Prehistory of the chotanagpur region part 5: State formation and general conclusions
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INTRODUCTION

For an anthropologist, the prehistoric archaeological data would give an indication of the kind of data that we should be expecting today from the population. This data would inform us of the underlying physical and social complexity in the population as well as about inter-community relations. Ideally, we should be able to tell something about the archaeological past of each community. However, this is rarely, if ever, possible. Hence, only some broad outlines may be possible in this work to show these indications.

Using the indications given from the earlier research papers in the series 1,2,3,4, it will be my attempt to create a timeline, as far as possible, of the progression of states and other cultures/traditions. We need a much better archaeological analysis of our sites if we are ever able to answer all the queries for the sites that are available. Only then shall we be able to link up the archaeological past with elements of myth, ethno-history and the present ethnographic record. Some indications of such researches are already beginning 5, but much more detailed work needs to be conducted.

LOCAL POPULATIONS AND STATE FORMATION

While such a monolithic approach to early states in Ranchi district seem to be more prevalent in the literature available, I would ascribe to a multi-ethnic model of state relations in the region. This is supported in the archaeological data by a multitude of industries which cannot, by any stretch of imagination, be said to have been made by any one tribal community. Helped by trade, such communities would have one or more lineages which would gain ascendancy helped by political or economic power. Such states would be fluid and dependent on the sparse population present at the time. It would be an organic entity where the many communities and tribes exploit various aspects of the cultural niche according to their needs and their expertise.

Later, as population expanded and more groups came in to settle, there would be the need to consolidate land-holdings and to intensify agricultural practices. Communal ownership of land is perfectly admissible in kinship-based state systems. The State would gain more revenue and more power and ultimately become hereditary. The munda-manki-headman relationship would differentiate from the religious pahan as their functions became centred on different spheres of authority. Individuals would recognize authority from the head of the household, the eldest member of the lineage, the headman and then the king.

As more and more people entered the various states in the region, they would become incorporated into other versions of tenurial rules like the bhuinhari. Greater intensification would also lead to greater surpluses and tributes to the Kings who could then finance bigger and bigger forts, larger armies and more intensive trading between the various kingdoms. Hence, State formation in this region can be seen to be entirely indigenous and not an exogenous occurrence. Since in the early state, each community exploits its own niche in a traditional manner, there is no need to transcend from the available tool kit into a more advanced one. Hence, we see a variety of structures which we loosely term as States.

It is no wonder, then, that the Neo-Chalcolithic toolkit was still used in this region even in the early historical period. The archaeological data is witness to the fact that there is a lack of true mesolithic or even iron age sites in the region. The sudden advent of high quality copper, bronze and gold artefacts could be a natural consequence of the burgeoning of trade in the more developed States.

The use of a variety of methods to exploit nature in order to
survive had visible endpoints. One of these was the cutting down of forests. Hence, the later historical records show no such variety of occupational and economic practices. What remains are the mythic accounts that are handed down from generation to generation.

For K.S. Singh 6,7, the thesis of Baden-Powell that Kolarian and Dravidian elements coalesced to form the tribal agrarian system had to be further developed in the light of the findings of the settlement operations. It shows up the inaccuracies of the descriptions of missionaries and early anthropologists. Apparently, this earlier view was that the breakdown of the original khuntkatti tenancy was due to the corrupting influence of the Hindus. For Singh, “the Dravidian elements had already undermined the Kolarian communal influences and the Bhuinhars had prevailed, by their superior technique of production over the communal Kolarian groups” (1969(a): 549).

For S.T. Cuthbert, John Davidson and E.T. Dalton had created a system of tribal peasant proprietorship. The bhuinhars had held their lands rent-free or at half the village rent. Then as the outsiders or dikus had come in, they had been reduced to the status of the ordinary renters or raiyats. This was repeated by the German missionaries. At the Bhuinhari settlement of 1869-1884, Babu Rakhal Das Haldar, Special Commissioner, characterized the khuntkatti system as a “non-Aryan commune.” It is claimed by Singh that Haldar and the others had not much idea of the khuntkatti system and had developed no theory of it since he had worked only in the Tamar plains and had not gone in where the khuntkatti system existed in its entirety.

After the Birsa movement began in the khuntkatti region between 1895 to 1901 the memorandum of Rev. J. Hoffman came through, followed by the studies of Rai Bahadur Sarat Chandra Roy. For Hoffman as well as Roy, the original communal khuntkatti system was disintegrating intro non-communal systems like the bhuinhari and raiyati. These were feudal or zamindari systems. This was the result due to which agrarian disturbances frequently occurred in this zone. According to Singh 8, Roy and Hoffman did not indicate the range of their acculturation and the extent to which the non-tribal communities had become absorbed into their agrarian system and had contributed to the present character of this agrarian system.

