded by the Satpuras. In the present study we intend to concentrate on the western Malwa region, roughly leaving out the areas east of Bhopal. This was the ancient Avanti region which emerged as one of the most important political powers in the sixth century B.C. The areas east of Bhopal present a different landscape. Unlike the wide expanse of the undulating black soil in Western Malwa this region is hilly, having a few agricultural pockets here and there.

The region studied here consists of the gentle level slopes with black soil, the Narmada trough and the area dissected by the Vindhyas towards the south and west. Within this region there are certain variations in the environment which could lead to significantly diverse forms of human adaptation. There are differences in physical relief, rainfall and vegetation.

The Vindhyan ranges, in the present case mainly the Dhar upland and the area between Jhabua and Pratapgarh, have an elevation ranging from 450m. to 600m. This hilly area with its steep slopes is mostly forested, making it a safe haven for tribesmen who maintain their primitive ways of life. The Narmada trough has an elevation varying between 150m. to 300m. The fertile land around it has attracted agricultural settlements from very early times. The black soil region is also an area of attraction for agriculturalists. But variations in rainfall and soil cover introduced significant differences in the patterns of living in this area.

If one looks at the rainfall pattern the entire region has a semi arid climate. However, several micro regions exist in this zone. Areas like Mandasaur, Jhalawar and Susner have less than 80cm. rainfall[2]. The vegetation of this area is of the dry tropical type having thorny bushes. Ujjain, Jhabua, Indore, Dhar and most other areas have slightly higher rainfall (between 85cm and 110cm). This area is characterised by dry deciduous forests. That is why, one finds a change in terrain and cultural setting if one moves north-west ward. Passing from Nagda to Ratlam one finds a change from the fertile black soil to a rugged and dissected territory. The undulating plateau merges with the offshoots of the western Vindhyas running north-

-wards. Soil is less retentive of water and has a reddish hue. Scattered boulders and basalt are strewn in the area. Similarly, the areas falling in the upper Chambal-Parvati basin are covered with fertile black soil. Thus, districts like Dhar, Ujjain, Indore, Dewas, and Mandasaur attracted agriculturalists from the earliest times. This area has a flat topography with a few hills and ridges here and there. But as one moves northward to places like Bhanpur, Pachpahar and Jhalarpatan, etc. there is a marked decrease in the total cultivable land available[3]. Traditionally associated with pastoral communities this area forms part of the Chambal badlands. Overgrazing and other natural factors have led to massive gulli erosion by the river Chambal. Large areas have turned into infertile waste.

The southern Malwa region comprises of the ranges of the Vindhyas. It has a variety of relief features. This area is characterised by dissected scarps, thick forests and sparse population. They dip southwards and merge with the Narmada trough. The Narmada trough, primarily consisting of the Nimar Plain and upland, is a fertile region at the lower reaches.

2.2

We intend to examine the environmental variables in a cultural ecological perspective. We define ecosystems as a population

comprising a set of species whose reactions to the habitat and co-actions between each other constitute an integrated system having some degree of unit character. The members behaving with reference to their dissimilarities engage in inter-specific relationships called symbiosis[4]. This will help us understand the patterns of adaptation to nature and long term interaction among the communities. It might shed light on the problem of change from pre-urban to urban society.

In the Malwa region three groups having distinct patterns of adaptation, can be seen. On the plains we have the agriculturalists; in the hilly regions and the rocky outcrops which dot the entire area, primitive tribal groups have resided from time immemorial. People like the Bhils seem to have been hunter gatherers in pre-modern times; in the drier parts going upto the Mathura region in north-east and merging with Rajasthan in north-west there were pastoral nomads. It seems that the three peoples i.e. the Nisadas and Bhils, the Abhiras and the Malavas who have been traditionally associated with this region, indicate the three types of adaptation outlined above. The Bhils were primarily hunters, the Abhiras engaged in pastoral nomadism and the Malavas (another group was Yadus in the earlier period) were communities who settled for agriculture.

The word Bhīl is a generic term for hunters. It is derived from the Tamil word Bhilawar meaning bow man[5]. The female ascetic Śabari in Valmiki Rāmāyaṇa was a Bhīl. Similarly, the Māhābharata describes a fight between Śankar disguised as a Bhīl and Arjuna[6]. All this shows that the Bhils were believed to be living in forests. They occupy mostly the hilly areas. Although, distributed all over the Malwa plateau, they are concentrated in Banswara, Jhabua, Dhar and West Nimar. They use dialects derived from Rajasthani, Gujrati, Malvi etc. languages, according to their proximity with particular agricultural community. This indicates tremendous inter-action between the agriculturalists and the hunting gathering groups. The interaction between the communities of the hills and communities of the plains works out in a few discernible patterns. The Bhīls work as agricultural labourers on the plains in periods of scarcity which coincides with the sowing season. They supply firewood and wild products like honey, Venison and Mohua flowers to neighbouring peasant communities. Thus, two kinds of exchanges have been taking place between the agriculturalists and the hill people i.e. the exchange of labour and the exchange of food items. This kind of cultural interaction has been continuing since hoary antiquity. In this pattern of interaction there has been continuous process of mingling of the peasants and hunters[7].

Even the famous king Vikramāditya after whom the Mālava era is named was related to Bhīl groups. He belonged to the Gardabhilla tribe. The 'Bhilla' ending might suggest some relationship with the Bhīls. This is indicative of the switch-over from hunting gathering way of life to agriculture in the early historical period, a pattern which might be observed even earlier[8].

The pastoral nomads living on the margins of the Malwa plateau present another interesting case of adaptation to the local conditions. Pastoralism is a mode of life primarily dependent upon herding of animals. It involves regular movements in search of new pastures to areas which are marginal for the agriculturalists. At present they are confined to some hilly regions of the Vindhyas in places like Chindwara and Betul[9]. But there are indications that in ancient times this region had a seizable population of pastoral nomads. The Abhiras who have been traditionally associated with pastoral nomadic activities have been associated with the Malwa region in the historical times. A late Jain work Kalpasutra refers to Malwa and some other regions as Abhiradeśa[10]. Mathura and its adjoining areas are considered their homeland by the Abhiras all over India[11]. In fact one of the reasons for the creation of Chambal badlands is the excessive grazing by cattle.

These areas are still frequented by pastoral nomads. The legends of Krsna who was a Yadu prince always associate him with the Gopas, a pastoral group. The close interaction between these two communities (Yadus and Gopas) in ancient India are indicative of the symbiotic relationship of the two communities. The Abhiras originally came from Rajasthan and Sindh and settled in various regions including the Malwa region[12]. Even in modern times Guna district and some other areas show a high proportions of pastoral castes[13]. This indicates sedentarization of pastoral communities in the past. Besides, place names like Gopagiri, Asirgarh (Assa-Ahir-garh), Gohand, etc. indicate some kind of relationship with cattle-herding. The rural bovine ratio is highest in middle India (100 and more per 100 people). This might indicate the existence of large pastoral groups in the past. One is not associating this phenomenon with the existence of particular tribes like the Abhiras or Yādavas, rather a kind of dynamic ecological adaptation by different communities, is suggested. They may change when the ecological system itself changes. When conditions favourable to pastoral nomadism, e.g. pressure on available land, lengthy droughts and so on are reversed by the opening up of new agricultural land. The nature of a

nomadic settlement and the associated importance of agriculture can best be visualised as a mobile point along a continuum with 'full sedentary' marking one end and 'wholly imperament' the other[14].

Another interesting fact is that pastoral groups from Rajasthan and Gujrat come upto Indore and Bhopal in dry seasons[15]. Malwa plateau is a thoroughfare and area of attraction for nomadic peoples. Their numbers increase considerably in years of drought. Besides, itinerant merchants like the Lambadas and Banjaras also keep traversing these areas. They sell salt and animal products like ghee, milk etc to the agriculturalists. In fact in Gujrat pastoral nomads pen their cattle in fields for manuring them. Some groups of iron smiths (Gadia Lohars) also come to this area from Rajasthan. They make agricultural implements and household articles like knives, containers etc[16].

The peasants and the pastoral nomads are interdependent on each other. The pastoral nomads exploit areas which are marginal to the agriculturalists. They supply milk, curd, ghee and hides to the villagers, they manure their fields and sometimes engage in other kinds of trading activities like selling salt etc. The pastoralist in return get food grains from the peasants without which they can not survive, because more often than not they are in short supply

supply of food. In fact pastoral nomadism as a way of life presupposes the existence of peasant groups which supply their food requirements. A year of drought might lead to an onrush of large pastoral groups from Rajasthan to Malwa. In certain cases of prolonged drought these communities might stay back in Malwa itself. Here one has an example of what can be called mal-adaptation, when pastoralists might persist with their ways of life in an agriculturally exploitable niche. But mostly Pastoral castes seem to have been generated where an intense peasant pastoralist symbiosis was developed[17]. Certain features of pastoral life also indicate the inherent instability of the total system. A pastoral group finding itself divested of its cattle might use hit and run methods against agriculturalists. They might take away the food items or sometimes might even subjugate the peasants[18].

The agriculturalists cover the largest portion of the Malwa region. They have been the dominant group since early historical times and may be before that also. They occupy the whole of black soil region and as such provide the most important form of adaptation to the local environment. The early historical period saw the rise of cities in this very core region.

As pointed out earlier, Western Malwa is a low rainfall zone. The black soil which covers this region is very fertile

and has an extraordinary capacity to retain moisture. It is known to have supported agriculture for centuries without manuring or being left follow[19]. A British agricultural expert commenting on the farming practices in the later half of the 19th century has made some interesting observations. He says that the farmers rarely ploughed the field. They did not even use a harrow. Rather they employed a Dutch-hoe which was the only agricultural implement known to them. The soil swells in the rainy season after absorbing water. In summer they lose a large amount of moisture and shrink in consequence. Wide cracks develop in the soil, sometimes as much as a metre deep. These cracks were filled by the fine soil of the surface with the help of some minor implement. This ensured a regular circulation of the soil. The cracks serve the function of ploughing by admitting free air into the body of the soil[20]. Even in modern times in some parts of central India hard wood of khair etc are used for making ploughs and they do not have any iron-share[21]. These agricultural practices can reasonably be expected to have prevailed in the same form or still more primitive form in early India. This knocks the ground out of such hypotheses which assume that a sufficient surplus could not be generated without the iron technology, especially iron ploughs[22].

Due to low rainfall, farmers practise dry farming in Malwa. The soil is fertile enough to bear both the kharif

and Rabi crops without irrigation. Apparently, the soil is so retentive of moisture that even the small amount of rainfall for the spring season crop is sufficient for plant growth[23]. Most of the rivers in this region flow through high banks cutting past hard basaltic traps. The hard rocks afford very shallow channel for the streams. In the summer season they cease flowing altogether with a few poodles of water left here and there[24]. Thus, even though the rivers like Chambal, Kali-sindh, Sipra, Parbati etc. carry considerable volume of water in various seasons, they are of little use for agriculture. The steepness of their banks makes irrigation from their waters very difficult. It is difficult to dig wells also because of the proximity of rock[25]. Even in 1971, the total irrigated area in Malwa did not exceed 8% of the total cultivated area[26]. 82% of the total irrigated area has well-irrigation and the rest of its is by ponds and canals[27].

If one maps the distribution pattern of the rural settlements with the relief types and the spread of the types of soil, one can discern the prime fact of environment. Cultivation or its absence as determined by various natural factors has a lot of do with the kind of settlements that exist in this region. The fertile plateau proper extending from the Mahi divide to the Betwa Sind basin

presents uniform distribution of habitation. The area is criss-crossed by channels like Chambal, Parbati, Sind etc. Here the physical and cultural settings have combined to present a homogeneity in the spatial pattern of habitation. Inter-village distance varies from 2-3 kms to 2-6 kms. This area and the Nimar plain on the Narmada are characterised by the compact type of rural settlements. Villages range from a cluster of thirty to hundreds of dwellings. Unlike these, the dissected relief of the Vindyas generate dispersed and scattered habitations[28]. The population distribution pattern also clearly shows the fertile Malwa plateau to be the area of attraction[29]. The areas traversed by the Vindhyas are characterised by sparse habitations. Districts like Indore and Ujjain have population density of 262 and 142 per km. respectively whereas districts like Sehore, pratapgarh etc. have population densities below 90 persons per kms^{-2}. All the ancient cities which emerged in this region were located in the agriculturally fertile areas. This emphasises the fact of the dependence of the early cities on the surrounding agricultural hinterland.

The socio-political structures which emerged in space and time were a result of the dynamic articulation of the interaction among the three groups, i.e. the hunter gatherers, the pastoral nomads and the agriculturalists. A kind of

disequilibrium is structured into their relationship. The hazards of pastoral nomadic and hunting gathering ways of life in the presence of aggressive agricultural communities might have led to the shift of labour to the agricultural communities. It would be interesting to look into the factors which caused imbalances in this pattern of interaction among these three groups in ancient Indian context. Another interesting factor to be taken note of is that the Malwa region functioned as a connecting link between the northern and southern India. Communities have migrated from the Indus region to this area even in the historical times. The contrasts outlined above among the three different patterns of adaptation are reinforced by these migrations. One can reasonably hypothesise that the communities which will emigrate from north-west will be primarily pastoral nomads. On the other hand we may assume that the communities emigrating from Agra-Mathura region should be both agriculturalists and pastoral nomads. To the east of the Malwa region we have dense forests of Mandla region which will foster hunting gathering way of life. Thus, the contrasts inside the Malwa region are further articulated by the different types of areas which surround it. The requirements of the three groups functioning in a wider world of the whole of northern India stimulated exchange activities. In fact some of the

settlements are located on points where such exchange activities could take place. Big settlements like Bagand in Khargone, and Manpur in Indore, are examples of contact point settlement[30].

None of the Malwa plateau rivers is navigable. However some sections of the Narmada can be traversed for a few months of the year[31]. Thus, Maheswar emerged as a city in ancient India not simply because it was located at the heart of a fertile agricultural plain but also because it was the point where Narmada could be crossed with great ease. Even in the medieval period a place called Akbarpur adjacent to Maheswar was used as the crossing point on Narmada. This was because the river at this point was about one mile broad and no deeper than three feet. It was easily fordable with camel for most of the year[32]. This stretch of plain-land about 16 miles long in the Barhwa Maheswar is succeeded and preceded by deep valleys and gorges. Not only this, the usually steep scarps of the Vindhyas can be easily crossed here. Thus, even in modern times the road to Dhar and Indore passes through this area. That is why, the ancient routes converged on the 16 mile stretch of Maheswar plains[33]. Crowded villages on road and river crossings can be seen is Bistan, Pati, Silawad etc. in the Khargone district. Internal competition and conflict among the agriculturalists has also given rise to stronghold fortresses on hill spurs. From these fortresses the chiefs could control the agricultural population and sometimes save

them from the depredations of other groups. Fortresses like those of Bijagarh, Ramgarh (Khargone). Asirgarh (Khandwa) indicate an old pattern of adaptation to defence requirements[34]. Malwa region was famous for its exports of precious and semi-precious stones. This kind of activity has been found associated with the oldest agricultural communities in the area i.e. the Kayatha culture. These semi precious stones are found in many areas of Malwa. Ujjain exported semi-precious stones in the early historical period to west. Specialised working in stone quarries could have given rise to some sites.

The rather simplified picture presented above regarding the ecology of the region, has taken us very close to the cultural materialist position. Let us reassert the fact that the environmental factors simply act as formative influence. There is always a possibility, that communities will continue with their old forms of adaptation even though more rational forms of exploitation of nature are known to them[35]. What we are aiming at is an understanding of the societal processes which functioned in a particular ecological setting. Environmental factors do not explain the origin of states and urban centres but simply form the background for the emergence of particular kinds of social formations.

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2. National commission on agriculture, (1976), Rainfall and cropping pattern, Vol. XIII and IX, give us interesting insights through their division of various sub-zones having differing rainfall and cropping pattern.

3. Statistics for net sown area and wasteland are the following in the Jhalwar district:-

Tehsil	Net sown area	Wasteland
Pachpahar	57%	27%
Khanpur	57%	24%
Jhalrapatan	42·5%	34%
Aklera	38·5%	42%
Pirawa	58%	29%
Gangadhar	39%	44%

Source - National Commission on agriculture, Vol. IX.

In contrast to these the averages in some near-by districts read as following:-

Tehsil	Net sown area	Wasteland
Indore	69%	16%
Sawar	81%	9%
Depalpur	79%	8%
Ujjain	75%	16%
Badnagar	80%	9%
Khacharod	71%	14%
Mahidpur	74%	8%
Tarana	72%	7%

Source: National Commission on agriculture, Vol.XIII.

4. Amos Howley, "Human ecology", in International encylopedia of the Social Sciences, Vol.3-4.
5. Shambhu Lal Doshi, (1971), Bhils: between societal self awareness and cultural synthesis, Delhi, p.16.
6. R.Y. Singh, (1972), Bhils of Malwa region - their habitat, economy and society. The national geographical journal of India, Vol. XVIII. No.3-4.
7. At present most of the Bhils have taken to agriculture except in some remote pockets. But the poor soils on the hills and primitive methods of agriculture do not provide sustenance throughout the year. They are dependent on the communities of the plains for at least some part of the year. 1/6th of the Bhil population work as agricultural labourers in plains'

villages. They cultivate fields as share croppers or landless labourers. The labourers often go to Gujrat, Malwa and Nimar during the harvesting period. Nearly 20% of their work force is engaged in rearing live-stock for milk and animal power. See R.Y. Singh, (1972). In fact, areas like Khandwa in Nimar district were famous for the excellent breed of cattle even in Mughal period. See Irfan Habib, (1982). An atlas of the Mughal empire, Delhi, plate 9 B. The Bhils also work as labourers in road construction, forest labour and railway construction. According to one case study in the Jhabua district, most of the labour force migrates to Nagda, Ujjain and Gujrat in the months of April and stays away till September, See J.B. Naik, (1969), Impact of education on the Bhils, New Delhi, pp.212-214. Sometimes they permanently settle on the plains and become part of the villages. See R.Y. Singh (1972).

8. We shall discuss this problem in greater detail in the next chapter.

9. A.B. Bose, (1972), "Pastoral nomadism in India", in L.S. Leshnik and G.D. Sontheimer (eds) Pastoralists, and nomads in South Asia, Heidelberg, 1972.

10. B.M. Suryavanshi, (1962), The Abhiras: Their history and Culture.

11. ibid.

12. ibid.

13. ibid.

14. Lawrence Leshnik, (1972), "Pastoral nomadism in the archaeology of India and Pakistan". World archaeology 4.2.

15. R.O. Whyte, (1964), The grassland and fodder resources of India, I.C.A.R. monograph, New Delhi.

16. V. Raghavaiah, (1968), Nomads, Secunderabad pp.175-76.

17. In an interesting study of the process of sedentarization of pastoral groups in the adjoining Gujrat region Hellbusch has shown how the pastoralists react to the demands of the agriculturalists. The Bharavad pastoralists stay in peasant villages for longer periods because the peasants' demands for milk, ghee etc. have increased. Due to an increase in population and extension of cultivation the pastures and cattle have decreased in numbers. Thus, the peasants are more and more dependent on shepherds for the supply of animal products. The Bharvad pastoralists might stay as long as three years in a single village. Sometimes they settle there permanently. This indicates the dynamic inter-relation between the peasants and pastoralists. It has been well said 'a true nomad is a poor momad'. Wealth is a burden to him. Excessive Wealth hinders his movement.

If the size of the herd he owns exceeds a particular limit he is forced to make faster movement in search of pastures which is made difficult by the large numbers of the cattle. If the number of cattle (who usually have a high mortality rate among pastoralists due to biological reasons) decreases below a limit the nomad can not survine on them alone. Thus, at both the ends of the continuum i.e. if the nomad becomes rich beyond a threshold or if he becomes poor below a level, he will join more sedentary groups. In case they are rich they will convert their wealth into land or such other forms of more permanent wealth. In case they are poor they work as land labourers with the peasant communite. See. S. Westphal Hellbusch, (1972), "changes in meaning of ethnic names as exemplified by the Jat, Rabari, BharaVad and Charan in North-Western India", in L.Leshnik and Sontheimer, (1972).

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22. ibid. They have effectively demonstrated the improbability of Agrawal's hypothesis that due to technological limitations the chalcolithic communities could not exploit the black soil for agriculture, see D.P. Agrawal, (1977), The copper-bronze age in India, New Delhi, pp.228-230.
23. The Imperial gazetteer of India, Vol. IX. p.358.
24. R.Y. Singh, (1978), The Malwa region, Rural habitat system, Varanasi, pp.67-68.
25. See the Gwalior state gazetteer, Vol.XII.
26. R.Y. Singh, loc. cit. pp.19-21.
27. ibid. This kind of agricultural practice rules out the possibility of state formation model provided by Karl wittfogel. His notion of semi-arid regions requiring a network of canals for successful agriculture, giving rise to a state organisation does not seem hold true in our case. The despot who is the repository of all power and wealth derives his power from the control

of irrigation canals. See Karl wittfogel, (1957). Oriental despotism, New haven.

28. R.Y. Singh loc.cit. pp.69-107.

29. ibid. pp.31-32.

30. ibid.p.69.

31. The Imperial gazetteer of India. Vol.IX. p.325.

32. Irfan Habib, (1982). An Atlas of the Mughal empire, p.25.

33. Sankalia and his colleagues have surveyed the Narmada basin which clearly brings out the importance of Maheswar region as a crossing point. See H.D. Sankalia, S.B. Deo, and Z.D. Ansari, (1971), Chalcolithic Navdatoli, Poona, pp.1-5.

34. ibid. p.67.

35. P. Bronte nomes out with an interesting example of the Masai tribesmen who are exclusively pastoral nomadic, in an environment where agriculture is possible, whereas the Turkana attempt cultivation in an uncompromising and arid zone. These can not be explained as effects of ecological factors. See P. Bronte, (1978), "Non-stratified social formations among pastoral nomads", In J. Friedman and M.J. Rowlands, (eds.), The evolution of social systems, Pittsburgh.

CHAPTER III EXPANSION OF THE AGRICULTURAL COMMUNITIES

3.1

The Kayatha culture complex represents the earliest known agricultural settlement in the Malwa region. Kayatha is situated in district Ujjain on the bank of the river Choti-kali-sindh. The Kayatha culture spanned over a period of two-hundred years i.e. between C. 2000 B.C. and C 1800 B.C[1]. The Kayatha people with their advanced copper metallurgy and specialised stone blade industry, do not seem to have had any antecedent in this area. This indicates that they came here from some other area. Thus, even at this early stage certain socio-economic processes were generating population movements. It is, however, difficult to answer what these processes were or where from the stimulants came.

So far, over forty sites with traits of the Kayatha culture have been discovered. They are mostly located in the black soil region around the tributaries of the Chambal river[2]. At the same time the time span of the Kayatha culture is co-eval with a part of the time span of the Indus-valley civilization. If one keeps in mind the historical pattern of migration of communities, and cultural influences, it seems likely that the Kayatha culture was related to cultures, north-west of it. Certain parallels have been found between the pottery of Kayatha and those of pre-Harappan Sothi culture. The red painted Brown slipped ware has

certain resemblance to the Dark slipped ware from Sothi. The deep bowl with the beaded rim and the globular jar with a concave neck has its counter parts in Sothi with minor differences.[3] Similarly, exact parallels of the Combed red ware have been found in Sothi[4]. There are certain similarities between the Kayatha and the Harappan pottery also. The Harappan Vessels having dark chocolate slip are quite similar to Kayatha Brown slipped ware. Again, a huge storage jar with a heavily beaded rim in the Kayatha ware shows similarity with a Harappan pottery[5].

Two exquisite necklaces composed of 173 and 160 beads of semi-precious stones found in a house remind one of a similar necklace from Mohenjodaro. A pot containing over 40,000 micro-beads of steatite, has been found in the same house as the earlier finds. This house also yielded copper axes, beads, bangles and storage jars. It was a large house with well-rammed yellow silt[6]. All this indicates that this house had emerged as the focus of the entire community. This fits in with the model of a tribal society. The settlements are of roughly equivalent size having houses of roughly uniform size but including a larger house with stronger ritual associations[7]. A particular lineage producing surplus has gained prestige and power. This is reflected in the existence of a larger house having a richer collection of artefacts including

some prestige goods like copper axes and necklace. There is a movement of precious goods to one centre. Malwa region was famous for its bead making industry in early historical times. One wonders if the pattern of trading can not be stretched back to pre-historic times; especially when we know that the Indus civilization engaged in vigorous trading activities with faraway communities. The extensive bead making industry of Chanhudaro might indicate, that it was one of the items of export[8]. There is considerable variation in the quality of the cutting of beads in the Indus valley[9] which might indicate that they came from different sources. Can one expect some kind of trade relationship between the Kayatha people and the Indus Valley? Can the high technology of the Copper axes be related to contacts with the Indus Valley? Probably some kind of 'trickle trade' was taking place, with the material changing hands over very short distances before reaching the consumer. Production was based on locally available material and some exotic materials like copper etc. were trickling in from distant sources, in small quantities. This kind of exchange takes place between village to village and nomads to village[10]. Especially when we know that pastoral nomadic communities existed in places like Bagor (in Banswara dist.) and Tilwara (on the margin of the Thar) even in very early period, these finds might indicate the existence of exchange relations between the

peasants and pastoral nomads. In fact, Bagor has yielded a large neckless jar which is very much similar to the pottery of Kayatha. There are other parallels in the pottery also[11]. The over all impression we have is that of an agricultural community spread over a uniform ecological niche. It is likely to have been related to communities to its north-west. These contacts might have influenced the institutional structure of these communities.

3·2

The next phase of cultural development in this region is characterised by a culture having affinities with the Banas culture of Rajasthan[12]. This period saw both an increase in the site size (at least in Kayatha) and an expansion of the inter-action sphere. The uniformities in pottery and other material remains, between the cultures of the Banas valley and those of the Malwa region indicate a more intensive pattern of inter-action over a larger geographical horizon compared to the preceding phase. Centred around the Banas river basin, The Ahar culture phase, named after the type site of Ahar (in Udaipur district) has been dated to 1700-1600 B.C. in Kayatha, on the basis of Radio carbon dates[13]. Kayatha was re-occupied after a gap of a hundred years. There is a complete break in the pottery tradition. Similarly, the appearance of

stylized terracotta figurines indicates the emergence of a different kind of religious belief system. But there is a distinct continuity in the stone blade industry which was to characterise all the succeeding chalcolithic cultures.

The typical Black and red ware used by the people in period II at Kayatha, indicates that the immigrants came from the Banas valley. This Black and red ware has been discovered in the earliest levels of Navdatoli[14] and Nagda[15]. Similarly, necklaces of shell beads of a short cylindrical shape and a short bicone terracotta bead bearing punctured patterns, have been found in both Kayatha and Ahar[16]. At the same time the Kayatha culture of the earlier period continued to survive in other Chambal river sites. This is evident from the overlap between the Kayatha and Malwa culture phases in many of these sites[17]. Unfortunately we do not have any detailed information regarding those sites where there is overlap between Kayatha and Malwa culture.

The Banas basin is an extension of the Malwa plateau. It is a flat alluvial country with slightly less rainfall than in the Malwa region. So far around fifty Banas culture sites have been discovered in this region alone[18]. In the Malwa plateau sites like Navdatoli, Nagda, Kayatha, etc. have shown evidences of cultural contact with this region. Thus, compared to the Kayatha culture there are many more

agricultural settlements dotting the landscape of Malwa and the Banas valley. However, there are significant variations in the patterns of adaptation in these regions.

Ahar was a purely copper using culture. Hardly if any stone implement has been found at this site. On the other hand Kayatha had a full-fledged blade industry with hardly any copper in the same cultural phase. The abundant use of copper at one site and its almost total absence at the other reflects the social structure of these communities. / At this stage of development the agricultural communities in the Malwa region did not as yet have the elite groups which could generate demands for foreign prestige goods like copper. These communities exploited locally available sources and inter-regional trade seems to have been almost absent. On the other hand, it is well known that the Harappans almost certainly exploited the copper mines of Rajasthan. This is evident from the similarities in the traces of nickel and arsenic content of the metal[19]. Could the extensive use of copper by the Aharians (even though of inferior quality compared to that of Indus) suggest some links with the Indus people? Could they be supplying copper ores? The Ahar culture sites have yielded dishes and bowls in Tan ware, which are closely related to the Harappan pottery[20]. The pastoral communities from sites like Bagor and Tilwara were intimately related to

the Banas culture. This is evident from their pottery and other artefacts[21]. Even in modern times sites like Bagor and Tilwara are inhabited by pastoral nomads[22] and there is a regular pattern of movement among them from the dry areas of the Ghaggar valley to South-east Rajasthan. Sometimes they go upto the Malwa plateau[23]. These communities with their annual transhumance might have been the connecting link between the Indus sites on the Ghaggar and the Banasians. Some similarities in pottery forms have been discovered between the Ahar Culture and Indus sites in Gujrat, in the later phase[24]. This might indicate an other direction of communication[24].

Kayatha has yielded a large number of terracotta figurines which are absent in Ahar. Stylized bulls made of fine clay, were probably used for worship. The naturalistic bull forms might have been used as toys but the stylized forms seem to have been used for ritualistic purposes only[25]. Terracotta figurines can be produced on a large scale only in a well established society. It is undertaken when there is a demand from institutionalised religious cults. Clay figurines were required for making votive offerings or they could be used as magical charms or household deities. Elsewhere the demand arises from a people who buy secular figurines and plaques for

decoration of homes or as toys for children. More important is the fact that, while these sites were showing certain uniformities in the sphere of economy and exchange (semi-precious stones, pottery etc. although copper was largely absent) they had independent spheres of belief systems as far as religion was concerned. Another interst-ing fact is that, some kind of variation in site size comes in evidence in this period. Thus, while the majority of the Ahar culture sites were small hamlets covering two to four acres, Ahar and Gilund covered an area of ten acres. This increase in the site size may have occurred towards the end of the chalcalithic period in Ahar, that is around 1300-1200 B.C. This can be inferred from the finds of a large structures (it overlaid smaller structures of two earlier periods) 30' long. Similarly, the appearance of a few lustrous red ware sherds and a Jorwe sherd in this phase (period I C of the excavator) makes it roughly contemporary with the Malwa and early Jorwe phases. Thus, this does not fall into the time range of the Ahar cultural phase we have postulated for Malwa sites like Kayatha. The variation in the site sizes and differences in the sizes of residences (the smaller houses were only 10'x9') is symptomatic of domination of smaller sites by a large site. One unit had acquired greater power and it was increasingly able to make decisions that were binding on

others. Sites with greater agricultural potential or having access to valuable minerals are likely to have engendered new patterns of relationship. The lineages which controlled these areas were apt to acquire greater prestige vis-a-vis other lineages. This superiority in production was artifulated through manifestations of control over super-natural by particular lineages[27]. Thus, some sites emerged as the focus of ceremonial activities with a particular lineage in its control. Could the Banas culture sites indicate the incipient origins of chiefdom? At the same time, the increase in the interaction sphere meant the availability of goods absent in one region. The cultural inventory was enriched. It meant the stabilisation of agricultural communities, since in the time of food shortage or other such emergency communities spread over a larger area, could help each other: It paved the way for the expansion and prosperity of the agricultural communities.

3·3

The next phase of cultural development is known as the Malwa culture phase. It has been named after a particular kind of pottery, predominantly found in Malwa in this particular cultural phase. In Kayatha[28] and Navdatoli[29] (located near Maheswar) this culture came

into existence around 1600 B.C. and ended around 1300 B C[30]. This culture was characterised by a black painted red pottery made of fine orange buff paste. It had a variety of designs geometric, floral, animal and a few human shapes, in black. What impresses one is the spread of this culture over a large area. It has been found at Daimabad and Inamgaon in Ahmadnagar and the Poona districts. Sites like Prakash in the Tapti basin at Khandesh have also yielded this pottery[31]. In north Kayatha, Nagda and Manoti (Mandasaur district) have a Malwa cultural phase[32]. Eran in the Sagar district has yielded the Malwa pottery at the earliest levels[33]. At most of the sites the Malwa settlers seem to have been the earliest agriculturalists. This indicates a tremendous population increase, or immigration from other areas. Or else it might suggest the gradual aculturation of hunting and pastoral groups by the agriculturalists. Again compared to the two cultural horizons discussed earlier the Malwa culture has a larger geographical spread. Apparently the agriculturalists seem to have confined themselves to the low rainfall black soil region. But they were crossing the Vindyas and the Satpuras and fanning out in Khandesh and the whole of the Deccan. On the margins, they did have contacts with other cultures. Kayatha, Navdatoli, and other sites have indicated an overlap between the Ahar and the Malwa cultural phases. Nagda,

located in the Ujjain district, has indicated certain influences from Saurastra in its chalcolithic deposits[34]. Certain influences in pottery forms from the Southern neolithic cultures have also been noticed[35]. Stone tool technology formed the backbone of the economy with parallel sided blade industry being most important. However, the Malwa culture sites have a sprinkling of copper tools. The preceding phases of culture in sites like Prakash, Bahal, Chandoli etc. showed the existence of neolithic communities. The introduction of the Malwa pottery which gradually became the dominant ware in all these sites, saw the introduction of copper technology in these areas[36]. Thus, the Malwa culture is associated with the spread of copper technology in the Deccan. At the same time the continuity of the stone blade industry indicates the element of continuity from Kayatha to the Malwa phases of cultural development. In fact it might indicate that some specialized community was engaged in producing these stone implements. Factory sites have been dicovered at places like. Adamgarh, Lalitpur, Mandasaur, Bhopal etc. The size of these sites suggests that they must have served the needs of more than a single extended family or band. It is possible that many groups visited them. Or else, the communities which stayed around these places of good

quality raw material might have exchanged it with surrounding communities. Most of the rock shelters have yielded chalcolithic potteries[37]. At Adamgarh bones of sheep and goats in addition to those of pigs, dogs and buffaloes have been found. Equally large number of bones of wild animals have been discovered. Most probably they indicate a combination of hunting and pastoralism[38]. The close association between the agriculturalists and these hunting pastoral groups is indicated by the fact that they were using the same basic material derived from the same local sources and the same basic techniques and were producing the same range of tools with differing proportions[39]. In the Southern neolithic there are clear evidences of particular kinds of stone being carried upwards of fifty miles. Certain examples of tools made in one centre having been discoverd in more than a dozen sites have also been found in the South[40]. But in Malwa region such precise co-relation has not been made so far. The possible mechanism of these exchanges is difficult to make out[41].

Together with the fact that the hunters, pastoralists and agriculturalists, had established a symbiotic relationship the dominant group i.e. the agriculturalists seem to have been emerging as the dominant group. Even in sites like Adamgarh which was occupied by pastoral nomadic groups, slash

and burn cultivation was practiced[42]. There seems to be a distinct possibility of shift from pastoralism and hunting gathering to agriculture. This kind of shift and the increase in the population of agriculturalists might explain the increase in the number of Malwa culture sites compared to those of the preceding cultural phase.

The individual sites of the Malwa culture themselves show signs of prosperity and population growth. At Navdatoli, phase I which was characterised by the Black and Red Ware of the Banas type, there were around 50 pottery types in all[43]. The phase II at Navadatoli i.e. the Malwa culture proper saw a quantum jump in the quantity and variety of potteries. This phase had roughly around 75 (Seventy five) pottery shapes[44]. This will mean an increase of fifty percent over the preceding phase. The greater variety in pottery shapes signifies many more kinds of requirements for the society. This would suggest a much more prosperous culture compared to the preceding period. It has to be combined with the evidence indicating a trend towards population increase. Navdatoli had initially ten huts with a population between 50 to 100. It expanded further in phases II and III when a larger area was occupied. At its peak the population might have increased to as much as 500[45]. Similarly, beads of semi-precious stones have been found in larger number

in the Malwa phase compared to the preceding phase in Navdatoli[46]. Objects of sea-shell showed contacts with the sea-coast, possibly Broach[47]. Various kinds of habitation structures have been discovered here. There is considerable variation in the size and shapes of these houses. Most of the structures were round huts not exceeding 8 feet in diameter. The smallest of these were probably used for the storage of grains. Some of the rectangular structures were quite large by comparison. Structures measuring 40'x15' and 22'x22' have been discovered. One of them seems to have been constructed for religious performances[48]. These variations in the sizes of habitation structures might indicate social differentiation with a small group controlling the larger community.

The overall inventory of tools and other objects is certainly richer than in the preceding period. But it does not suggest any significant increase in trading activities. Most of the materials were locally available or could be procured through inter tribal exchange. The use of copper might have generated some exchange activities. But even this was mostly procured from locally available sources[49]. In the Malwa region copper has been reported from the districts of Harda (Near the district of Khandwa) and Jhabua[50]. In small quantities. Prof. Sankalia has suggested west Asiatic origins for the channel spouted bowls in the Malwa ware. But it is more likely, that it

was derived from the Southern neolithic[51]. Sea-shell and lapis lazuli in Navdatoli were probably procured through 'trickle trade'.

The Malwa culture signified the expansion of agri-cultural communities in and around Malwa. The existence of small and big houses indicates some kind of differen-tiation. The communities seem to be in the chiefdom stage.

The next phase of development is known as the Jorwe culture phase after a (dated C. 1300-700 B.C) type site in Maharastra. In Navdatoli the Jorwe pottery appears in phase II and red pottery with black painted decoration characterising this phase has, again, a wide spread. This pottery seems to be derived from the assimilation of the southern neolithic and the Malwa potteries. The tradition of painting in black over red is obviously derived from the Malwa ware. The changes in the fabric and surface dressing are already indicated in the Malwa ware of Maharastra. Unlike the coarse fabric and buff slip in Malwa sites the Maharastra specimens have fine fabric and a pinkish red wash[52]. The globular jar, carinated bowl and lotas (Indian household utensil) in Jorwe ware are derived from the Malwa ware. From the Southern neolithic it borrowed tubular spouts and funnel mouth[53]. The dis-tinguishing feature of the paintings in the Jorwe pottery

is the speed and deftness of application. The fussiness of the old pottery style disappears and the linear patterns are simplified. The number of animals and human motifs also diminishes. The mark of the new pottery is the economic use of decoration with rapid strokes[54]. This implies mass-scale production, greater demand for pottery and greater efficiency. On the basis of many C^{14} dates available from sites like Nevasa, Chandoli, Navdatoli and Inamgaan etc. Jorwe culture has been dated from 1300 B.C. to 700 B.C[55]. Most of the Jorwe culture sites were deserted by 1000 B.C. but, on the basis of evidences from Inamgaon and Sonegaon, a late Jorwe phase lasting upto 700 B.C. has been postulated.

The Jorwe culture spread upto the upper Krsna Valley in South and Navdatoli was its northern extremity. It covered almost the whole of Maharastra except Konkan[56]. In the Malwa region itself sites like Nagda, Eran, Manoti etc. did not have Jorwe pottery and they continued to use the Malwa ware. Apparently the close interaction between the Malwa and Jorwe people indicates similar patterns of development. Thus, studies conducted in one area might give insights into the developments in the other region.

Sites like Navdatoli, Daimabad and Inamgaon indicate that the Jorwe culture phase overlapped with the Malwa culture

As pointed out earlier they were likely to have developed out of a synthesis of the Southern neolithic and the Malwa culture. Contacts with Lustrous red ware people in Saurastra have also been found in some sites[57]. This will indicate a widening of the cultural horizon. The agriculturalists in the black soil region were interacting with Southern neolithic, Saurastran chalcolithic and the Banas chalcolithic. The expansion of agricultural communities continued as is evident from settlements established on virgin soil in Sonegaon, Jorwe, Chandoli, etc. Nav datoli, Inamgaon and some other sites witnessed expansion in site size.

Many new developments are discernible in the socio-political structure in the Jowre period. In the Deccan a two-tiered settlement hierarchy had clearly emerged. The settlements were clustered in three regions i.e. the Tapti basin, the Pravara — Godavari valley and the Bhima valley. Each of these regious had one large site which, because of its size might have dominated the whole region. Prakash in the Tapti valley, Daimabad in the Pravara - Godavari basin and Inamgaon in the Bhima Valley spread over an area of about fifteen acres each. The average size of the sites was five acres. Some medium sized sites like those of Jorwe, Bahal and Nevasa have also been discovered[58]. Incidentally, it must be pointed out that

the three bigger sites were roughly equidistant from each other. This shows that some kind of 'central places' had emerged on this large undulating terrain. At Inamgaon there is some evidence of planning of the settlements, a feature which is absent in the preceding Malwa phase. Large rectangular houses at a distance of a metre and a half from each other spread over the whole of the habitation area. One particular habitation area seems to have been occupied by privileged individuals, as an embankment was constructed to protect it[59]. A huge structure at the (10·50m x 9·15m) centre of the main mound, having a number of pit sides and round platform for storage bins of various sizes was also discovered. It had large fire pits on one side the excavator believes that it was a public building. It may have been used as a granary by the priest chief[60]. To the north of the granary a large house, having five rooms including a kitchen and a store room, was discovered. Most other houses in the site seem to be single room dwellings. This indicates that the person living in the five room house enjoyed an exalted status. There is considerable variation in grave goods in the burials discovered in this site. In one case a person was buried in an urn of unbaked clay having four stumpy legs. The man was buried in a sitting posture and

his feet had not been amputated. In all other cases the feet of the buried person had been amputated[61]. At another site a child burial has been discovered in which a copper bronze necklace was found around the neck of a child[62]. The use of a costly necklace by a youngster indicates that he was enjoying a high status by birth. This is an important evidence of change from a society where status was acquired through acts of bravery to one where a person was born with a high status.

The existence of a mud embankment 240 metre long and oa channel 4 meter wide and 3·50 meter deep dug parallel to it, indicated the presence of an authority at the site[63]. This authority could organise and direct the community efforts. At Daimabad also traces of an earthen embankment have been discovered which could have been a fortification also[64]. These embankments indicated the societal potential for the mobilisation of labour on a larger scale than was possible before[65].

Copper bronze implements were used on a larger scale. The craftmen's habitations were huddled together in the periphery of the site at Inamgaon. This pattern of keeping the craftsmen at the periphery of habitation prevails even now in Maharastra villages. These craftmen's quarters had pit silos for storing grains which they exchanged with the agri-

-culturists. The Baluta system in modom Maharastra involves exactly this kind of relationship between villagers and craftsmen[66]. Period I and II yielded houses of potters, coppersmiths and ivory carvrs. Thus at least three kinds of craft specialists seem to have emerged by the early Jorwe phase. The Jorwe pottery bears potters' mark in the form of a dot or a cross[67]. The use of potter's mark is indicative of private ownership and a more conscious specialisation of labour. The graffiti decorations show a drawing of a cart with solid wheels by humped bulls[68]. This is proof of the existence of wheeled transport in this period. Whether, it was used by the preceding chalcolithic communities or not, is difficult to say, but the introduction of wheeled transport must have provided a boost to the exchange economy. The occurrence of wheat in period II has been interpreted as the consequence of the introduction of irrigation. Since wheat is a rabi crop in this region it requires winter rainfall. This area has very little winter rainfall. Thus, the existence of channel near the embankment might be indicative of the beginings of well organised irrigation[69]. Navdatoli, Kayatha etc. have yielded evidence of wheat cultivation in the Malwa period itself. That is because, this region had a higher rainfall. All these evidences show the beginnings of double cropping from an early

period. This will mean that the agricultural economy had become much more stabilsed[70]. The richer inventory of goods, (among notable discoveries are the finds of conch shells, which could only be procured from deep South, ivory beads etc.), the two tiered hierarchy in site size, the variations in house types, the existence of embankments and the variation in burials all indicate a differentiated agricultural society. The appearance of elaborate ceremonial complexes (priest's house and the huge complex with large fire pits, identified as a religious structure) and two tiered hierarchy characterise the 'asiatic state' of Friedman's model[71].