The Kolarian system was represented by the Munda and Bhumij while the Dravidian system was represented by the Oraon, Chero, Kherwar, Kharia and Nagbansis. Between 1856 to 1874, all the old Munda and Oraon chiefs had been replaced in Ranchi district by Hindu farmers “introduced by their landlords or by numerous holders of religious and maintenance grants” (Singh; 1969(a): 551).

Despite various Acts, including the CNT Act of 1908, the primacy of tenancy laws over civil or central laws were not recognized. As a result, other tenancy systems had disappeared like the Pariadari and Uttakari rent assessments in Palamau which had all disappeared by 1892. Many other systems of paying the landlords or local officials in cash rather than as kind was also removed during this period, thus ensuring that the tribals (who did not have a cash economy) enter the cash economy system. As a consequence, they began to borrow money and soon entered the debt trap of the usurious moneylenders so much prevalent in tribal areas in India. Thus, they lost their lands and other goods. Much labour was obtained by the local landlords through systems of forced labour 8.

The major states included that of the Mundas, Oraons and the Cheros in the region, though other smaller states also existed which may also have created this kind of variety. These states were so much a part of the local populations that they may have often grown up as chieftainships and again become part of the amorphous local population after they had been conquered by other local kings or their armies. Many of these early states have been indicated by the indigenous population lineages having become the rulers, typical of segmentary societies. This had been demonstrated by Thapar for the Indo-Gangetic region 9 and also by Sen for the Mundas in the Chotanagpur region 9. Also, the Chotanagpur Maharaja’s dynasty seems to have originated from a Munda lineage, though this was denied later in favour of a Hindu lineage and enforced through a Brahminical myth of origin 10.

Even the cases in Bengal show that local lineage-based states developed and continued until after the Mauryan period 11.

Such societies, or their kings have later been influenced by or had become followers of other religions like Hinduism or Buddhism 12. Bhengra had reported four excavated sites – Loapahar (Stone Age), Barudih (Microlithic and Neolithic), Sonua Nullah and Dungi (Neolithic).

Some of these events may also be affected by the use of early crop species used in the region. Such a list from Orissa shows the use of Oryza sativa, Vigna mungo, Vigna radiata,
Macrotylioma uniflorum, Cajanus cajan, Cucumis sativus, Coccinia grandis, Trichosanthes cucumeria, Praecitrullus fistulosus, Momordica charantia, Momordica dioeca, M. balsamina, Luffa cylindrica, Luffa acutangula, Colocasia esculenta and Dioscorea spp. This data also shows the possibility of a sedentary agricultural population and a more mobile, root-crop or rice-pulses based, shifting agricultural population who used a variety of economic techniques for survival at the same general region. Parallels have also been drawn with the work of Pratap in the Rajmahal Hills mentioned in an earlier paper.

In fact, the body of Pratap’s work seems to be a very well-reasoned and meticulously conducted analysis of the kind which we really require. His finds in the Rajmahal hills suggest a mode of shifting cultivation existing among the Paharia tribe until very recently, till about 150-200 years back. In other words, studied in detail, the region shows complexity and disturbance, but within it remarkable continuity of traditions exhibits themselves showing its ancient traditions and the roots of modern tribal cultures. In order to link up these basic concepts and ideas, much further work needs to be carried out in a multi-disciplinary manner. In these days, where every funding seems to be linked to socio-economic benefits in the current scenario, this is a major problem.

GENERAL CONCLUSIONS

The outline of the Chotanagpur region with specific relations to its prehistory is given through the blinkers of a specific perspective. This perspective is solely mine. If the reader is looking to fulfill all the missing references in this, seemingly, encyclopaedic review, they would be mistaken. No review of the region, short of a book, can ever attempt to be encyclopaedic about this region. One can only pinpoint certain broad areas of research, certain windows within the panorama, and note the salient points of what strikes one as right or wrong about it. While going through these overlying points, I think, it would be well enough to remember it.