The next phase of development in the western Malwa region has been called the late Jorwe phase dated between 1000 to 700 B.C. in Inamgaon[72]. This period, has so far been an enigma for archaeologists. By 1000 B.C. most of the Jorwe culture sites were deserted. The historians and archaeologists were unable to fill the yawning gap between the early historical period beginning around 7th 6th century B.C. and the end of these chalcolithic cultures. The desertion of sites in the late Jorwe phase has been attributed to sudden increase in aridity in the region. This is represented stratigraphically in the weathered soil layer at Nevasa[73]. Majority of Jorwe sites like

Prakash, Bahal Nasik etc. were deserted. At sites like Inamgaon, Sonegaon etc. a degenerate Jorwe phase survived. This was because the impact of aridity was less in the Bhima valley and further South. Some sites in the Krsna Valley show new influences coming from Maharastra. They are indicative of the movement of farmers from North[74].

However, no attempt has so far been made to measure the period of this drought. Nevasa had a long hiatus and was reoccupied only in the historical period, as is evident from the succedding phase IV yielding NBPW[75]. Prakash, on the other hand, had a very short hiatus between the chalcolithic Jorwe phase and the succeeding iron age. This is evident from the occurrence of fourteen to fifteen feet of BRW deposits below the first finds of the NBPW sherds[76]. Similarly some burials in Tekawada on the Girna river show an overlap between the Jorwe pottery with the Black and red ware of the historical period[77]. What we are trying to suggest is that variations in the periods of re-occupation indicate problems generated by the social structure itself. Aridity no doubt caused considerable dislocation. The late Jorwe sites of Inamgaon, Sonegaon are mere shadows of their prosperity in the earlier period. At the same time,

however, the number of craft specialists increases from three to five in Inamgaon in the late Jorwe phase[78]. Rice, Sorghum and some other legumes were introduced in the late Jorwe phase or in the overlap between the early and late Jorwe[79]. The generally arid conditions provided a spur to pastoral nomadic way of life. Probably enemy raids (as evidenced by appearance of iron age pottery in late Jorwe Inamgaon etc.) and extension of cultural interaction zone (as evidenced by greater craft specialisation and introduction of new types of crops) contributed to the social milieu existing in that period. At the same time a generalized shift towards pastoralism as evidenced by the desertion of most of Jorwe culture sites in Deccan and Malwa by agricultural communities must have triggered off tremendous social changes.

The developments within the Malwa region were following a slightly divergent course, Although they were intimately related to the goings on in the Deccan. Here fortified towns like Nagda, Maheswar and Eran came into prominence.

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4. ibid.
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7. See chapter one for a discussion on this kind of social organisation.
8. Sir Mortimer Wheeler,(1968), The Indus civilization, Cambridge, pp.98-99.
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10. T.W. Beal "Early trade in highland Iran: view from a source area", World archaeology 5.2.
11. V.N. Mishra "Bagor - a late mesolithic settlement in north west India," World archaeology 5.1.
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24. Lustrous Red Ware has been discovered in period IC in Ahar which is similar to pottery from Saurastra. See The Birth of Indian civilization, p.184.

25. Z.D. Ansari and M.K. Dhavalikar, (1975), Excavations at Kayatha, Pune.

26. This section is based on H.D. Sankalia et al., (1969), Excavations at Ahar, Poona and V.N. Mishra, (1969), "Early village communities of the Banas basin, Rajasthan" in M.C. Pradhan et.al. (eds) Anthropology and archaeology, Bombay.

27. See chapter one for further discussion.

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29. H.D. Sankalia et.al., (1971), Chalcolithic Navdatoli, Poona, p.42.

30. There are many radio-carbon dates for the Malwa culture phase from sites like Kayatha, Navdatoli, Inamgaon etc. They all roughly show the beginnings of this culture around 1600 B.C. This culture was superseded by the Jorwe culture around 1300 B.C. in many sites.

31. See D.P. Agrawal, (1971), The copper bronze age in in India, Delhi. pp.45-50. For Inamgaon evidence see M.K. Dhavalikar, (1976), "Settlement archaeology of

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32. Finds of the Malwa ware in Manoti are reported in Indian Archaeology - a review, 1959-60. p.24.

33. Udai Vir Singh, (1967),"Further excavations at Eran", Journal of the Madhya Pradesh Itihase Parishad, 5.

34. Bridget and Raymond Allchin, The birth of Indian civilization pp.187-88.

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37. R.V. Joshi, (1978), Stone age cultures of central India Poona, p.84. Scholars like Jerome Jacobson, (1978), "Ethnohistory and archaeology in eastern Malwa" in Sylvia Vatuk (ed), American studies in the Anthropology of India, Delhi, and Lawrence Leshnik op.cit. have also hinted at this possibility. Cave paintings in central India depict dancing scenes. Such huge gatherings indicated the participation of very many bands. Modern ethnographic studies have shown that such occasions are used for exchanging objects of

interest and value. Even in modern times primitive communities in this area exchange forest products like basket, honey, venison etc. for food and cloth. Such exchange relations are likely to have existed in pre-historic times. This kind of relationship among the pastoralists, hunters and agriculturalists is likely to have provided impetus to the movement of manpower from one group to another.

38. Jacobson Loc.cit. assigns the potteries in the rock shelters around Bhopal the period between 2000 B.C. to 800 B.C.

39. Bridget and Raymond Allchin, (1974), "The relationship of neolithic and later settled communities with those of late stone age hunters and gatherers in peninsular India", in R.S. Sharma (ed), Indian society: Historical probings, New Delhi.

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41. ibid. pp.256-57. See reference number 37.

42. R.V. Joshi in "Stone age cultures of central India," believes that Adamgarh inhabitants practiced slash and burn cultivation. Incidentally, the stories of Krsna's (which show close relationship between the pastoralist Gopas and the agriculturist Yādavas)

association with the Yādavas and Gopas might indicate shifts of labour from one group to another group. The frequent desertion of chalcolithic sites also indicates some kind of situation when sedentary people cauld become nomadic and nomadic groups could become sedentary.

43. H.D. Sankalia et al. (1971), Chalcolithic Navdatoli, Poona, pp.106-164.

44. ibid. pp.165-203.

45. H.D. Sankalia, (1973), "The beginning of civilization in Madhya Pradesh", Journal of Indian history.

46. Following is the distribution of some of the types of beads found at Navdatoli:

Stone	Phase I	Phase II
Agate	5	9
Carnelian	5	12
Faience	8	85
Quartz	-	1
Jaspar	2	4
Lapis	1	1
Quartzite	-	7
Shell	15	58

source: Cholcolithi Navdatoli, p.351.

47. ibid. p.407.

48. ibid. pp.49-52.

49. It was believed that copper was imported from Khetri in Rajasthan But at least the copper used in the Deccan is now believed to have been extracted from locally available ores. See M.K. Dhavalikar,(1974), "Development and decline of the Deccan chalcolithic" in D.P. Agrawal and Â. Ghosh (eds), Radio carbon and Indian archaeology.

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55. ibid. C^{14} dates of Navdatoli, Navasa, Chandoli etc. are given on pp.334-337. Inamgaon C^{14} dated are mentioned in M.K. Dhavalikar, (1976), "Settlement archaeology of Inamgaon" Puratattva, 8. 1975-76.

56. M.K. Dhavalikar, "Development and decline of the Deccan chalcotithic".

57. Sites like Navdatoli and Prakash have yielded the Lustrous red ware in small quantities. See, Bridget and

Raymond Allchin, The birth of Indian civilization. pp.187-197.

58. M.K. Dhavalikar, "Development and decline of the Deccan Chalcolithic" in D.P. Agrawal and A. Ghosh (eds). Radio-carbon and Indian archaeology.

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65. M.K. Dhavalikar, "Settlement archaeology of Inamgaon",

66. ibid.

67. H.D. Sakalia, pre-History of India. p.132.

68. ibid.

69. M.K. Dhavalikar and G.L. Possenl. (1974), "Subsistence pattern of an early farming community of western of India, "Puratattva, 7.

70. This will imply that the agriculturalists could cushion crop failures in one season and carry on its traditional patterns of subsistence by crops

grown in the next season. The introduction of irrigation helped intensify the methods of exploitation of land of a particular area. At the same time it reduced the area available for exploitation having maximum returns. Thus, irrigation had the inbuilt tendency of generating intra-community and inter-community competition. There were bound to be some communities which were at a relative disadvantage. The groups having access to irrigation channel could produce more and convert it into normal pattern of domination over other communities. Or else the communities at a disadvantageous position could try to wrest the central of these channels by attacking the community controlling it.

As pointed out earlier irrigation was not important in the Malwa region. However, the introduction of irrigation in Deccan bespeaks of the ability of the community to mobilise labour for large scale activities.

71. See our discussion on the 'Asiatic state' in chapter I. This is only an intermediate stage between the formation of full fledged state society and chiefdom. We have very little evidence of inter regional trade. As pointed out earlier, long distance trade for gaining prestige goods might be one of the ways of gaining higher status and power by the elite. Other mechanisms

for acquiring higher status can be victories in war and elaboration of rituals. Thus, even in the Susiana plains in Iran, inter-regional and inter-national trade did not start on a large scale until long after state formation. See H.T. Wright and G.A. Johnson, (1975), Population exchange and early state formation in South-Western Iran" American Anthropologist, 77.

In this kind of social structure, rank is absolutely determined "The redistributive system loses its former function as a means of converting surplus into status, in an act of generosity". All ritual is hierarchised. This conical clan state consists of many noble lineages who owe their position to kinship to a royal line. It is a small scale affair consisting of an area not more than twenty to thirty kms. The expansion of these units takes place by sending out non-inheriting sons of kings to other neighbouring domains by marriage alliances. That is why this phase is characterised by the existence of large centres surrounded by several smaller ones. We have sites like Inamgaon, Daimabad, Maheswar Nagda, Eran, etc. which are relatively larger than several sites around these places. The use of copper and various kinds of semi-precious stones on a larger scale, is indicative of its greater consumption by the elite. One of the

most important sources of surplus in agriculture and luxury goods production is captive slaves from the surrounding smaller sites. Thus, the growth in demand for surplus, leads to importation of labour from the surrounding communities. This process finally leads to conflict and tensions among the 'asiatic states'. The existence of greater amount of luxury goods and possibilities of capturing slaves, tempts these communities to attack and subdue each other. Thus, the raids and hit and run methods of previous social structure give way to wars. Wars, having the subjugation of the other communities and the loot of luxury as the primary motive.

72. M.K. Dhavalikar, "Settlement archaeology of Inamgaon".

73. M.K. Dhavalikar, "Development and decline of the Deccan Chalcolithic".

74. ibid.

75. H.D. Sankalia et.al.,(1960), From history to pre-history at Nevasa, Poona, pp.67-70.

76. B.K. Thapar,(1965), "Prakash 1955: A. Chalcolithic site in the Tapti Valley", Ancient India, 20-21, 1964-65. Thapar dates period II on the basis of finds of iron to 600 B.C. This is obviously questionable because he believes that the NBPW appeared in the same phase

around 300 B.C. and merged into period, III around 100 B.C. This will give equal periods of existence of 300 year each to the pre-NBPW layer of 15 feet and NBPW layer of 3 feet. The iron age phase can go back to about 900 B.C.

77. Bridget and Raymond Allchin p.219.

78. In period II at Inamgaon houses of potters and copper smiths have been discovered. In period III there is the addition of gold smiths, lime makers and wine distillers. See Dhavalikar, "Settlement archaeology of Inamgaon".

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CHAPTER IV THE BREAK-DOWN AND BEGINNING OF THE POLITICAL SOCIETY

4.1

So far, the impression we have been able to form with the archaeological cultural sequences, is one of expanding agricultural communities through various phases of development. As pointed out earlier, the Kayatha culture sites are mostly confined to the Chambal Valley. So far around forty sites yielding Kayatha potteries have been discovered. The Malwa cultural phase which came after the Ahar phase saw an expansion of the agricultural communities in the whole Malwa region.[1] In the later stage of its development (around 1400-1300 B.C.) these agricultural communities penetrated into the vast Deccan plateau, reaching towards the Bhima Valley. The mechanisms involved in this process of expansion were probably a gradual increase in population. The agricultural societies have a greater propensity for population increase compared to the hunting gathering societies. This is because agriculture leads to the artificial extension of the ecological niche and consequent increase in the carrying capacity of land. Also, agriculture leads to the sedentarisation of population which stimulates population growth. In the agricultural societies children can be inducted into the production process at a younger age which might again provide impetus for population increase. What we observe in the process of development from the

Kayatha phase to the Jorwe phase is the working out of the inner dynamics of the agricultural societies. There are distinct possibilities of foreign influences in these cultural phases, but they are sponged into the indigenous cultural pattern. The gradual increase in population is supplemented by some improvements in the technological sphere as evidenced by greater use of copper implements in each succeeding phase. Apparently, there is some evidence of the evolution of more complex forms of social organisation, This is indicated in the construction of bunds and irrigation channels. Despite all this, the overall pattern is one of continuity. Houses were similar, stone tools constituted the dominant tool industry and there were similarities in the pottery tradition in all the cultural phases. The Malwa culture phase has been reported from about seventy sites in M.P., itself. Compared to the forty sites of the Kayatha phase this will indicate a significant increase in population. (As pointed out earlier, there was an increase in site size of individual sites but they are not well reported).

The next phase of cultural advance is represented by the historical Black and Red Ware pottery bearing sites. There is much confusion regarding their chronology. In the Malwa region the BRW has been found to occur with the NBP in most of the sites. This will bring down its dateto of the

fourth third century B.C. @n the other hand a C^{14} date at at Eran indicates the beginning of the BRW phase around 1040 B.C.[2] This kind of variation in dates is to be expected because we do not believe in overnight transformation of all the sites. Still, we have to fix a date for its beginning since it is also related to the coming of the iron age in this region. We shall take into account some of the evidences from the Deccan region also since there was a broad similarity in the cultural developments of the two regions. The most detailed report for the BRW phase comes from Prakash. We believe that the NBPW is a much more reliable evidence for dating various strata. One can work out the chronology backwards. In the Malwa region the NBPW can be assigned to 450-200 B.C.[4] Prakash, located on the Tapti river, has a debris of 14'-15' BRW habitation below that of the NBPW. This will give us a date of around (1000 B.C.) on the basis of the assumption that 1' of debris took roughly forty years to accumulate.[5] At Inamgaon late Jorwe phase, dated to 1100-800 B.C. the historical BRW akin to the megalithic complex has been reported.[6] Similarly, at Tekawada the use of the BRW along with the late Jorwe pottery in the twin burials points to a similar period.[7] Further south in Hallur well stratified BRW deposits have yielded around 1000 B.C. radio carbon dates.[8] This brief discussion exhausts the list of sites

whose dating can be reliably utilised for our period. Thus, we believe that the iron-age began in the Malwa and the Deccan regions between 1000-850 B.C.[9]

What is striking about the historical BRW phase is the tremendous increase in the number of sites. By about 500-400 B.C. the whole of Madhya Pradesh was te@ming with numerous agricultural settlements. Compared to the 70 sites of the Malwa culture phase, the BRW, NBPW complex and early historical sites have so far been reported from about 185 sites in the Malwa region. This will represent a four fold increase (we are using each site as representing one unit of population) compared to the forty sites of Kayatha even if we leave aside the problem of site sizes. Compared to the Malwa phase the increase is two and half times. As pointed out earlier, the agricultural societies do have greater possibilities of population increase, compared to the hunting gathering societies, but our evidence indicated a gradual expansion upto cir. 1000 B.C. The population increase after that phase is too dramatic to be explained by the internal dynamic of the system.[10] Between 1800 to 1000 B.C. i.e., the Kayatha to the (Malwa--Jorwe) phase there was an increase in the number of sites from 40 to 70. This will mean an increase of 75% in 8 centuries. From the Malwa phase to the early historic i.e.,

1000 to 400 B.C. there was an increase of 164%. If we try to compute the population growth rate per century on this basis it will be 9·375% in the earlier phase and 27·38% in the later. Another significant change is discernible in the distribution pattern of the sites. The Malwa phase showed that the sites were scattered all over the Malwa plateau and in the surrounding areas. Although the Ujjain district has shown the existence of twnety five Malwa culture sites, even the out-lying Mandasaur district had eleven sites. In the BRW and early historical phase the Ujjain district has so far yielded one hundred twelve sites whereas the Mandasaur district has just seven sites. In other districts the number of sites either remains the same or decreases between the Chalcalithic and the BRW phases. Clearly the Ujjain area is emerging as the focus of the entire Malwa region. It seems to have attracted population from all the surrounding areas. Further more the nucleation of population in the Ujjain district is sharply contrasted with the total absence of the agricultural settlements around the Ujjain city itself (there is just one BRW site in the Ujjain tehsil). This fact further substantietes our view that the Ujjain settlement was attracting agriculturalists from the surrounding areas. This type of distribution pattern of the sites goes against the traditionally held belief

that the ancient Indian towns represented centrodes of population which thinned out towards the periphery. This kind of distribution pattern envisaged maximum number of sites around the urban centres and a progressive decrease in their numbers as one moved out. This belief substantiated by ancient Indian treatises like the Arthāśastra probably emanates from the idea that it was the king who established the cities. That is why almost all the ancient Indian cities are said to have been founded by various kings. However, we should be wary of such conclusions. They assume that the kings established political authority and cities came into existence due to their initiative only. The clustered distribution pattern around the cities could indicate the streamlined administration of the king whose political authority waned over the outlying regions. The kind of site distribution we have discovered questions this belief. The site distribution pattern shows that the city of Ujjain held advantage not simply because it could exercise some form of coercive authority over the outlying regions, (in that case we would have expected the sites to be nearer the site of Ujjain) but also because of some in built advantages in terms of its accessibility and location as an unit of settlement. What we are trying to emphasise is not the negation of political or economic factors as such. Rather we doubt the

applicability of such categories as economic and political factors, in the pre-state societies. We do not separate those institutional processes into political or economic categories. When we are using the term political power, it is meant to symbolise the total authority structure of the society and it is used interchangeably with institutional processes. The nucleation of population in the district as a whole could be either due some natural advantages for settlement by the agriculturalists or due to some institutional mechanisms. It is more likely that it was due to some changes in the institutional structure of the society as such since agricultural communities had been staying in this region for about eight hundred years. Interestingly enough we have instances of such a nucleation of population in Mesopotamia and Susa regions also. This population movement preceded the emergence of state societies in these regions.[11] It has been argued by some writers that this nucleation of population was the result of competition for labour by the competing political units. There is an increaing demand for luxury goods manufactured by artisans. It leads to a demand for non-agricultural labour. This population in turn requires an assured supply of food products. Thus, there is a competition for control over a larger agricultural hinterland and more than that, an agricultural work

force. These factors lead to conflict among the ambitious political heads of various units. These unsettled war-like conditions give a further spur to population movements towards regions where there is maximum security. This in turn gives rise to bigger political entities culminating in in state society.[12]

As pointed out earlier, the population increase in the Malwa region as evident from the increase in the number of sites, can not be explained as a result of population expansion. The other possibility could be the switch over of the hunting gathering people to sedentary agriculture. We do have certain evidences of the co-existence of primitive communities with advanced agriculturalists in modern and ancient times.[13] In many ethnographic studies it has been found that contacts with advanced communities instilled a taste for such goods as salt, spices, clothes, metal and glass among the aboriginal population. These were earlier unknown or considered luxuries. They became necessary wants after some time and the tribesmen had to balance the new expenditure by providing their labour to agriculturalists or merchants. Some times they switched over from slash and burn cultivation to plough cultivation.[14] But, this has been a continuing process throughout the pre-historic and historic phases in Indian history. May be it was stimulated by certain changes in the

agricultral societies. By and large such an influx was a regular process as a part of the expansion of agriculturalists. Thus, be it the Malwa phase or the early historical phase our data encompases this kind of process in the rate of population growth itself. The only variable left to us to explain the population explosion in this region is immigration.

Around 1000 B.C. the plains of the Saraswati region in Rajasthan suffered some kind of climatic change. There is some difference of opinion among the scholars about the magnitude of change. But they do believe that this region was progressively dessicated probably due to the decrease in precipitation.[15] Some tectonic disturbances causing changes in river regimes could also cause floods in some regions and dessication in others.[16] What is important for our understanding is that even minor changes in climate could trigger of major population movement. In a survey of the Anupgarh - Pugal region in Western Rajasthan it has been found that the number of nomadic families ranges from 3·5% to 37·4% from year to year depending upon the availability of water.[17] If the modern parallels are any guide, the pastoralists in western Rajasthan have a very shaky subsistence base which can not cushion even the yearly fluctuations in the rainfall. Large populations keep switching

over from one kind of subsistence base to another. In drought years they migrate upto the Malwa region even in modern times. Thus, even mild changes lasting from hundred to two hundred years could have catastrophic effect upon the economy of this region. It is likely that the environmental changes which are believed to have occurred in the early first millerium B.C. generated tremendous population movements. The pastoral nomads usually purchase their utensils of daily use like pottery etc from sedentary agricultural communities.[18] Thus, it is difficult to identify them as a separate group, in the archaeological assemblages. Some attempts have been made to identify the Black and Red Ware with a few pastoral groups. But, the pastoralists are unlikely to have maintained a separate pottery assemblage. Another kind of population movement which could have gravitated towards the Malwa region was from the Deccan chalcalithic sites. A majority of the sites like those of Praksah, Bahal, Nasik etc. were abandonned around 1000 B.C. scholars believe that it was due to increased aridity in this region with a sharp decline in the rainfall.[19] On the contrary the Malwa region does not seem to have experienced any drastic change in the rainfall pattern. In fact two early historical sites have shown the evidence of floods around 1000 B.C., in the Malwa region. The site of Nagda

had a break between the pre-historic and early historic period, and it was caused by floods.[20] Similarly, at Manoti in the Mandasaur district destruction by floods was followed by the early historic habitation.[21] These evidences indicate that the Malwa region was emerging as the area of attraction in the early historic phase. The sudden spurt in the number of sites indicates: the movement of population from the peripheral regions to the Malwa region as it had a congenial climate. It was probably, because of these population movements that fortifications cropped up in the late chalcolithic phase (around 1000 B.C.) in sites like Eran, Nagda, and Maheshwar. Some scholars have tried to use evidences from literary sources and compare them with the archaeological finds.[22]

A brief discussion of the material culture of the BRW people with whom we have identified this phase of development won't be unwarranted. Iron appears with the historical BRW in about tenth century B.C., but it did not bring about any significant change in the material condition.[24] At Prakash BRW iron age phase there was a general enrichment of the material inventory and even copper implements were used on a larger scale than in the earlier period. At Nagda, socketed axe, arrow-heads, spear-heads, knives, daggers etc., have been found.[25] This repertoire is repre-

-sented in all the sites in the early phases of the iron age in India. The chalcolithic assemblage mainly consisted of axes, beads, bangles etc. mainly used for production or ornamentation. The iron age assemblage on the other hand indicated that most of the tools were war-weapons. They in fact express the new ideology of power, the emergence of heroes and conquerers symbolising the coercive authority which led to the emergence of the political power as the decisive component affecting changes in the social structure. The burials at Tekwada with the use of BRW and their location outside the habitation areas suggest the arrival of a people with a different cultural tradition. In the preceding Jorwe phase the burials are found in the habitation area itself. Besides, they exclusively used the Jorwe pottery in burials. The BRW also was akin to the megalithic BRW. The Megalithic burials also point to a similar change. Allchin's study of the South Indian ash-mounds might be instructive in some ways. He has shown that the process of ash mound formation was complete by the time iron arrived at these sites.[26] We can assume that cow dung was being used for other purposes probably for agriculture. This will indicate the intensification of agriculture in the early historical period. It might also indicate a shift of the pastoral communities to agriculture and more settled life. The general material culture

showed greater prosperity compared to the preceding phase. Beads of quartz, rock crystal, carnelion, agate, Jaspar etc. have been discovered. Bangle fragments of shell and glass and ivory combs are also reported. It was the gradual development of this culture which culminated in the urbanisation of the 6th century B.C. Most of the BRW pottery reported from the early historical phase is without any painting. There is a shift in the ceramic tradition from individually crafted item to mass produced item. That is why the tradition of elaborate decoration of pottery which characterised the chalcolithic cultures, dies out.

Out literary and archaeological evidences indicate the cultural unification of northern and southern India in this phase. Again it is a larger interaction sphere compared to the preceding period. This was to pave the way for the enrichment and evolution of all the cultural groups. The succeeding phase of course was that of urban culture.

REFERENCES

1. We have attached a list of the Malwa culture sites which indicates its spread upto the Gwalior district in north showing possibilities of contact with northern India.
2. Eran C^{14} dates have caused lots of problems because they do not conform to the stratigraphy given by the excavators. The chalcolithic phase has yielded radio-carbon dates ranging from 2035 B.C. to 640 B.C. But except for these two dates other radio carbon dates range from 1500 to 1014 B.C., which can be useful for demarcating various phases although confusion persists regarding the stratigraphy. See Bridget and Raymond Allchin,(1968), The birth of Indian Civilization P.335 for the C^{14} dates.
3. B.K. Thapar, (1965), "Prakash 1955: A chalcolithic site in the Tapti Valley," Ancient India, No. 20-21.
4. The NBPW has been found to occur in two different cultural contexts. The earlier phase seems to have been pre-urban. This phase is represented by the type site of Śrāvasti where the pottery is thin sectioned and in the fulness of its evolution. This phase is also represented at sites like Kauśāmbi and Rājghāt. This phase has been assigned to 500-300 B.C. NBPW occurs in a later context in sites like Hastinapur Rupar, Ujjain, Navdatoli etc. This phase is characterised by the restricted use of NBP. The NBPW in this phase was medium sectioned.

coins, monumental buildings and other urban traits also came into existence in this phase. This phase can not be dated earlier than 350 B.C. See, K.K. Sinha, (1969), "The NBP Ware Fresh hypothesis in the light of Sravasti evidence" in B.P. Sinha,(ed), Potteries in Ancient India, Patna, Our sites in the Malwa region fall within the second phase of the NBPW spread. We however believe that this phase started around 450 B.C. See our discussion on chronology in the next chapter.

5. It is difficult to compute the rate of debris accumulation in any area. Even in the more scientifically explored Mesopotamia, the estimates vary from forty years to hundred years for the formation of one foot of debris. It depends on the climate, the material used and other local practices of a particular region. In our case we have followed N.R. Banerji's estimate of tell formation in this region. See N.R. Banerji, (1965), The Iron age in India, Delhi, Since he has not discussed the basis of his assumption our dating remains tentative.

6. H.D. Sankalia, Z.D. Ansari, M.K. Dhavalikar, (1975), "An early farmers' Village in Central India "Expenditon, 17.

7. For Tekwada see IAR, 56-57 and Bridget and Raymond Allchin (1968), pp. 219-220.

8. Allchin B and R (1968), p.335.

9. D. Chakrabarti has taken back the beginnings of the iron age in this region to 1100 B.C. or even earlier. He bases his assumption mainly on the evidences from Nagda and Eran. In Nagda the chalcolithic phase is superimposed by the iron age layer after a brief period. The excavator believed that the gap between the chalcolithic and the iron age phase was very small because there were distinct continuities in the alignment of structures of the succeeding phase. Chakrabarti, saying that similar chalcolithic cultures had come to an end in 1300 B.C., believed that iron age began around this period. However, culturs having affinities with the jorwe culture might have continued to exist even in the later period. In any case Navdatoli itself can not be used as a firm dating criterion for all other sites. He also referred to the C^{14} dates in Eran. The problem however is that the continuity in the cultural traditions in Nagda might not indicate a short gap, because the coming of iron did not change the material culture in any significant way in sites like Prakash etc. The excavator did not provide any convincing argument in favour of his view that the break signified a gap of 40-50 years. Besides he believes that NBP occurs in this site around 500 B.C., which is slightly earlier, If we accept Chakrabarti's dating of 1300 B.C.

for the beginnings of the iron age in Nagda, it will mean that 9 feet of iron age debris was formed in more than a thousand years of habitation. Since the habitation came to an end in the second century B.C. as is evident from an inscribed sealing. This of course sounds improbable. If we take forty years for one feet of debris accumulation as, it will take back the date of NBP to 940 B.C., in Chakrabarti's computation as the BRW habitation is represented by seven feet of debris. We believe that the Nagda iron age occupation does not precede 800 B.C. Similarly, the evidence from Eran does not have internal consistency and should be utilised cautiously. See Dilip Chakrabarti, (1976), "The beginnings of iron in India" Antiquity Vol.50.

10. We have computed our data on the assumption that one site represents one unit of population.

11. See R.M. Adams and H.J. Nissen, (1972), The Urik countryside, Chicago, and R.M. Adams, (1972), "Patterns of urbanisation in early southern Mesopotamia" in P.J. Ucko, R. Tringhan and G.W. Dimbleby (eds.) Man settlement and urbanism, 1972. In both the studies, the large scale desertion of some outlying areas has been shown to be synchronous with the increase in the size and number of settlements in certain core regions. For the Susa region see. H.Wright and G.Johnson, (1975),

"Population, exchange and early state formation in South--Western Iran" American anthropologist, 77,

12. See the discussion on dualistic states in J. Friedman and M.J. Rowlands, (1978), "Notes towards an epigenetic model of the evolution of civilization" in J. Friedman and M.J. Rowlands. The evolution of social systems, Pittsbargh.

13. Raymond and Bridget Allchin, (1974), "The relationship of neolithic and later settled communities with those of late stone age hunters and gatherers in peninsular India" in R.S. Sharma,(ed.), Indian Society: historical probrings, they have collected date from sites like Adamgarh etc., to show the coexistence of hunting, gathering groups with agriculturalists. They have also shown its modern ethnographic parallels.

14. See C.V. Furer-Haimendorf (1940). The Reddis of the Bison hills, London, pp.282-284. There have been very many studies of Bhils and Gonds who stay in the Malwa region. See chapter three for other references.

15. There is a whole lot of literature on the ecological disturbances in this region. See, Gurdip Singh, (1979), "The Indus Valley Culture," in G.L. Possehl (ed) Ancient cities of the Indus. Delhi. R.N. Ghosh, (1977), "Photogeological studies on ancient water regims of Rajasthan rivers," in D.P. Agrawal and B.M. Pande (eds.) Ecology and archaeology of Western

India, Delhi, Both these scholars believe that a phase of marked aridity began around 1000 B.C. However, a host of other writers like V.M. Mehar - Homji, and R.P. Dhir (in the book cited above) believe that there were only minor fluctuations in the climate.

16. R.L. Raikes and R.H. Dyson, "The prehistoric climate of Baluchistan and the Indus Valley, in G.L. Possehl Op. Cit. R.L. Raikes, (1968), "Kalibangan Death from natural causes", Antiquity, No.42.
17. A.B. Bose, "Pastoral nomadism in India" in L.R. Leshnik and G.D. Sontheimer, Pastoralists and nomadsin South Asia.
18. Lawrence Leshnik, (1972), "Pastoral nomadism in the archaeology of India and Pakistan" World archaeology Vol.4. No.2.
19. M.K. Dhavalikar, (1973), "Development and decline of the Deccan Chalcolithic" in D.P. Agrawal and A. Ghosh (eds) Radio-carbon and Indian Archaeology. Also see G.G. Majumdar and S.N. Rajguru's comments in V.N. Mishra and M.S. Mate (1965), Indian Prehistory: 1964, Poona.
20. N.R. Banerjee, The iron age in India pp.30-38.
21. IAR, 1959-60
22. See the appendix
23. As pointed out earlier, there is some confusion regarding the stratification and dating of the fortification in these sites. But whatever evidence we have seem to indicate their

occurrence in the early part of the first millenium B.C. See H.D. Sankalia "The beginning of civilization in M.P. "Journal of Madhya Pradesh Itihasa Parished, 1973. N.R. Banerjee, Op.cit, and Udai Vir Singh, "Further excavations in Eran "Journal of Madhya Pradesh Itihasa Parishad, No.5. 1967. In Nagda the chalcolithic phase ended around 800 B.C., according to the excavator thus there is a distinct possibility of fortification having been built around 1000 B.C.

24. See B.K. Thapar, (1965), "Prakash, 1955: A chalcolithic site in the Tapti valley", Ancient India No.20-21, 1964-65, N.R. Banerjee, Iron age in India for Nagda, and Udai Vir Singh, (1967), "Further excavation in Eran". Journal of Madhya Pradesh Itihasa Parishad, No. 5, 1967. These are the only three well reported sites from which we can have a wee-bit of idea of the early phase of BRW culture.
25. D. Chakrabarti, (1976), "The beginnings of iron in India", Antiquity Vol. 50.
26. F.R. Allchin, (1963), Neolithic Cattle Keepers of South India, Cambridge University Press,p. 170.

CHAPTER V EPILOGUE

5.1

And so we enter the sixth century B.C. The personalities and people who stalk the stage of history are no longer heroes and warriors, rather they are kings and emperors. Pradyota, Bimbisāra, Prasenjit are only some of the examples. The king of Ujjain (Avanti) might go all the way to Rājagṛha, a distance of more than one thousand kilometers, to satisfy his imperial ambitions. The kings of Kosala and Magadha can quarrel not to settle some personal grudge but to claim the territory of Kāśī[1]. The Buddha can cover the areas of Gaya to Kauśāmbī to disseminate his teachings[2]. All this indicate the breakdown of the regional barriers. Kingdoms encompassing diverse ecological zones had come into existence. A period of tremendous cultural interaction in economic, social and religious spheres is discernible. In the Malwa region Ujjain emerged as the centre of political and economic dominance. A structural comparison of the finds from the major urban centres should be instructive.

The Northern Black Polished Ware is reported from all the early urban centres of India. It either precdes or coincides with the beginnings of urbanism in all the sites[3]. This pottery has been reported from as far flung sites as Amaravati (Andhra Pradesh, Guntur district) Bangarh

(Bangla-desh, Dinajpur district) and Charsada (Peshawar district, Pakistan). It has been found to succeed the PGW cultures in the Upper Ganges Valley and the BRW, belonging to different traditions, in the lower Ganges Valley, Malwa and the Deccan. Thus, the NBPW (later phase) covered almost the entire Indian sub-continent except deep south. Household utensils constitute a very personal item of use manifesting the individuality of any culture. The occurrence of the NBPW in such far flung areas is the evidence for intensive cultural interaction among various communities. Besides, we believe that the NBPW was not a trade pottery. Most probably, it was carried by monks and merchants for their personal use. In some cases it might have been manufactured locally[4]. This will indicate that the cultural interaction among the various zones was not simply confined to the sphere of economy, which is what happens in the early stages of contact. Rather, the cultural integration was taking place in the more conservative spheres of religious ideas and beliefs also. The NBPW cultural stratum in sites like Atranjikhera[5], Prahlādpur[6], Rājghāt[7], Vaiśālī[8] etc. was larger than the preceding cultural stratum. There is an increase in the number of sites also in this phase. In U.P. Bihar, West Bengal and Madhya Pradesh quite a few

sites are founded on virgin soil[9]. This indicates an expanding economy and a growing population. Nucleation of population in large sites would indicate intensification of agriculture.

In the early phase of the introduction of the NBPW there was a boom in the ceramic industry. Besides the fact that the NBPW dishes, bowls and handis are found in many shapes which have no precedence, other associated pottery industries like the Black slipped Ware, Grey Ware and Red Ware, saw the introduction of many new shapes[10]. The new shapes and better finish indicate an improved technological skill and a general improvement in the aesthetic tastes of the people who were using it. It show that people had diverse kinds of requirements for which they needed many more types of pots and pans.

The tribal societies are characterised by the 'domestic mode of production' where every household produces or is capable of producing almost all the things it requires. In other words every household as an independent unit repeats what the other unit is doing in production activities. This kind of organisation is replicated in the ritual and political structure of this society[11]. As a tangible reflection of this social organisation the houses and household goods are also broadly similar to each other in these

societies. In the more advanced chiefdoms one might come across some larger structures. Some times the community as a whole might construct channels or bunds for the use of the tribe as a whole[12]. The emergence of higher forms of organisation such as state leads to the breakdown in this self-sufficient 'familial mode of production'. The state intervenes as an intermediary among various production units. This intervention can be in the form of supplier of raw materials, organiser of irrigation work or as the sole legitimate authority to solve internal and external order and dispute problems. The representatives of this new social structure control large financial resources. Their political and ritual status is embodied in the existence of larger structures. Thus, the breakdown of the domestic mode of production is also mirrored in the existence of diverse kinds of residences. In Ujjain a mudfortification, enclosing an area a mile long and three quarters of a mile wide was erected after about 25 to 50 years of the settlement of the site[13]. That, it was meant for a privileged group is clear from the existence of humbler habitations outside the fortification[14]. There is some controvery whether it was a fortification or simply a bund against the river kṣiprā[15]. However, the literary references to a fortification and the existence of other large public structures inside this area in the succeeding phase

do indicate that this structure functioned as a fortification at least in the later phase of its existence[16]. The existence of fortification is indicative of the fact that certain group of people have identified themselves as superior to the surrounding population. It might also show the needs of a political authority to protect itself from hostile neighbours. In other urban centres of ancient India fortifications came up rather late. In Kauśāmbī they are said to have been erected in 1000 B.C.[17] But this early dating has been questioned and it has been shown that the fortification was not appreciably earlier than the appearance of the NBPW[18]. This will bring down the date of the beginnings of fortification to around sixth century B.C. as the NBPW phase can be dated to the fifth century B.C. In sites like Śrāvastī, Rājghāt Vaiśālī etc. fortifications were built between 500 to 200 B.C. But they seem to have been present in almost all the early historical sites.

In Ujjain, Kauśāmbī etc. use of burnt bricks is attested from the beginning of the NBPW phase. In Ujjain a tank measuring 32'x 26' was made of burnt brick. Similarly a brick canal was exposed upto 185'[19]. Brick revetments were built in some places around the fortification. An apsidal structure built of columnar dressed stones has also been reported[20]. In Kauśāmbī a place made of dressed

stones and many large brick structures have been reported. This phase of the appearance of the NBP has been placed around 450 B.C. by us. However, in other sites like Vaiśālī, Rājghāt, Śrāvastī etc. the initial phase of the NBPW shows mud and bamboo structures. In the earlier phase of the NBPW, Ayodhyā had Wattle and daub houses and mud brick structures[21]. At Mathurā NBPW period has been divided into three sub-phases. It was only in the last sub-phase that it witnessed vigorous building activity[22]. Atranjikhera yielded a similar evidence. Here no structure has been reported from the early phase of the appearance of the NBPW[23]. In Vaiśālī the Casket containing Buddha's ashes had a stupa built on it with piled up mud which contained NBPW sherds[24]. Fortifications and brick structures made their appearance only around 300 B.C[25]. Although, we do not expect uniform developments all over northern India, the frequent references to most of these sites as urban centres in the early Buddhist sources and the C^{14} dates available from various sites indicate a need for an upward revision of dates for the beginnings of urbanism. It may be placed between 450 B.C. and 350. We shall discuss this problem later on. It was in this phase that most of these centres had vigorous building activities. Brick-lined drains, ring-wells, tanks made of brick etc. have also been reported.

Iron has been reported from all the sites in the urban phase[26]. Compared to the preceding cultural stratum it came in greater use. Iron weapons are found in large quantity. Iron sickles, axes and hoes have also been reported[27]. An iron smelting site was discovered in Ujjain which showed advanced techniques of iron making. Copper was used in considerable quantity even in this phase. It was mostly used for decorative purposes. Antimony rods, rings, bangles, toys and collared beads are a frequent occurrence in almost all the sites. Copper hooks, chisels and axes, have also been reported. A copper miniature vase has been reported from Atranjikhera. The rim of a copper utensil has been discovered in Campā. Similarly, in Vaiśālī two copper bowls have been reported.

Terracotta figurines have been reported from Ujjain in this period. These figurines are of very crude make compared to the succeeding phase. Such figurines occur in most of the early historical sites. Beautiful terracotts figurines have been recovered in Patna, Buxar, Bulandibagh, Buxar, Kauśāmbī, Rupar etc. completely moulded figurines have been found in Rupar, Kauśāmbī and Buxar. But they occur after 300 B.C. In Amarāvatī sculptural activities started around the second century B.C.

Ujjain was a famous exporter of semi-prrecious stones in ancient times. There are evidences of bead manufacture from period I itself. It was produced in larger quantity from period II. Beads of agate, carnelian and many other semiprecious stones have been found in large numbers. Such beads have been reported from most of the sites (see our chart). Eye beads of stratified glass and lapis lazuli have been reported from Śrāvastī. Lapis Lazuli is not found in the Indian sub-continent. Thus, it was imported from outside. The evidences from Śrāvastī indicate the beginnings of inter-national trade. In the preceding phase of development copper and iron were probably exchanged among various regions. But the large scale production of semi-precious stone beads seems to anticipate the second first century B.C. boom in trade between Ujjain and foreign countries via the port city of Broach. The existence of specified areas of bead manufacture indicates craft specialisation. This exchange activity was no longer incidental, rather it was a well organised activity. Glass bangles have also been reported from various sites.

Beautiful ivory objects have been reported from Ujjain. A decorated comb and a human figure are some of the significant finds. Ivory points, pendants and arrowheads have been reported from various various sites. The existence of

bone points as reported from almost every site might indicate the beginning of the art of writing by the early 4th century B.C.

The most significant addition to the entire cultural assemblage is the appearance of seals, sealings and coins in this phase. Uniscribed cast copper coins and Punch marked copper and silver coins have been reported from many sites (See the chart). Again they seem to occur in the later phases of the NBPW culture. They do not seem to occur anywhere before the early fourth century B.C. Similarly, seals and sealings bearing third and second century Brahmi characters have been reported from most of the sites. The appearance of coins, seals and sealings is the sign of the beginnings of complex processes of exchange and guild activities. Silver, punch marked coins with 'Ujjain' symbol have been found in places like Ujjain, Vidisa, Eran and Kauśāmbī. They have also been reported from Gujrat, Maharastra and Andhra Pradesh[28]. The appearance of writing is also related to the increased complexity of the economic activities[29]. The appearance of coinage meant the coming into existence of money lenders and bankers (Śreṣṭhin). It eased the exchange process through easy inter-personal exchanges. More important still, is the fact that some universal standard of exchange

was accepted by the far flung areas. This showed the influence of the nascent urban economies whose dynamics was affecting the entire sub-continent. The punches and seals were marks of authority guaranteeing the quality of the object. No wonder the earliest coins in India are said to have been issued by merchant guilds who had most to do with exchange.

5·2

Our discussion on the beginnings of urbanism creates some new problems. The cultural equipment outlined above does not seem to have come into existence before the later half of the fifth century B.C. Traditionally the sixth century B.C. is believed to have been the beginnings of the urban life in India. Besides, most of the characterstics we have selected for the understanding of urbanism appear in different phases, fortifications being the earliest and coinage seals, sealings being the latest. Of course the traits complex approach of Gordon Childe has been found wanting and none of the characteristics is universal. For example, monumental structures were totally absent in early China[30]. That is because monuments themselves are a society's way of symbolising its religious

or political aspirations. Similarly long distance trade, writing etc. can be found missing in one instance or the other. This kind of approach which mechanically lifts trait complexes from one instance or other and uses them as ends in themselves rather than as reflections of the societal formation, is bound to cause confusion[31]. What we should look for is certain social formations as reflected in the archaeological remains i.e. social stratification, state formation, craft specialisation and urbanisation. The social formation which is discernible in the archaeological assemblages outlined above does seem to have all these features, specialised craft activities could be seen in the widespread use of textiles, metal work and jewellery. As pointed out earlier, in the city of Ujjain, separate structures have been discovered where bead making and metal smelting activities were performed. The very richeness of the finds indicates some amount of specialisation. Social stratification is a vague category which has been found even in the simpler societies. All urban societies were class societies meaning thereby that access to strategic economic resources was controlled by some groups. The war weapons discovered in such prolific numbers are by themselves symptomatic of the patterns of domination established in this phase of development. Again, the small amount of luxury goods discovered in this cultural phase could not be owned by all.

Presumably, it was owned by the same people who weilded those weapons. The variations in site sizes and the differences between the individiual structures also indicate a stratified society. State societies are supposed to have emerged out of the attempt to legitimise the unequal access to the means of production. Besides, our literary sources abound in references to the formation of state societies around the 6th-5th century B.C. (See the appendix). With this kind of development it is reasonable to think that by 6th-5th century B.C. state societies had come into existence. Urbanism as a phenomenon means that all the three developments outlined above were effectively concentrated in comparatively small areas. Urban centres worked as containers where all the developments took place.

In some cases all the developments outlined above occured without the urban centres having come into existence. Or else cities in China and Egypt developed after prolonged phase of maturation. With our limited evidence, it is difficult to trace all these processes of development. However, in the present case, urban centres do seem to have emerged around 5th-4th century B.C. It is evident from the large size of some of the urban settlements. Sites like Ujjain sprawling over a huge area, speak of the complex web of relationships that existed inside this habitation.

The period of the Buddha (Cir.563-483 B.C.) has been believed to be one of great social upheavals. New classes of merchants were gaining economic control whose ritual status was very low. It has been contended that it was to remove the discrepancy between the ritual status and actual status of this noveau riche group that Buddhism arose. Besides, the Buddha is repeatedly mentioned as parleying with kings and merchants. Now, if we accept our dates for the beginnings of the urban centres, where could the kings and the merchants stay? In the villages? Could it be that most of the personalities associated with the Buddha were products of the encrustations of the later phases? This kind of happening is well known about the Brahmānical literature? Otherwise, are we not too fastidious about our trait-complex approach? How are we going to explain the existence of the pan-Indian empire in the fourth century B.C. without any prior development in the social structure? Should we not expect political society or urban centres to emerge in course of time? Probably this provides the clue; by the time of the Buddha, societal relations were changing, new power blocks were emerging. The emergence of urban centres was a process whose beginning will have to be placed earlier than their tangible remains. A period of gestation was required for the efflorescence of the urban centres. Buddhism was very much a protest against a way of life in which social inequality, civil strife, riches and poverty were rampant.

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1. See A.L. Basham, (1981), The wonder that was India, Delhi, and Narendra Wagle, (1966), Society at the time of Buddha, Bombay, 1966, for the references in the Buddhist literature to the contemporary society.

2. D.D. Kosambi, (1977), The culture and civilization of Ancient India, Delhi, pp.109-111.

3. Prof.K.K. Sinha has suggested that the NBP occurs in two distinct cultural contexts. The earlier phase has yielded the NBPW in large numbers which is of high quality. This phase had mud brick or wattle-daub huts, no ring wells, no fortification, no inscribed material or coinage. The earliest occurrences of the NBPW are reported from the Middle Ganges Valley sites like Chirand, Vaiśālī, Kauśāmbī etc. This earlier phase seems to be pre-urban in nature as is evident from the artefacts recovered from various sites. In the later phase the NBPW is of an inferior quality and is used in a smaller quantity. In this phase baked brick structures and fortifications have been reported from many sites. Moulded terracotta figurines, punchmarked coins and inscribed sealings are frequently found. All this clearly, indicates an urban society. The NBPW occurs in this context in sites like Hastināpur, Rupar, Kumrahar and Ujjain. This

phase has been believed to have begun around 350 B.C. The early phase is thought to have begun around 500 B. C. See K.K. Sinha, (1969), "The NBP ware-Fresh hypothesis in the light of the Sravasti evidence" in B.P. Sinha (ed). Potteries in ancient India, Patna, However, in view of the calibrated dates provided for both the phases they can be assigned slightly earlier dates. The earlier phase might have begun around the end of the seventh century B.C. the urban phase might have begun around the early part of the fifth century B.C. Following are some of the dates provided for various sites:-

P.G.W/N.B.P.W.Phase

Site	C^{14} date	Calibrated date in B.C.
Mathura	610 ± 150	750 ± 150
	730 ± 150	810 ± 150
	660 ± 100	790 ± 100
Atranjikhera	150 ± 150 (disturbed layer)	110-70 ± 150
	540 ± 150	660-510 ± 150
	530 ± 150	640-500 ± 150
Allahpur	270 ± 110 (contaminated)	380-240 ± 110

N.B.P.W. Dates

Site	C^{14} dates	Calibrated date in B.C.
Ahicchatra	475 ± 105	470-440 ± 105
Bateswar	640 ± 160 (disturbed)	780 ± 160
Kaušambi	530 ± 110	640 ± 110
	410 ± 110	420 ± 110
	440 ± 100	430 ± 100
	400 ± 100	420 ± 110
Besnagar	470 ± 105	
	295 ± 110	
Kayatha	470 ± 100	460-400 ± 100
	495 ± 100	475 ± 100
Mathura	400 ± 110	420 ± 110
	460 ± 100	440 ± 100
	510 ± 150	490 ± 150
	300 ± 160 (inconsistent)	390 ± 160
Noh	685 ± 105	795 ± 105
Rupar	485 ± 100	470 ± 100
	390 ± 105	420 ± 105
Ujjain	450 ± 95	530-410 ± 95
Chirand	765 ± 95	
	35 ± 105	

See, Makkhan Lal, (1980), "The date of painted Grey ware culture: A review". Bulletin of the Deccan College

Research Institute, Vol.39. Also see D.P. Agrawal and D.K. Chakrabarti, (eds), (1979), Indian Pre-History, Delhi. Sites like Kayatha, Ujjain and Rupar which had been placed in the group of the sites having NBP in the urban phase have dates around 450 B.C. (See our chart for some more dates).

4. As pointed out earlier, the good quality NBPW occurs in the earlier phase of its existence. The cultural assemblage belonging to this phase does not indicate any large scale trade. On the other hand the pottery occuring outside the Ganges Valley is mostly found in late contexts (most of the time after the 4th century B.C.) when it was gradually fading out of existence in the Ganges Valley itself. It has been shown by scholars like Karl Polanyi that trade in ancient times was mostly confined to luxury items (K. Polanyi et.al. (eds) (1975), Trade and market in the early empires, Glencoe. In many of the sites of Bihar like Chirand, Oriup etc. (which were historically unimportant places) the NBPW forms more than 50% of the total pottery yield. Similar is the case with Rājghāṭ, Śrāvasti and Sārnāth. This would rule out the possibility that the NBPW was the exclusive preserve of the elite. If it were a trade pottery one

would expect that sites at greater distance from the Ganges Valley would yield better quality pottery in lesser quantities. At least in the case of Ujjain the case is the reverse. It has yielded bad quality NBPW in large numbers. In Vaiśāli the chak-Ramdas area yielded large number of the best quality pottery in period I. But in the Garh area which was settled around 3rd century B.C. (period IB) and has fortification and rich cultural assemblage NBPW was not used. Thus, the rich and powerful presumably staying inside this area were not using this pottery. On the other hand in the Chak Ramdas area with its poorer cultural assemblage and no fortification, the NBPW continued in use even in period 1 B. (See Krishna Deva and V.K. Mishra (1961), Vaisali excavations (1950), Vaiśālī Samgh. This will suggest that the poorer sections of the population were still using this pottery. The general deterioration in the quality of the pottery in the urban phase also indicates that the NBPW was not a trade pottery. In Pauni and Amarāvatī the NBPW has been recovered from the lowest stupa levels. Its dish and bowl shapes were ideal for begging food. This lends support to our belief that it might have been carried by the monks.

5. A Ghosh, (1973), The city in early historical India, Simla.

6. A.K. Narain and J.N. Roy, (1968), The excavations at Prahladpur, Varanasi, 1968, period 1B, the NBPW phase covered a larger area.
7. A.K. Narain and J.N. Roy, Excavations at Rajghat, Varanasi, 1976, Vol.II. Here also period 1 B, having the NBPW showed larger habitation area compared to the preceding period.
8. Krishna Deva and V.K. Mishra, (1961), Vaisali excavations: 1950, Vaisali Samgha, 1961. In this case also, period 1 B cultural stratum covered a larger area. This corresponds to the urban phase of the NBPW occurrence.
9. In U.P. and Bihar occurrence of the NBPW coincided with the earliest occupation ofthe site in Ayodhya, Champā, Jajamu, Manwar, Takiaper, Kumrahar, Rajgir, Sravāstī Vaiśālī, Katragarh etc. In Hastinapur the NBPW occured after a brief period of abandonment. In West Bengal, M.P. Maharastra and Andhra Pradesh the NBPW finds, either from earliest habitation layer or from a reoccupation of the site, are reported from sites like, Awra, Amaravati, Broach, Kayatha, Ter, Tripuri, Paithan, Bahal, Pauni, Tumain, Chandraketugarh and Bangarh.
10. See L.A. Narain, (1969),"Associated antiquites of the NBPW with special reference to Bihar" in B.P. Sinha (ed) Potteries in ancient India, Patna. Also see the excavation reports of Rajghat and Prahladpur, Op.cit.

11. M.Sahlins, Tribesmen, Englewood cliffs.
12. See R.A. Fernea's paper in K. Kraeling and R.M. Adams, City invincible, for the collective activities of tribesmen. They construct irrigation channels for their use.
13. See N.R. Banerjee, (1965), The iron age in India, Delhi. He thinks that the fortification was erected around 700 B.C. We have assigned 450-400 B.C. to the NBPW phase here. The 6' debris below this level should have taken between 250-200 years to accumulate according to the estimates of the excavator himself. So the erection of the rampart after a 25 to 50 years of habitation should be placed some where around 650-600 B.C.
14. Indian Archaeology - A review, 1957-58.
15. M.S. Mate, (1970), "Early historic fortifications in the Ganga Valley" Puratattva, No.3.
16. N.R. Banerjee, Iron age in India.
17. G.R. Sharma, The excavations at Kaúsāmbí (1957-59), Allahabad, 1960.
18. See A. Ghosh, The city in early historical India, and K.K. Sinha, EStratigraphy and chronology of early Kausambi" in D.P. Agrawal and A. Ghosh (eds). Radio carbon and Indian archaeology, Bombay, 1973.
19. N.R. Banerjee, "The excavations at Ujjain." "Indologen Tagung, Gottingen, 1959.
20. N.R. Banerjee, Iron age in India.

21. IAR, 1976-77
22. IAR, 73-74, 74-75, 75-76, 76-77.
23. R.C. Gaur, "A note on the NBPW" in B.P. Sinha (ed). Potteries in Ancient India.
24. B.P. Sinha and Sita Ram Roy, Vaisali excavation: 1958-62.
25. For Ayodhya the excavator gives the late 3rd century B.C. to 1st century A.D. for the post rampart phase which saw most of the construction activity. In Atranjikhera, two of the C^{14} dates of 295±100 and 260±105 will indicate a similar date. Although other C^{14} dates indicating an earlier beginning are also available. The Mathura C^{14} dates ranging between 510 to 300 B.C. for this phase might point to an earlier beginning. Vaiśālī has been assigned 300 B.C. to 100 A.D. by the excavator.
26. Most of the comparative data we are presenting here is based on the reports from Indian Arcaeology-A review 1953-54 to 1978-79.
27. Compared to the preceding period these was an increase in the number and variety of iron tools. See D. Chakrabarti "Beginnings of iron and social change in India" in Indian studies: past and present vol. XIV. No.4.
28. S.K. Dikshit, Vijaiyini itihasa tatha puratattva (in Hindi).
29. The earliest uses of writing were for maintaining records of economic activities. See R.M. Adams, Evolution of the urban Society.

30. K.C. Chang, (1974), "Urbanism and the king in ancient China" World archaeology Vol. 6 No.1.

31. This kind of approach has been followed by A. Ghosh op-cit. and V.K. Thakur, (1980), Urbanisation in Ancient India, Delhi.

APPENDIX

The attempts to co-relate the literary tradition with the archaeological cultures has been taken up very recently. Any study on those lines will require an independent study which could establish the fact that certain tribes could be associated with certain areas in a particular historical phase. We too are making an attempt in this direction. Our conclusions are tentative, but they do give us some idea of the process of change in the institutional structure. Some literary sources can also be utilised for reconstructing the societal developments from the early first millenium B.C. Prof. Romila Thapar has made some attempts to co-relate some tribal groups with the archaeological cultures in the Malwa region[1]. The Yadavas are repeatedly associated with the areas like Saurastra, Malwa and Viderbha. The evidences used by us are from myriad sources. The dates of their composition vary from 7th-6th century B.C. to 4th-5th century A.D. The Yādavas are frequently mentioned in later Vedic works like the Śatapatha Brāhmaṇa and the Aitareya Brāhmaṇa. They are mentioned even in the Ṛg veda[2]. They participated in the battle of ten-kings. Suffice it to say that even the information given in the Purāṇas which were composed in the post christian era, might refer to events which took place somewhere in 1000-700 B.C. This is the date traditionally given to the later Vedic phase.

The epics and Purāṇas are the products of a cummulative process of accretion of the oral poetic tradition. This kind of oral tradition is meant to affirm the convictions and values of a society. They constitute, what has been called 'the charters of legitimacy' for social institutions and actions, validation of traditional customs, beliefs and attitudes.[3] The emergence of heroic sagas as exemplified in the epic literature is symptomatic of a new value system. The egalitarian societies are giving way to societies which are commanded by human heroes towering over the common masses. The new genre of literature emerges when the society can no longer contain the tensions of the social structure. In other words, the epic literature (unlike the myth having gods as the leading characters) legitimises the powers of a group of people who have gained unequal power.[4] The oral literature however undergoes many additions and substrattions before it is put to writing. That is why, we have the descriptions of primitive tribal society and advanced urban civilization in the same texts. Thus, any attempt to present synchronic picture of a society through these literary sources will be virtually looking for a will-O-the wisp. We shall try to use the data in an evolutionary perspective. Although the choice of various contexts will be arbitrary and shall assume a uniform development in time and space, it will be done with the help of anthropological studies. We believe that even if we succeed in

reconstructing some of the components of the societal structure, it might give us some idea of other parts of it. This is because various levels of socio-cultural integration show a complementarity among its components.

In the Mahābhārata and many other Purāṇas the story of the banishment of Yadu to the south from the Madhya desa is mentioned. This will obviously indicate the Malwa region. The Harivaṁśa says that the Yādavas conquered territories extending from Ānarta (modern Kathiawar and some portions of Malwa) to Mathura[5]. There are references to Mahismant, a member of the Haihaya segement of the Yādavas, as having founded the city of Mahismatī. In another instance kārtivīrya Arjuna is credited with the conquest of Kārkotaka Nāga and establishment of Mahismatī[6]. One of the sons of Tālajangha was Avanti after whom the Malwa region was known[7]. Similarly, the Ghata Jātaka also records the tradition of Yādavas staying in Mathura and Dwāravati[8]. At the end of the Mūsalaparva in the Mahābhārata Arjuna is shown as establishing the son of Krtvarmā in the city of Mrttikāvati, the son of Yuyudhana on the banks of Saraswati and the son of Aniruddha in Indraprastha. The city of Mrttikavati was located somewhere in Ānarta which consisted of parts of Malwa and Gujrat[9]. All these references do indicate that the earliest Indian literature does associate Malwa with the Yādavas. Various other regions

around Malwa have also been associated with the Yadavas. They include Kathiawar, Deccan and the Banas Valley[10]. This indicates the cultural unification of larger region compared to the archaeological cultures discussed so far. BRW phase, of course, is represented in all these areas. Some other uniformities in the spread and synchronisms have led certain scholars to believe that the BRW pottery represented the Yādavas[11]. It is difficult to believe that such a large region was occupied by the segements of only one tribe especially when they are referred to as having occupied areas as far as Magadh. In fact, pre-state chiefdoms are typically known to have existed in a single ecological zone. It was the state societies which controlled diverse ecological zones[12]. While we do believe that there was some immigration to Malwa, the identification of these regions with the habitation of the Yadus is more a result of the process of Sanskritisation and state formation. This simply indicates that lineages from larger and larger areas were crowding the canvas of the bards and brāhmins. They had to find geneological connexions and legitimacy for the emerging powers[13]. Even the uniformity of material culture need not indicate a single tribe. The Hittities, a well known Indo-European group, fully adopted the material culture of the areas they conquered. But they would not have been known as a separate group of people if their inscrip-

-tions were not deciphered[14]. In fact we have certain indications which might show that the Yādavas as a group referred to the indigenous communities also. The Andhakas and Vrsnis are are referred to as Vrātyas in the Drona-parva of the Mahābhārata[15]. Agrawal has pointed out that the Vrātyastoma ritual was meant to convert the non-Aryan population[16]. In the Rājsūya ceremony of the Pāndavas Śisupāla accused Krsna of not belonging to any caste[17]. Similarly, the Vrsni god Krsna is said to have been defeated by Indra in the Rg veda[18]. This fact gets added significance when we remember the intense rivalry of Krsna and Indra in the epic literature. Similarly, drinking of liqueur has been called one of the four greatest sins in the Śruti literature. It was regularly indulged in by the Yādavas. Balarāma is repeatedly mentioned as getting drunk and eating the meat of buffalo. More significant is the contrast between the marriage practices of the Yādavas and the Indo-Europeans. They practised cross-cousin marriage which is prohiluted in the Indo-Aryan kimohip system[19]. Besides, they practiced sagotra marriage (Vasudeva-Devakī and Krsna - Śatyabhāmā). A Brāhmana named Brahmadatta married most of his 500 daughters to Yadu princes[20]. Bride capture, again an unorthodox practice of marriage was regularly resorted to by the Yadus. Similarly a late Buddhist text refers to Gujarat as one

of the panca-dravida lands[21]. In one instance the Yādava lineage is mentioned as descended from the demon Madhu. His son Lavana a fearful demon was killed by Śatrughna[22]. One of the important clans of the Yādavas was called Madhus. This again indicates connexions with the indigenous population. In course of a few generations a people who were considered heathens become a respectable community with a prestigious pedigree. It seems that most of the so called Yādava lineages were but separate groups integrated into the main line for social legitimacy.

We shall briefly review the social structure of these agro-pastoral groups. This might give us some idea of the societal developments in the Malwa region immediately preceding the emergence of state society.

If one takes a glance into the dynastic list of the Andhaka-Vṛṣṇis one thing strikes us. The names of all the sons are mentioned. Quite a few of them seem to be ruling simultaneously over different areas. Succession is not according to the law of primogeniture. For example seven sons of Sātvata are mentioned. Out of them Mahābhoja, Andhaka, Vṛṣṇi and Devavṛddha, were founders of various lineages[23]. After the internecine war among the Yādavas the sons of Aniruddha Kṛtvarma and Sātyaki are shown as being installed as kings. Even in such a crucial time

as the Mahābhārata war Krsna and Sātyaki sided with the Pāndavas, Krtavarmā helped the Kauravas and Balarāma remianed neutral. The partcipation of all these leaders in the Rājasūya sacrifice of the Pāndavas indicates that they enjoyed considerable power and independence. There was no centralizing authority. Such practies are symptomatic of the existence of segementary lineage system. Sahlins believes that such social structures emerge in an inter-tribal situation when there is considerable pressure on a limited area of land. Its main thrust is predatory organisation in conflict with other tribes. It is typically suited to tribes which are agro-pastoralists, but not advanced agriculturalists[24].

Krsna and Ugrasena are time and again referred to as kings of the Bhojas, Kukkuras, Andhakas etc. and not as kings of a particular territory. State signifies the establishment of society as a territory as opposed to kinship entities under lineage chiefs in tribal societies. The Frankish invaders used to call themselves the 'king of Franks' which latter on changed to 'king of France'[25]. Similarly, Kamsa was called a tyrant not because of any misrule but because "he prosecuted his relatives and gained ascendancy over all of them. The wretch began to appress the Rājanyas, old people and the Bhojas"[26]. Krsna says that he did service to his kinsmen by killing Kamsa and Sunāman[27].

Most of the marriages of the important Yadu heroes were by bride-capture. When Kṛsna comes to know Arjuna's penchant for his sister, he, instead of marrying her off in a regular Aryan fashion advises him to abduct her.[28] The function of regulating sex ratio through bride capture is exclusive to pre-state societies. Since the Civilized societies are relatively large, settled over an extensive territory under a single government, an adjustment to local demographic imbalances can be done within this unit itself[29]. Similarly, the wars fought by these chiefs are not for some territorial gain, rather, they are due to bride capture or some personal animosity. Alliances are along the kinship lines. Like all the songs of heroic ages the battles are used for the glorification of particular personalities. In the innumerable battles which the Andhak Vṛsnis fought the presence or absence of an army was immaterial to the out-come of the war. It was a few heroes like Kṛsna, Balarāma, Pradyumna etc. Who decided the result of the war. This shows that the old egalitarian structure was being eroded.

Cows, gold, honey, garments constituted the major form of gift[30]. For Subhandrā's marriage the gifts consisted of gold, cows, mares, mules, elephants and clothes[31]. In the Harivaṁśa Kṛsna is shown as bringing spoils of war to the assembly. Meanwhile, Nārada, sent by Indra, gave a long discourse on the glorious deeds of Kṛsna. Then

Krsna distributed the wealth among his kinsmen[32]. Does it not sound like, some chieftain collecting 'funds of power'? In the narrative sections of all the epics, land is completely absent as an item of gift. Food items like rice are mentioned just once or twice. Does it not indicate an economy which is predominantly pastoral? At the same time the symbiotic relations between the Gopas who were pastoral nomads and the Yadus also indicates a similar social structure.

The general pattern that emerges from our discussion is that an agro-pastoral society was being transformed into a more stratified society. Intermittant wars and plunders brought more power to chiefs. War booty generated new patterns of patron-client relationship among the leaders and their followers. Kinship ties were established among the ruling groups. The larger the network of these ties, the higher the prestige and the greater the capacity to cushion economic or political crises. A capacity to tide over such difficulties with the help of powerful kinsmen further enhanced chiefs' power. The movement towards the Malwa region by the herders from drier regions might have led to a suddedn increase in the productivity of labour. This itself might generate new patterns of relationship. Availability of pastures in abundance might lead to a

gradual sedentarisation of the population. The incessant wars indicated the crisis of the old structure. Already, only a few consecrated families had access to political power. The groups of Dvaipyas and Haimyas were staying with the Andhaka Vrsnis but they did not enjoy any political power[33]. The maintenance of geneology itself became important as a result of the emergence of private property and various other rights, whose legitimacy could be proved through high ancestry. It has been shown that groups like Āndhras and Sātvatas were placed in the 'Śūdra' Category in the Smriti literature. Similarly, they are mentioned as Sankīrna jātis in many instances. This indicates the inclusion of clan groups into the caste structure. The conference of kshatriya status to some groups was a recognition of their political authority[34]. The Mahābhārata[35] war has a symbolic value for the makers of the geneology since its end saw the emergence of full fledged monarchical system. This is clear from the shift in the geneological record from giving lists of lineages to that of the kings, mention of dynasties by name and regnal years of individual kings[36]. The Māhābhārata war signified a conflict not for cows or gold but for rights over land, for right to rule over it. The switch-over to agriculture itself generates new problems to be solved by the society. Fixed residence and large groupings

lead to new forms of order and dispute. The settlement may demand more elaborate forms of co-operation, careful co-ordination is required for harvesting sowing etc. as food procurement will take longer period. Co-operation may be required for defensive purposes because the agricultural communities can not simply melt away at the threat from other communties, as agricultural activity requires investments of labour for long periods of time. Similarly, there are possibilities of accumulation of property in the form of farming implements, durable dwellings and surplus crops. The right to rule which was firmly established after the Māhābhārata war meant the right to enforce law and order and the right to collect taxes[37]. Thus, the end of the Mahābhārata war signified new patterns of property relations and political power. It was this pattern of the emergence of ruling groups sanctified by the Brāhmanical rituals and enriched by spoils of war, in the back-ground of an agricultural economy, that characterised the succeeding phase.

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1. See her, "Purānic lineages and archaeological cultures" and "Geneology as a source of social history" in Romila Thapar, (1978), Ancient Indian Social History, Orient Langman Ltd.
2. H.C. Raychaudhari, (1972), Political history of ancient India, Calcutta, pp.124-26.
3. For a discussion of various function of myths see G.S. Kirk, (1970), The nature of Greek myths, Penguin, chapters two and three.
4. Very little work has been done on the Indian literature with this kind of theoretical perspective, On the epic literature. We can cite Iravati Karve, (1969), Yugānta, Pune as themost significant study in this field. This study looks at the Mahābhārata war as signifying some kind of end of an epoch and of a social system. The new era probably signified the emergence of the stratified state society.
5. Harivaṁśa 54,
6. R. Morton Smith, (1973), Dates and dynasties in earliest India, Delhi, pp.26-27.
7. ibid. p.27.
8. A.K. Chatterjee,(1972)."The Vrishnis", J N S I", vol.34.

9. K.D. Bajpai et al. (1967) A Geographical encyclopaedia of ancient and medieval India, Banaras.

10. See Romila Thapar, "Purānic lineages and archaeological cultures" Ancient Indian Social history. (1978), Orient Longman.

11. D.D. Kosambi, (1956), Introduction to the study of Indian history, Bombay, 1956, p.139. Romila Thapar has identified the BRW with the Yādavas and believes that these very people carried the BRW to Vatsa and Magadha.

12. Davydd Greenwood and W. Stini, (1977), Nature culture and human history, New York.

13. The process of acquiring higher status by the chieftains in modern times has been discussed in many anthropological studies. See, Surajit Sinha, (1962), "State formation and Rajput muth in tribal central India", paper presented at the 49th Indian science congress, Cuttack,. In ancient India we have examples of the Indo-Greek king Menander being called a Ksatriya by the Buddhist work Milinda-panho. Similarly, in his inscriptions, the Śaka King Rudradaman declares himself the protector of varnas, and speaks of marital relations with the Sātavāhanas who were Brahmins. We believe that such processes of assimilation could be projected back to the pre-historic or the early historic phase.

14. See O.R. Gurney, (1976), The Hittites, Penguin Books, 1976.
15. Mahābhārata, 7.118. 15(critical edition).
16. V.S. Agrawal, (1953), India as Known to Pāṇini, Lucknow, pp.441-42.
17. Bhāgavata Purāṇa, x.74, (S.V. Jagose edited)
18. D.D. Kosambi, Culture and civilization of ancient India, Delhi, 1977, p.115.
19. Krsna's marriage with Mitravindā (Bhāgavata-purāṇa x.50, Bhadrā (x.83) and Laksmaṇā (x.83) are some of the examples. T.R. Trautmann, (1974), "Cross-cousin marriage in ancient north India" in T.R. Trautmann (ed), Kinship and history in South Asia, Michigan, has argued that Krsna's marriages with his cousins mentioned only in the Bhāgavata Purāṇa which was compiled in south India. That is why, the South Indian kinship pattern crept in. But some of these marriages are mentioned in the Harivaṁśa, Brahmāṇḍa, Brahma, Vāyu and Matsya Purāṇas, obviously all of them were not due to Drāvidian influences.
20. N.K. Dutt, (1945), "Some unorthodox marriages in the family of Yadu", Indian Historical Quarterly, Vol.XXI. No.2.

21. Romila Thapar, "Purānic lineages and archaeological cultures".

22. R. Morton Smith, pp.27.

23. Bhāgavata Purāna, IX.24.

24. Marshall Sahlins, (1961), "The segementary lineage: An organisation of predatory expansion" American anthropologist, Vol.63.

25. M. Sahlins,(1968), Tribesmen, Englewood cliffs,

26. Mahābhārata, 2.55 6-7.

27. ibid.

28. Bhāgavata Purāna, X.83.

29. Andrew, P. Vayda, "Hypotheses about functions of War" in Morton Fried et. al. (eds), War; the anthropology of armed conflict and aggression, New York, 1968.

30. See Bhagavat Purāna, X. 5-45.

31. Mahābhārata, 1.213. 40-50.

32. Harivamśa, II. 101-102.

33. G.S. Majumdar, (1969), "Polity of the Andhak Vrsni Samgha" in Satakari Mookerji feliciation volume, Varanasi.

34. Romila Thapar, " Genealogy as a source of Social History".

35. Here we are not concerned with the actual scale or occurrance of the war but with what the popular memory thought of it. Morton Smith gives it the date of 975 B.C. This fits in with our period of changes coming in the Malwa region. It has been pointed out by Romila Thapar that the geneological list given after the Mahābhārata war has a futuristic form. The past is viewed as essentially the period before the Mahābhārata war. This section more often speaks of kings and their successors. Pointing to the early historical period. This again will put the Mahabharata war somewhere between 10th to 7th century B.C.
36. Romila Thapar, "Genealogy as a source of Social History".
37. ibid.

KAYATHA CULTURE SITES

	Name of the site	District	Sources
1.	Manoti	Mandsaur	
2.	Sanjeet	Mandsaur	V.S. Wakankar Chalcolithic Cultures of Malwa
3.	Mandasaur	Mandsaur	
4.	Jharda	Mandsaur	
5.	Nahargarh	Mandsaur	
6.	Jaora	Ratlam	
7.	Songadh	Ratlam	
8.	Meen	Ratlam	
9.	Runija	Ratlam	
10.	Khachraud	Ujjain	
11.	Rajgad	Ujjain	
12.	Runija	Ujjain	
13.	Bhilsudi	Ujjain	
14.	Takarawada	Ujjain	
15.	Dhangwada	Ujjain	
16.	Kayatha	Ujjain	
17.	Futipal	Ujjain	
18.	Nepawali	Dhar	
19.	Kanwan	Dhar	
20.	Manawar	Dhar	
21.	Maheshwar	Khargone	
22.	Chiklda	Khargone	

	Name of the site	District	Source
23.	Azadnagar-Indore	Indore	
24.	Lohagal	Indore	
25.	Bilawali	Dewas	
26.	Maksi	Shajapur	
27.	Narsinghgarh Pachor	Rajgarh	
28.	Ashta	Sehore	
29.	Shahadkarad	Bhopal	
30.	Kharwai	Raisen	
31.	Bhimbetka	Raisen	
32.	Dhansuta	Ujjain	IAR, 68-69
33.	Badagaon	Shajapur	IAR, 69-70
34.	Sipawara	Shajapur	
35.	Soyat	Shajapur	
36.	Susner	Shajapur	
37.	Simrol	Indore	IAR, 70-71
38.	Awra	Mandasaur	IAR, 57-58, 59-60.

Following is the list of sites in Madhya Pradesh which yielded the Malwa Pottery

Name of the site	District	Name of the Journal
1. Awra	Mandasaur	IAR, 57-58, 59-60
2. Asta	Sehore	IAR, 56-57
3. Eran	Sagar	IAR, 60-61, 64-65
4. Kasrawad	Nimar	IAR, 56-57
5. Kanvan	Dhar	IAR, 57-58
6. Kayatha	Ujjain	IAR, 64-65, 67-68
7. Khera	Dewas	IAR, 56-57
8. Ghat - bilod	Indore	IAR, 56-57
9. Takariyada	Ujjain	IAR, 55-56
10. Takaroda	Ujjain	IAR, 56-57
11. Tungani	Ujjain	IAR, 56-57
12. Dhar	Dhar	IAR, 56-57
13. Dhodhar	Ujjain	IAR, 56-57
14. Nagda	Ujjain	IAR, 56-57
15. Navdatoli	Nimar	Site report
16. Parmar - Kheri	Ujjain	IAR, 56-57
17. Pasewa	Mandasaur	IAR, 56-57
18. Badanawar	Dhar	IAR, 56-57
19. Bilawali	Dewas	IAR, 56-57, 62-63
20. Betana	Indore	IAR, 56-57
21. Besnagar	Vidisa	IAR, 63-64, 65-66
22. Bhilswra	Ujjain	IAR, 55-56

Name of the site	District	Name of the journal
23.Mandasaur	Mandasaur	IAR, 65-66
24 Manoti	Mandasaur	IAR, 1958-59-60
25.Metwas	Ujjain	IAR, 56-57
26.Maori	Ujjain	IAR, 56-57
27.Rajota	Ujjain	IRR, 59-60
28.Rura	Bhind	IAR, 1958-59
29.Lohari	Ujjain	IAR, 56-57
30.Sarangpur	Shajapur	IAR, 60-61
31.Singwara	Shajapur	IAR, 60-61
32.Tripuri	Jabalpur	IAR, 55-56 to 68-61
33.Atud	East Nimar	IAR, 1962-63
34.Barakalan	Bhind	IAR, 63-64
35.Makora	Gwalior	IAR, 68-69
36.Jharada	Mandasaur	IAR, 69-70
37.Narayanagad	Mandasaur	IAR, 69-70
38.Badagaon	Shajapur	IAR, 69-70
39.Sipawara	Shajapur	IAR, 69-70
40.Soyat	Shajapur	IAR, 69-70
41.Susner	Shajapur	IAR, 69-70
42.Dhangwade	Ujjain	IAR, 69-70
43.Lahagal	Indore	IAR, 70-71
44.Simrol	Indore	IAR, 70-71
45.Uncha-khera	Morena	IAR, 72-73
46.Mewada	Morena	IAR, 72-73

Name of the site	District	Name of the Journal
47. Jalod	Ujjain	IAR, 74-75
48. Unchahera	Ujjain	IAR, 74-75
49. Barkher khurd	Ujjain	IAR, 74-75
50. Phootipal	Ujjain	IAR, 74-75
51. Amlawad Beka	Ujjain	IAR, 71-72
52. Amlawad kalan	Ujjain	IAR, 71-72
53. Âlot	Ujjain	IAR, 71-72
54. Baniakheri	Ujjain	IAR, 71-72
55. Khera-Narayan	Ujjain	IAR, 71-72
56. Banjari	Ujjain	IAR, 71-72
57. Bhawasa	Ujjain	IAR, 71-72
58. Jharda	Ujjain	IAR, 71-72
59. Khachrod	Ujjain	IAR, 71-72
60. Khamaria	Ujjain	IAR, 71-72
61. Parliakalan	Ujjain	IAR, 71-72
62. Rajgarh	Ujjain	IAR, 71-72
63. Deopur	Mandasaur	IAR, 57-58
64. Koyali	Mandasaur	IAR, 59-60
65. Koyala	Mandasaur	IAR, 59-60
66. Retam	Mandasaur	IAR, 59-60
67. Burhampur	East Nimar	IAR, 59-60
68. Mujali	West Nimar	IAR, 59-60
69. Banya-khedi	Shajapur	IAR, 60-61

Following is the list of sites in Madhya Pradesh which have yielded early historical pottery:

Name of the site	District	Journal
1. Delcha	Ujjain	IAR, 56-57
2. Jalod	Mandasaur	IAR, 56-57
3. Asohna (BRW,NBPW)	Bhind	IAR, 59-60
4. Barauli (BRW, NBPW)	Bhind	IAR, 59-60
5. Jamdara (BRW, NBPW)	Bhind	IAR, 59-60
6. Mow (BRW, NBPW)	Bhind	IAR, 59-60
7. Mujali (BRW)	West Nimar	IAR, 59-60
8. Ujjain (BRW, PGW, NBPW)	Ujjain	IAR, 59-60
9. Tripuri (BRW, NBPW)	Jabalpur	IAR, 66-67
10.Burhanpur (BRW, NBPW)	East Nimar	IAR, 60-61
11.Nagda (BRW, NBPW)	Ujjain	IAR, 55-56
12.Awra (BRW, NBPW)	Mandasaur	IAR, 57-58
13.Maheswar (BRW, NBPW)	West Nimar	Site report
14.Pasewa (BRW, NBPW)	Mandasaur	IAR, 57-58
15.Lahar (NBPW)	Bhind	IAR, 57-58
16.Tewar (NBPW)	Jabalpur	IAR, 57-58
17.Barehat (NBPW, BRW)	Bhind	IAR, 58-59
18.Daboh (BRW, NBPW)	Bhind	IAR, 58-59
19.Jamuha (BRW, NBPW)	Bhind	IAR, 58-59
20.Kaitha (BRW, NBPW)	Bhind	IAR, 58-59
21.Mehara-Buzurg (BRW, NBPW)	Bhind	IAR, 58-59
22.Sirsa (BRW, NBPW)	Bhind	IAR, 58-59

Name of the site	District	Journal
23.Barata (PGW, NBPW)	Bhind	IAR, 58-59
24.Manoti (BRW)	Mandasaur	IAR, 58-59
25.Eran (BRW, NBPW)	Sagar	IAR, 60-61
26.Kakaratha (BRW, NBPW)	Jabalpur	IAR, 60-61
27.Akoda (BRW,PGW,NBPW)	Bhind	IAR, 61-62
28.Vidisha (BRW,NBPW)	Vidisa	IAR, 61-62
29.Bilawali (BRW)	Dewas	IAR, 61-62
30.Dharwada (BRW)	Dewas	IAR, 61-62
31.Barakalan (BRW,G.W. NBPW)	Bhind	IAR, 63-64
32.Jharda (BRW,NBPW)	Mandasaur	IAR, 69-70
33.Narayanagad (BRW,NBPW)	Mandasaur	IAR, 69-70
34.Kayatha (BRW? NBPW)	Mandasaur	IAR, 69-70
35.Badagaon	Shajapur	IAR, 69-70
36.Sipawara	Shajapur	IAR, 69-70
37.Soyat	Shajapur	IAR, 69-70
38.Susner	Shajapur	IAR, 69-70
39.Tumain (NBPW)	Guna	IAR, 71-72
40.Kutwar (BRW, NBPW, PGW)	Morena	IAR, 70-71
41.Nadner (BRW, NBPW)	Sehore	IAR, 71-72
42.Chandupura (BRW, NBPW)	Gwalior	IAR, 71-72
43.Dhaneli (BRW,NBPW)	Gwalior	IAR, 71-72
44.Jaderua (BRW, NBPW)	Gwalior	IAR, 71-72
45.Person (BRW,NBPW)	Gwalior	IAR, 71-72

Name of the site	District	Journal
46.Soron, (BRW, NBPW)	Gwalior	IAR, 71-72
47.Banger (BRW)	Ujjain	IAR, 71-72
48.Baleri (BRW)	Ujjain	IAR, 71-72
49.Bhat Pachalana (BRW)	Ujjain	IAR, 71-72
50.Birakheri (BRW)	Ujjain	IAR, 71-72
51.Birgoda Randir (BRW)	Ujjain	IAR, 71-72
52.Chirola (BRW)	Ujjain	IAR, 71-72
53.Datarwa(BRW)	Ujjain	IAR, 71-72
54.Kararia (BRW)	Ujjain	IAR, 71-72
55.Kharotia (BRW)	Ujjain	IAR, 71-72
56.Lohana (BRW)	Ujjain	IAR, 71-72
57.Likhoda (BRW)	Ujjain	IAR, 71-72
58.Limoda (BRW)	Ujjain	IAR? 71-72
59.Kharsod (BRW)	Ujjain	IAR, 71-72
60.Kantharia (BRW)	Ujjain	IAR, 71-72
61.Piplaipanth (BRW)	Ujjain	IAR, 71-72
62.Sanaoda (BRW)	Ujjain	IAR, 71-72
63.Singaoda (BRW)	Ujjain	IAR, 71-72
64.Tokra (BRW)	Ujjain	IAR, 71-72
65.Chirola (BRW)	Ujjain	IAR, 71-72
66.Runkhera(BRW)	Ujjain	IAR, 71-72
67.Bawalia (BRW)	Ujjain	IAR, 71-72
68.Chitawad (BRW)	Ujjain	IAR, 71-72
69.Delchi-Buzurg (BRW)	Ujjain	IAR, 71-72
70.Delchi-Khurd (BRW)	Ujjain	IAR, 71-72

Name of the site	District	Journal
71.Nalesara (BRW)	Dewas	IAR, 78-79
72.Dhulet (BRW)	Ujjain	IAR, 71-72
73.Jormatakha(BRW)	Ujjain	IAR, 71-72
74.Narwar(BRW)	Ujjain	IAR, 74-75
75.Parlia-Khurd (BRW)	Ujjain	
76.Bhaijukheri (BRW)	Ujjain	
77.Birgoda (BRW)	Ujjain	
78.Kaytha(BRW)	Ujjain	
79.Shamnera (BRW)	Ujjain	
80.Makoriam(BRW)	Ujjain	
81.Baranagar (BRW)	Ujjain	
82.Bhondwas (BRW)	Ujjain	
83.Dhureri (BRW)	Ujjain	
84.Dunalja (BRW)	Ujjain	
85.Harnaoda (BRW)	Ujjain	
86.Itawa (BRW)	Ujjain	
87.Kajlana (BRW)	Ujjain	
88.Khandoda (BRW)	Ujjain	
89.Palsoda (BRW)	Ujjain	
90.Pachilana-bil (BRW)	Ujjain	
91.Palwa (BRW)	Ujjain	
92.Simlauda (BRW)	Ujjain	
93.Jahangirpura (BRW)	Ujjain	
94.Sarsana (BRW)	Ujjain	
95.Banbanan (BRW)	Ujjain	

Name of the site	District	Journal
96.Berawan (BRW)	Ujjain	IAR, 71-72
97.Jalodia (BRW)	Ujjain	IAR, 71-72
98.Makla (BRW)	Ujjain	IAR, 71-72
99.Metwas (BRW)	Ujjain	IAR, 71-72
100.Nivida Khurd (BRW)	Ujjain	IAR, 71-72
101.Rupeta (BRW)	Ujjain	IAR, 71-72
102.Unhel (BRW)	Ujjain	IAR, 71-72
103.Khera Danta (BRW)	Morena	IAR, 72-73
104.Khera Dantrada(BRW)	Morena	IAR, 72-73
105.Khera Kanker (BRW)	Morena	IAR, 72-73
106.Khera Laduka (BRW)	Morena	IAR, 72-73
107.Khera Nagali (BRW)	Morena	IAR, 72-73
108.Khera-Rameshwar (BRW)	Morena	IAR, 72-73
109.Namuna-ki-thor (BRW)	Morena	IAR, 72-73
110.Khera Mundra (BRW)	Morena	IAR, 72-73
111.Khera-Rodawad (BRW)	Morena	IAR, 72-73
112.Gudikhar (BRW)	Bilaspur	IAR, 73-74
113.Malhar (BRW)	Bilaspur	IAR, 73-74
114.Dhangwade (BRW)	Ujjain	IAR, 69-70
115.Ajanda (BRW)	Ujjain	IAR, 74-75
116.Barnagar (BRW)	Ujjain	IAR, 74-75
117.Garaoda (BRW)	Ujjain	IAR, 74-75
118.Kantharkheri (BRW)	Ujjain	IAR, 74-75

Name of the site	District	Journal
119.Kararwas (BRW)	Ujjain	IAR, 74-75
120.Narsingha (BRW)	Ujjain	IAR, 74-75
121.Paslod (BRW)	Ujjain	IAR, 74-75
122.Ranaoda(BRW)	Ujjain	IAR, 74-75
123.Bichrod (BRW)	Ujjain	IAR, 74-75
124.Dhuletia (BRW)	Ujjain	IAR, 74-75
125.Singaoda(BRW)	Ujjain	IAR, 74-75
126.Sodang (BRW)	Ujjain	IAR, 74-75
127.Kanoghia(BRW)	Ujjain	IAR, 74-75
128.Piplai Kayatha(BRW)	Ujjain	IAR, 74-75
129.Nipania (BRW)	Ujjain	IAR, 74-75
130.Badre(BRW)	Ujjain	IAR, 74-75
131.Akyadhaga(BRW)	Ujjain	IAR, 74-75
132.Bani (BRW)	Ujjain	IAR, 74-75
133.Bansingha(BRW)	Ujjain	IAR, 74-75
134.Chitawad(BRW)	Ujjain	IAR, 74-75
135.Dhablasia(BRW)	Ujjain	IAR, 74-75
136.Ghosla(BRW)	Ujjain	IAR, 74-75
137.Hapakheri(BRW)	Ujjain	IAR, 74-75
138.Jhutawad(BRW)	Ujjain	IAR, 74-75
139.Narainkheri(BRW)	Ujjain	IAR, 74-75
140.Parlia (BRW)	Ujjain	IAR, 74-75
141.Piplaibhun (BRW)	Ujjain	IAR, 74-75
142.Piplaighat (BRW)	Ujjain	IAR, 74-75

Name of the site	District	Journal
143.Rani-pura (	Ujjain	IAR, 74-75
144.Singh-deval	Ujjain	IAR, 74-75
145.Sipwara	Ujjain	IAR, 74-75
146.Gavari	Ujjain	IAR, 74-75
147.Golva	Ujjain	IAR, 74-75
148.Kangashia	Ujjain	IAR, 74-75
149.Kareri	Ujjain	IAR, 74-75
150.Kath Baroda	Ujjain	IAR, 74-75
151.Kohra-kheri	Ujjain	IAR, 74-75
152.Limboda	Ujjain	IAR, 74-75
153.Makron	Ujjain	IAR, 74-75
154.Mallupura	Ujjain	IAR, 74-75
155.Mirgarh	Ujjain	IAR, 74-75
156.Paldoona	Ujjain	IAR, 74-75
157Randhir	Ujjain	IAR, 74-75
158.Jamalpura	Ujjain	IAR, 74-75
159.Lokana	Ujjain	IAR, 74-75
160.Molana	Ujjain	IAR, 74-75
161.Nanarkheri	Ujjain	IAR, 74-75
162.Navda	Ujjain	IAR, 74-75
163.Rajota	Ujjain	IAR, 74-75
164.Ringnodia	Ujjain	IAR, 74-75
165.Rohat Kalan	Ujjain	IAR, 74-75

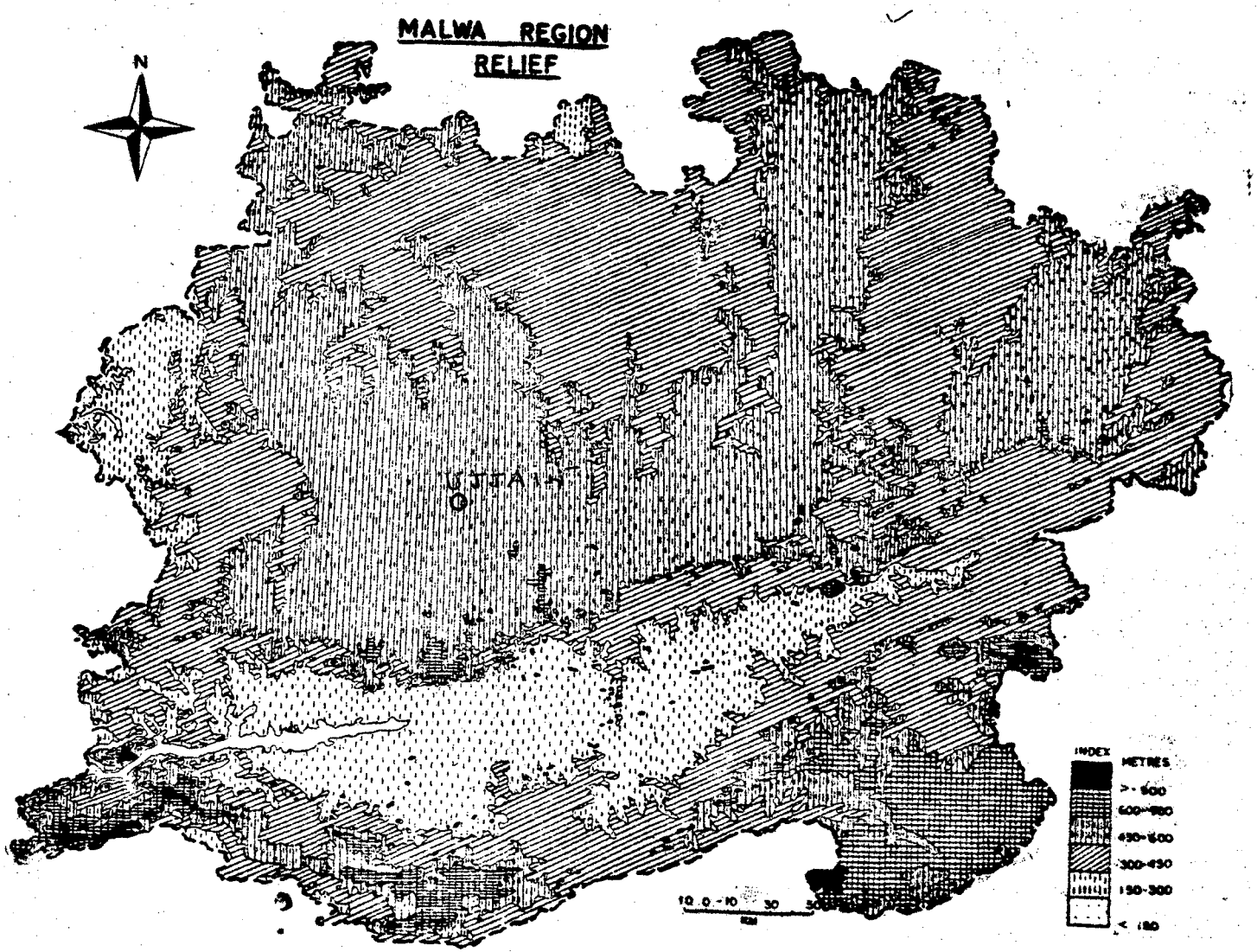
Name of the site	District	Journal
166.Tumni	Ujjain	IAR, 74-75
167.Shrivachh	Ujjain	IAR, 74-75
168.Banki	East Nimar	IAR, 77-78
169.Dhulkot	East Nimar	IAR, 77-78
170.Khatla	East Nimar	IAR, 77-78
171.Bhadakheri	Indore	IAR, 77-78
172.Kadwati	Indore	IAR, 77-78
173.Sipra	Indore	IAR, 77-78
174.Khamod	Indore	IAR, 77-78
175.Misa (PGW etc)	Bhind	IAR, 78-79
176.Besar	Raisen	IAR, 78-79
177.Ferozepur	Raisen	IAR, 78-79
178.Fatehpur-marmata	Raisen	IAR, 78-79
179.Raisen	Raisen	IAR, 78-79
180.Mirkheri (BRW)	Dewas	IAR, 78-79
181.Mundaheda (BRW)	Dewas	IAR, 78-79
182.Arandya	Indore	IAR, 58-59
183.Hatod	Indore	IAR, 58-59
184.Kanaria	Indore	IAR, 58-59
185.Khagaria	Indore	IAR, 58-59
186.Marod	Indore	IAR, 58-59
187.Narwar	Indore	IAR, 58-59
188.Panod	Indore	IAR, 58-59
189.Undel	Indore	IAR, 58-59

MATERIAL CULTURE OF THE EARLY HISTORICAL SITES

NAME OF THE SITE	KAUSAMBI	RAJGHAT	VAISALI
PERIOD, NATURE AND THICKNESS OF THE DEPOSIT	pd III, sub-phases 9-16 over BRW, PGW deposit	pd I B,C, over 2m. Black slipped ware Grey ware and BRW deposit.	pd I A, B, II. I A stratum covered a smaller area.
DATE	R.C.Dates in B.C. 220±100, 270±110, 295±105, 335±115, 400±110, 410±110 440±100, 500±105, stratigraphically 605-45	470±100 for IA 490±110 for IB. According to the excavator, 600-400 main phase, 400-200 for deteriorated NBP	Stratigraphically dated to 500-300 B.C. pd.II-150 B.C. to 100 A.D.
STRUCTURES	III.10 Rampart raised, intense building activity The palace of the earlier phase was remodelled with dressed stones of standard size. Two more large structures having a hall and galleries made of bricks and stones, found.	Ring wells 34m. long wooden planks on the bank of the Ganges a clay embankment subsequently a channel was also built. Houses with reed walls plastered with mud, 5.3cm. thick floor of burnt clay.	pd. I B, A mud rampart measuring 65'x9', IA - mud, bamboo structures pd I B - simple structures of square bricks, ring wells.
POTTERY	NBP in large quantity, bowls, handles, jars, dishes. BRW upto III 10. Red ware Grey ware PGW.	pd IB, NBP proper, 1C, coarse variety, 50% of the total ceramic complex, BRW, Black slipped ware.	NBP associated with grey ware, Red ware in I B. BRW, Buff ware also reported.
BONE POINTS BANGLES	Bone arrowheads	Tools of bone	-
IRON	Although occurring earlier they became more numerous arrowheads, axes, adze, javelins, Knives	simply reported	Nail, Knife, dagger sickle (pd II)
COPPER	Simply reported	Copper new addition in the material inventory	antimony rods, rare.
BEADS	-	Beads of Agate, amethyst, coral carnelian, glass, Lapis Lazuli, Topaz, chalcedony, chert etc.	-
TERRACOTTA FIGURINES	Completely moulded plaques with elaborate decoration, III 14. Handmade types in III.10 and III.12.	Terracotta animal figurines moulded plaques.	Terracotta nags and other figurines pd 1B, moulded figurines.
COINS SEALS SEALINGS	Punch-marked coins seslings from III.16 characteristic of the Sunga period.	Uninscribed cast copper coins.	Coins, seals, sealings coming from pd.II
BONE, IVORY HORN OBJECTS	Ivory arrowhead	ivory beads	-
OTHER OBJECTS COMMENTS	-	Weights, terracotta discs	Opaque glass, weights of stone terracotta and stone bangles in pd.1 B.
SOURCES	G.R. Sharma, Excavations at Kausambi both the reports.	A.K. Narain et al., Excavations at Rajghat vol.1,2,3.	Vaisali excavations 1950 and 1958-62

NAME OF THE SITE	UJJAIN	BROACH	MATHURA	MAHAVIR
PERIOD, NATURE AND THICKNESS OF THE DEPOSIT	pd II, over about 6 feet deposit of BRW culture	At the upper levels of pd I, one sherd of NBP occurred	Over the deposits of PGW and BRW pd IB (15 NBP sherds) II and III	pd I, II, NBP in larger quantity in I B
DATE	R.C. Date in B.C. 450± 95 Stratigraphically 500±200 B.C.	Excavator gives it a date of 3rd century B.C.	R.C.Date in B.C. 400±110, 460±100, 510±150, 300±160 660±100, 730±145	pd I dated to 300 B.C pd II second century B.C.
STRUCTURES	Rampart covering an area a mile long and 3 quarters of a mile wide, use of lime, bricks, Massive tank like structure of bricks, workshop for making beads, roads.	The first inhabitants appear to have raised a mud rampart with deep ditches outside. Ring wells.	Compact mud platforms, circular pits, ring wells, a Mauryan period fortification. In pd III, floors of surkhi, complex of 12 mud blocks in two cases having storage jars public buildings. tural activity	pd IA - Wattle and daub houses IB granite uprights bearing Mauryan polish, fragmentary brick structures, pd II intensive struc-
POTTERY	Bad quality NBP with thick grey ware dishes, BRW and Red Ware, potter's stamp.	Pottery with moulded and stamped designs.	Stamped motif on the pottery in pd III, earlier phase associated with PGW, BRW Red ware, Grey Ware.	NBP, BRW, Black slipped ware Brahmi inscription on a sherd.
BONE POINTS BANGLES	-	A dozen bone arrowheads shell bangles	Bone points	-
IRON	Arrow heads, spearheads	-	Broken spearheads and other implements of Iron	Simply reported
COPPER	Antimony rods and ear rings	-	Copper antimony rods	-
BEADS	Carnelian, onyx, chalcedony agate, jade, jasper, quartz, seatite, acquamarine, garnet, crystal	Chert, agate, jasper, chalcedony, glass, terracotta	Beads of Topaz carnelian amethyst and other semi - precious stones gadrooned and cylindrical terracotta beads	-
TERRACOTTA FIGURINES	Terracotta figurines	-	Terracotta plaques showing female figures in the Sunga style from pd II.	-
COINS SEALS SEALINGS	Coins in large numbers	-	Coins, seals with Brahmi letters square punch marked coins of copper.	Punch - marked coins in pd II.
BONE, IVORY HORN OBJECTS	Awls, seals, ear ornaments, hair pins, combs, bangles, dice of ivory	-	Beads of Ivory	-
OTHER OBJECTS COMMENTS	Polished stone discs, gamesmen, dice of terracotta, balls of stone, terracotta	Ear ornaments and gamesmen	Connected directly with Ujjain Hastinapur and Ahichatra through trade routes.	Pd II sculptural activity
SOURCES	N.R. Banerji. The iron age in India	IAR, 1959-60, 60-61	-	IAR, 58-59, 73-74

MAPS


MALWA REGION
RELIEF
N
UJJAIN
INDEX
METRES
>- 600
600-450
450-300
300-150
150-300
< 150
10 0 10 30 50

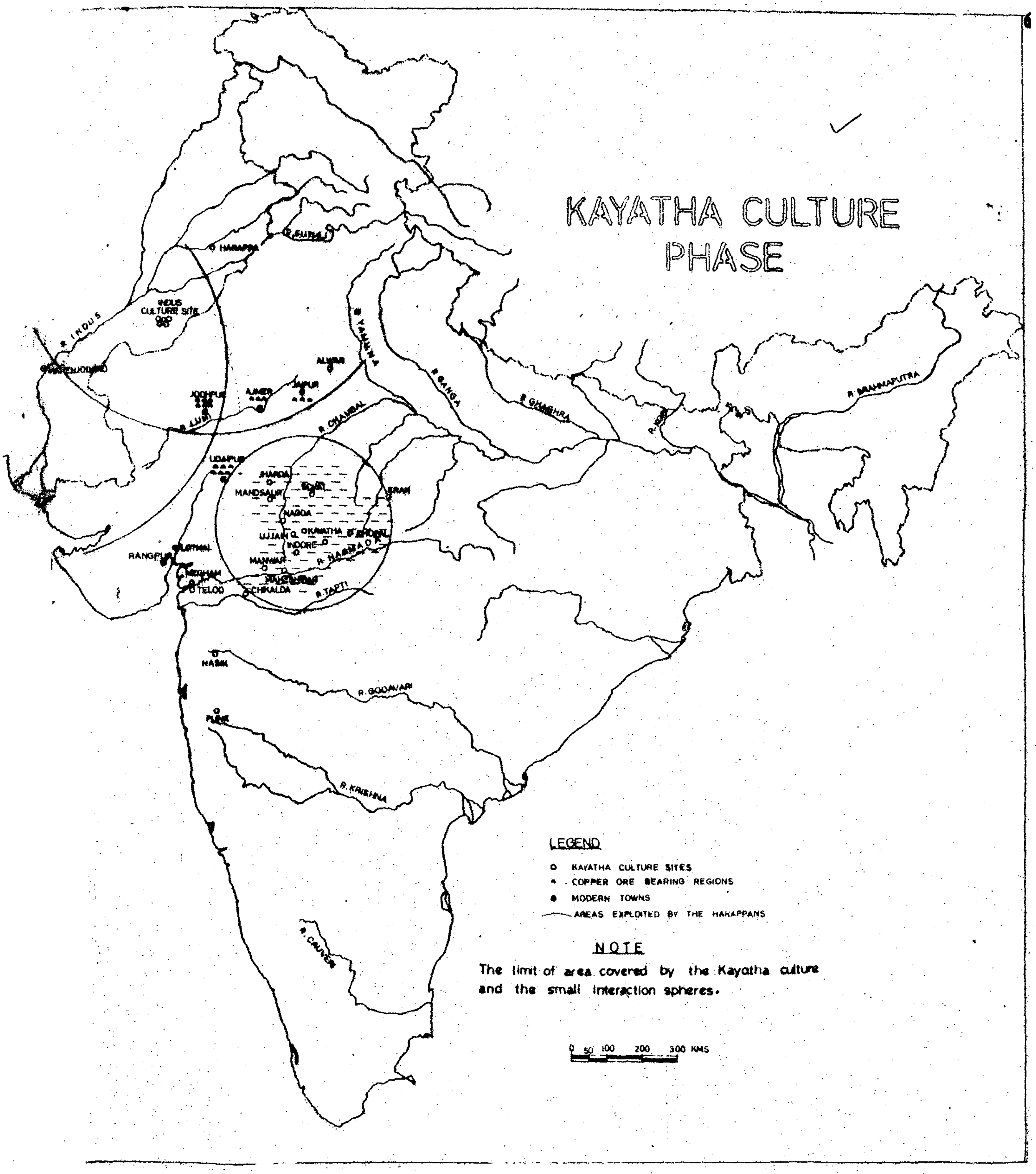
LEGEND

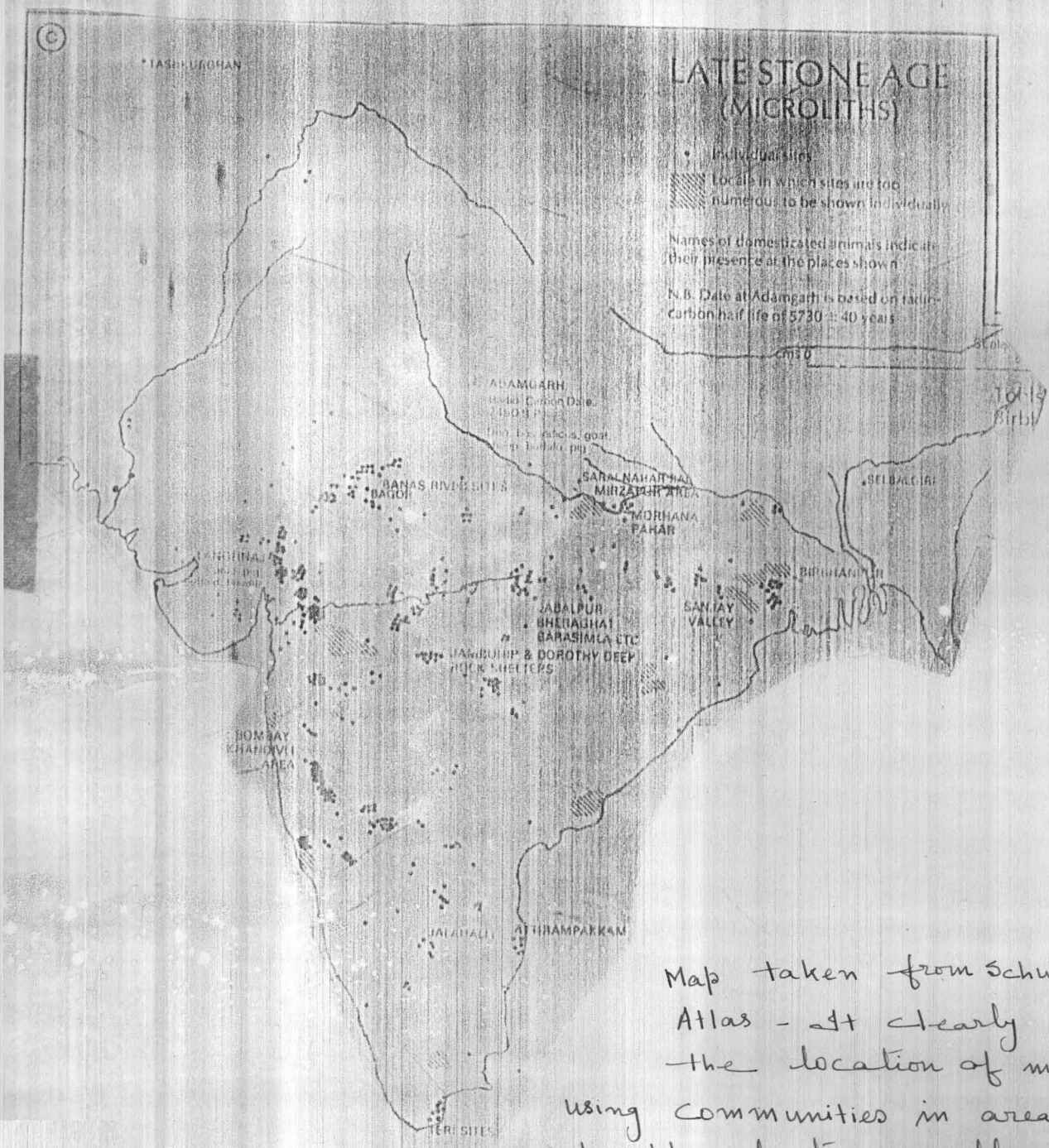
The rainfall pattern which describes the distribution of monthly rainfall throughout the year is expressed in coded form with letters, symbols and numerical suffixes. A letter denotes a rainfall interval and subscript to each letter the number of months in the interval.

SYMBOLS (Letter)	RAINFALL INTERVALS (Centimetres per month)
	Greater than 30
A	20 - 30
B	10 - 20
C	5 - 10
D	Less than 10 (if the pattern begins with A or B)
E	Less than 5 (if the pattern begins with C, D or E)

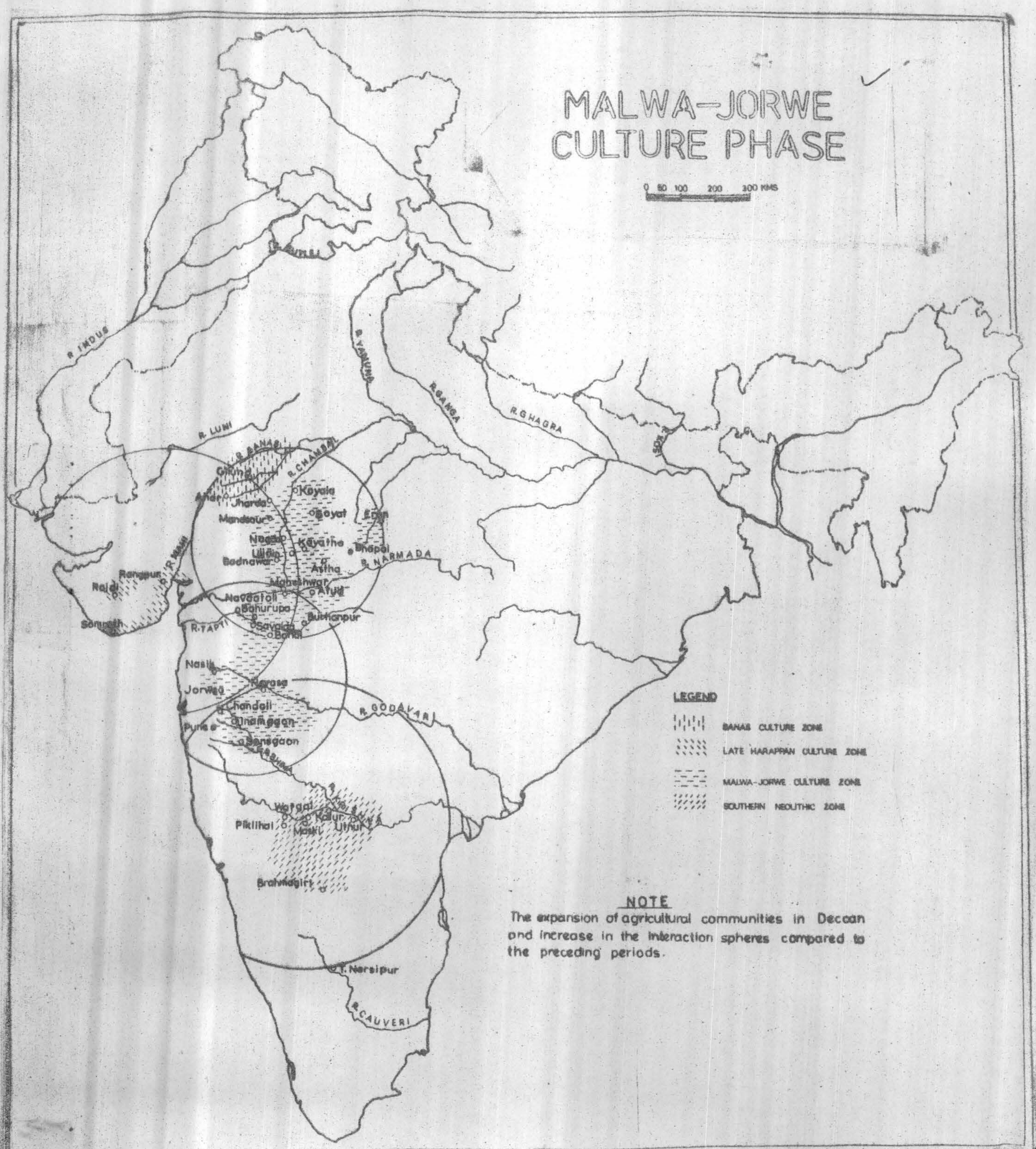
The coded form of each pattern consists of three groups corresponding to the three seasons: February to May; June to September and October to January. The central is entered in brackets.

The area covered by a rainfall pattern is termed a zone and the zones [illegible] numbered. Roman numbers indicate State rainfall zones [illegible] brackets give their corresponding

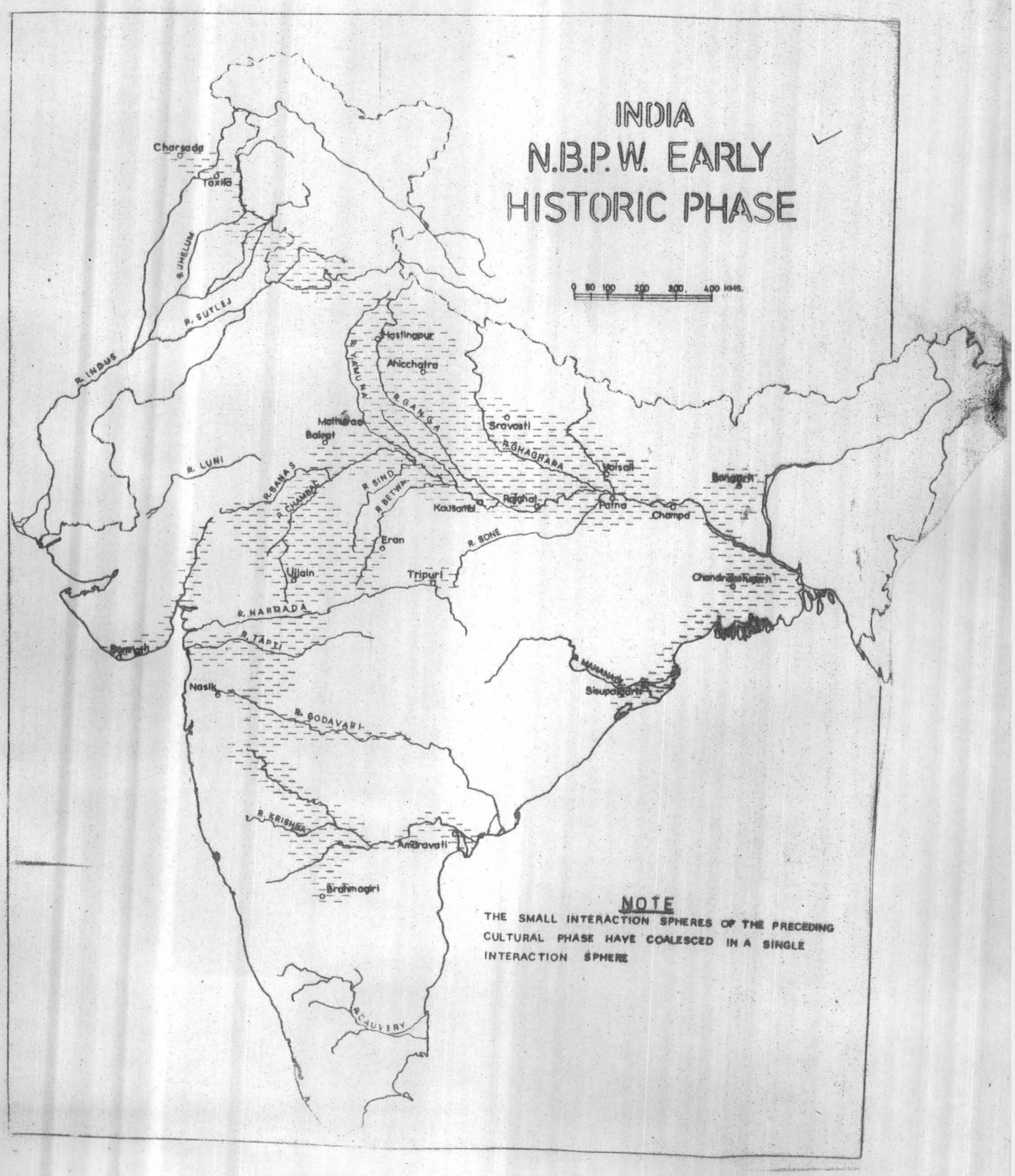

KAYATHA CULTURE PHASE
HARAPPA
R. SUTLEJ
R. INDUS
INDUS CULTURE SITE
MOHENJODARO
R. YAMUNA
R. GANGA
R. GHAGHRA
R. BRAHMAPUTRA
JODHPUR
AJMER
JAIPUR
R. LUNI
R. CHAMBAL
UDAIPUR
MANDSAUR
NAGDA
UJJAIN
KAYATHA
INDORE
MANWAR
ERAN
RANGPUR
LOTHAL
MEGHAM
TELOD
CHIKALDA
R. TAPTI
NASIK
R. GODAVARI
PUNE
R. KRISHNA
R. CAUVERI
LEGEND
KAYATHA CULTURE SITES
COPPER ORE BEARING REGIONS
MODERN TOWNS
AREAS EXPLOITED BY THE HARAPPANS
NOTE
The limit of area covered by the Kayatha culture and the small interaction spheres.
0 50 100 200 300 KMS

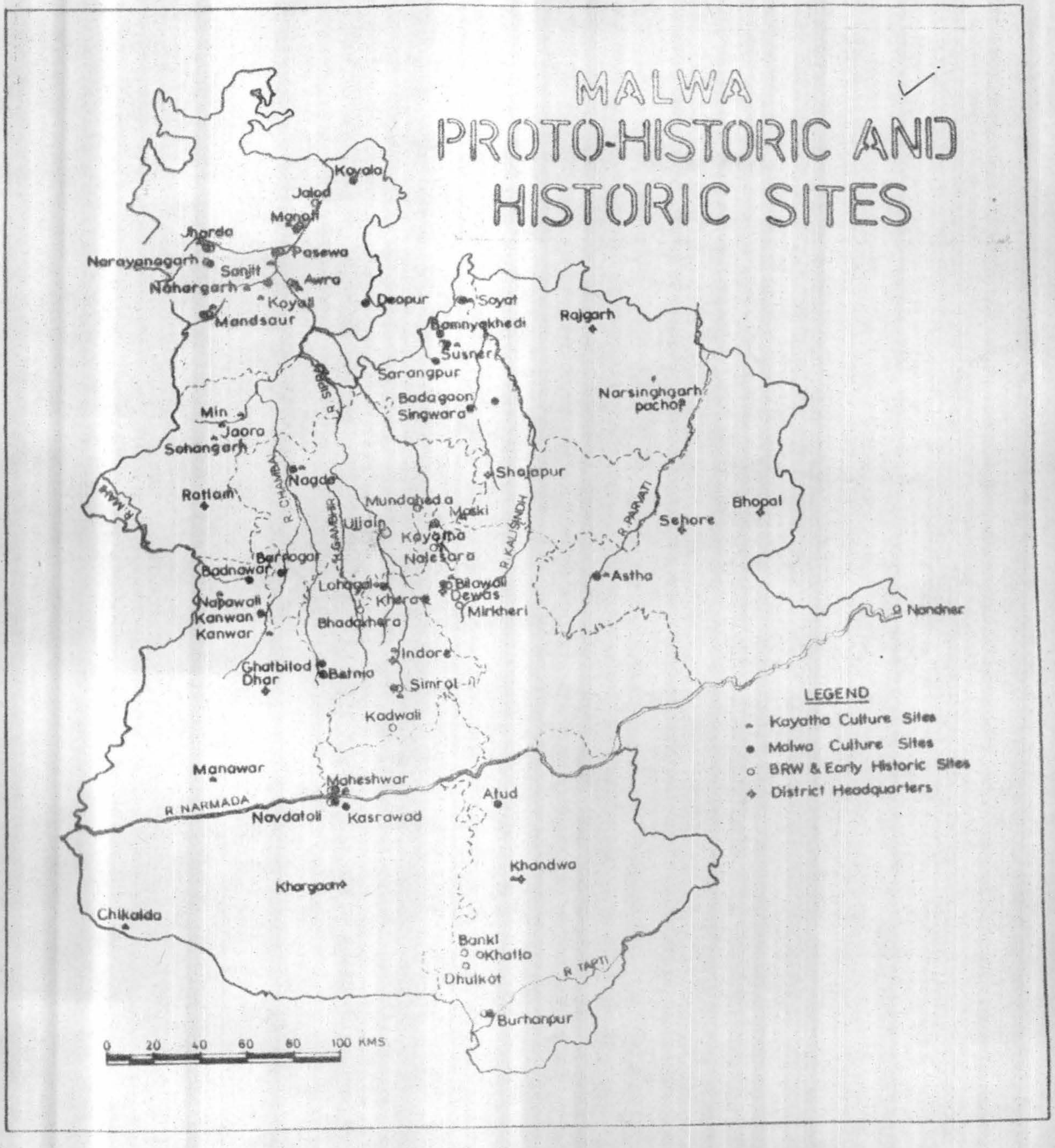


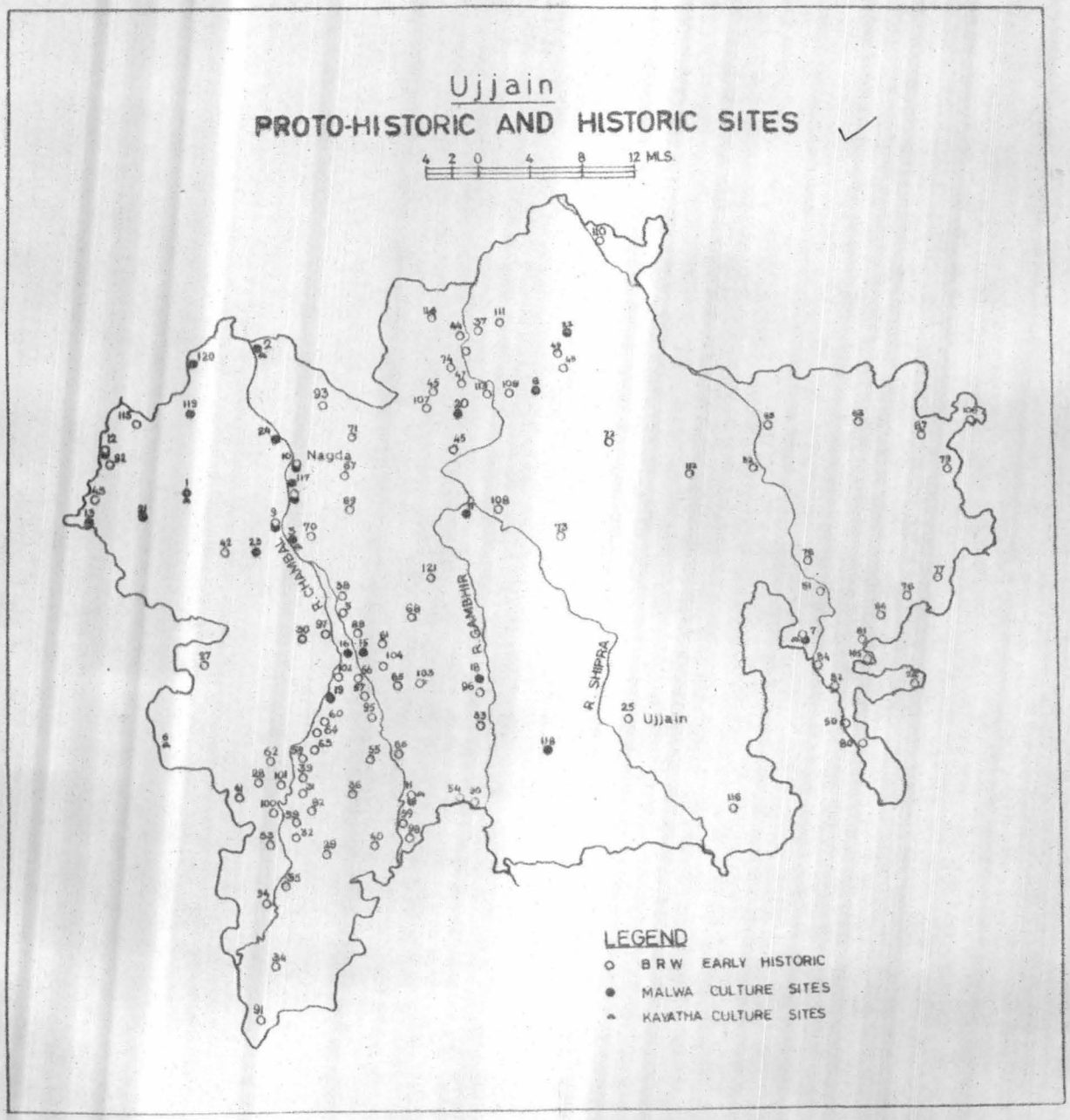
Map taken from Schwartzberg's Atlas - it clearly indicates the location of microlithic using communities in areas peripheral to agriculturalists.



MALWA-JORWE
CULTURE PHASE
0 50 100 200 300 KMS
R. INDUS
R. SUTLEJ
R. YAMUNA
R. GANGA
R. GHAGRA
R. LUNI
R. BANAS
R. CHAMBAL
R. NARMADA
R. MAHI
R. TAPTI
R. GODAVARI
R. CAUVERI
Gilund
Ahar
Jharda
Mandsaur
Kayala
Dangwada
Eran
Nagda
Kayatha
Bhopal
Ujjain
Badnawar
Astha
Maheshwar
Navdatoli
Bahurupa
Burhanpur
Savalda
Rangpur
Rojdi
Somnath
Nasik
Jorwe
Daimabad
Chandoli
Inamgaon
Pune
Songaon
Watgal
Piklihal
Maski
Kallur
Utnur
Brahmagiri
T. Narsipur
LEGEND
BANAS CULTURE ZONE
LATE HARAPPAN CULTURE ZONE
MALWA-JORWE CULTURE ZONE
SOUTHERN NEOLITHIC ZONE
NOTE
The expansion of agricultural communities in Deccan and increase in the interaction spheres compared to the preceding periods.


INDIA
N.B.P.W. EARLY
HISTORIC PHASE
0 80 100 200 300 400 KMS.
Charsada
Taxila
R. JHELUM
R. SUTLEJ
R. INDUS
Hastinapur
Ahicchatra
R. YAMUNA
R. GANGA
Mathura
Baigat
Sravasti
R. GHAGHARA
R. LUNI
R. SABARMATI
R. CHAMBAL
R. SIND
R. BETWA
Kausambi
Rajghat
Vaisali
Patna
Champa
Eran
R. SONE
Ujjain
Tripuri
R. NARMADA
R. TAPTI
Nasik
R. GODAVARI
R. KRISHNA
Amaravati
Brahmagiri
R. CAUVERY
NOTE
THE SMALL INTERACTION SPHERES OF THE PRECEDING CULTURAL PHASE HAVE COALESCED IN A SINGLE INTERACTION SPHERE


MALWA
PROTO-HISTORIC AND
HISTORIC SITES
Kayala
Jalod
Manoti
Jharda
Narayangarh
Sanjit
Pasewa
Nahargarh
Awra
Koyali
Deopur
Mandsaur
Soyat
Susner
Rajgarh
Sarangpur
Badagaon
Singwara
Narsinghgarh
pachor
Min
Jaora
Sohangarh
Shajapur
Ratlam
Nagda
R. CHAMBAL
R. SIPRA
Mundakheda
Maski
Ujjain
Kayatha
Nalesara
R. KALISINDH
R. PARVATI
Sehore
Bhopal
Bilawali
Dewas
Mirkheri
Astha
Nandner
Badnawar
Napawali
Kanwan
Kanwar
Lohagal
Khera
Bhadakhera
Indore
Ghatbilod
Dhar
Betnia
Simrol
Kadwali
LEGEND
Kayatha Culture Sites
Malwa Culture Sites
BRW & Early Historic Sites
District Headquarters
Manawar
Maheshwar
R. NARMADA
Navdatoli
Kasrawad
Atud
Khandwa
Khargaon
Chikalda
Bankl
Khatla
Dhulkot
R. TAPTI
Burhanpur
0 20 40 60 80 100 KMS


Ujjain
PROTO-HISTORIC AND HISTORIC SITES
4 2 0 4 8 12 MLS.
Nagda
R. CHAMBAL
R. GAMBHIR
R. SHIPRA
25 Ujjain
LEGEND
B R W EARLY HISTORIC
MALWA CULTURE SITES
KAYATHA CULTURE SITES

MAP

LIST OF CHALCOLITHIC AND EARLY HISTORIC SITES IN THE UJJAIN DISTRICT

1. Khacharaud
2. Rajgad
3. Bhilsuda
4. Takrawada
5. Rajota
6. Runija
7. Kayatha
8. Thikariya
9. Tungani
10. Nagda
11. Dhangwade
12. Jalod
13. Unchahera
14. Barkher-khurd
15. Amlawad Bika
16. Amlawad Kalan
17. Alot
18. Baniakheri
19. Khera-Narayan
20. Banjari
21. Bhawasa
22. Jharda
23. Khameria
24. Parmar-kheri
25. Ujjain
26. Belari
27. Bhat-Pachalana
28. Birakheri
29. Birgoda Randir
30. Chirola
31. Datarwa
32. Kararia
33. Kharotia
34. Lohana
35. Likhoda
36. Kharsod Khurd
37. Kantharia
38. Piplai-panth
39. Sanaoda
40. Singaoda
41. Tokra
42. Chirola
43. Runkhera
44. Bawalia
45. Chitawad
46. Delchi-Buzurg
47. Delchi-Dhulet
48. Jormalakha
49. Parlia-Khurd
50. Bhaijukheri
51. Birgoda
52. Shamnera
53. Baranagar
54. Bhondwas
55. Dhureri
56. Dunalja
57. Harnaoda
58. Itawa
59. Kajlana
60. Khandoda
61. Palsoda
62. Pachilana-bil
63. Palwa
64. Simlauda
65. Jahangirpur
66. Sarsana
67. Banbana
68. Berawan
69. Makla
70. Nimbodiya-Khurd
71. Rupta
72. Piplainath
73. Ranipura
74. Singh-deval
75. Sipwara
76. Gavari
77. Golva
78. Kanashia
79. Kareri
80. Kath-Baroda

81. Khana-Kheri
82. Limboda
83. Makrone
84. Mallupur
85. Mergarh
86. Paldoona
87. Ramdi
88. Jamalpura
89. Molana
90. Naharkhehra
91. Navda
92. Ringnodia
93. Rohal Kalan
94. Ajanda
95. Guraoda
96. Kantharkheri
97. Kararwas
98. Narsingha
99. Paslod
100. Ranaoda
101. Bichrod
102. Dhuletia
103. Singaoda
104. Sodang
105. Piplai-Kayatha
106. Nipania-Badre
107. Narain-Kheri
108. Akyadanga
109. Bani
110. Bansingha
111. Dhablasia
112. Ghosla
113. Hapakheri
114. Jhutawad
115. Shrivachh
116. Narwar
117. Metwas
118. Maori
119. Dhodhar
120. Lohari
121. Unhel

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