The general theory of culture used in any particular analysis is also very important. In this respect, perhaps, a theory of culture that is useful to the kind of situation we find in these areas should be worthwhile, rather than a more specific one that is more useful to cultures that are alive today as follows:

“Once we locate the reality of society in historically changing, imperfectly bounded, multiple and branching social alignments, however, the concept of a fixed, unitary, and bounded culture must give way to a sense of the fluidity and permeability of cultural sets. In the rough-and-tumble of social interaction, groups are known to exploit the ambiguities of inherited forms, to impart new evaluations or valences to them, to borrow forms more expressive of their interests, or to create wholly new forms to answer to changed circumstances. Furthermore, if we think of such interaction not as causative in its own terms but as responsive to larger economic and political forces, the explanation of cultural forms must take account of that larger context, that wider field of force. A culture is thus better seen as a series of processes that construct, reconstruct, and dismantle cultural materials, in response to identifiable determinants.” (Wolf 15: 387)

In this context, then, the local inhabitants of Jharkhand were many and varied. They have migrated from different areas and have migrated to other areas. They have followed a mixed bag of occupations. They have borrowed cultural traditions and lent them. They have incorporated through the years not unitary cultural traditions but millennia of cultural borrowings and traditions. They have lost certain practices and gained others. As a result, it would be foolish of us to trace a single tradition followed over long periods of time even in one area within this zone. The cultures of this zone have adapted and have been adapting for all these years. It would be wise to remember this as we look at the overview created here from the data described above:

The Lower Palaeolithic of this region seems to be lacking in number of tools, a specific identity and definition. There seems to be a lack of sites of this period in the region. The local geography is hilly and forested and has an ample amount of rain. Winters would be cooler than at present and the whole year would be pleasant, even chilly. This, in comparison with the warmer plains weather, might have been part of the reason why fewer than expected humans reach here. Let us go through the data presented in this regard again. There are many diverse kinds of sites in the state of Orissa than in many parts of Bihar and Jharkhand.

Kuchinda in Sambalpur District could be one example. A Middle Palaeolithic like this site is expected to be about 60-70 thousand years old. At Burla, in the same district, chopper-chopping, proto-handaxes as well as Lower, Middle and Upper Palaeolithic types are found together. In 1994, H.C. Sharma checked out these components and claimed that there were two traditions. One had a chopper-chopping Soanian component. The other had an Acheulian handaxe-
cleaver Madrasian component. In some places, the two populations having each component combine or one transfers to the other mode. The result is seen in the intermediate proto-handaxes found at these mixed sites. There are some major problems with this scenario. While it is possible for a Madrasian component to have crept in through Orissa, there is no continuity of the pure Soanian chopper-chopping components all the way from the major Soan valley or northern Indian regions. Further, there are too many sites where both types are being used. It is too much to expect an interaction between these two components to lead in one direction every time. I suggest that it is a matter of perspective. While the raw material is different in the two types, both use the same basic techniques for making the tools. While calling some of them chopping tools, one must look at their working edges. Both may give the same working edges and hence may have similar functions. Hence, it may just be another diversification of basic tool-making technology. In fact, some recent authors like Chauhan 16 have suggested the use of alternate typologies for Soanian types of choppers and chopping tools keeping exactly this idea in mind.

The Kharagpur hills in the borders of Hazaribagh, Munger and Jamui seem to be an area of special interest. The intrusion of human beings into the region seems to have begun late. As a result, there seems to be transition between Upper Palaeolithic and a full-blown Mesolithic found all over this region. A mixture of dates seem to be the cause of much confusion in the sites found recently (also see the timeline created here), especially since they have been derived from indirect sources. These dates range from 12,000 to 10,000 years BP for an Epi-Palaeolithic or late Palaeolithic to 7420+110 BP (5470+110 BC) as at Paisra or 4,000 to 3,000 BC. They range from the Middle to Upper Pleistocene to Early Holocene. If all these dates are to be believed, this so-called ‘intermediate state’ between an Upper Palaeolithic to a Mesolithic may be a stage in its own right since it maintains itself over time for such a long period, if only for this local region!

Going along with the same issues raised in point 1, Acheulian tools with a pebble base are found in most sites in Hazaribagh, Munger and Jamui. Where could they have come from? One possibility is due to migrations from Santal Parganas in Jharkhand or Bankura and Purulia districts in West Bengal – in all three of which districts an Acheulian tool complex based on pebbles is found.

With this kind of a structure, one can see that a three-fold base of the Lower, Middle and Upper Palaeolithic in its pure form has never existed in the region. While in some regions tools have been found which seem to be even older, it is not apparent from most finds. However, there are problems with this perspective. Human beings may have come late into this region. Yet, most sites are surface finds, often freshly deposited or re-deposited on the river terraces. Few sites have been excavated. If one looks for this kind of a succession, one will have to concentrate on finding such sites that may be excavated before such a picture begins to emerge. There does seem to have been a population depletion up to the Holocene according to some authors. However, it does seem that if one follows the rules of punctuated equilibria, an unprotected hill slope or river terrace is unlikely to protect large-scale signs of small groups out on food-finding expeditions or moving in small movable groups. In the present day context, a Birhor leaves very little debitage around, except in their permanent settlement areas. Most settlements at this point were impermanent. As far as settlements are concerned, Narayan 17 claims that most of the prehistoric people liked to settle and live near rivers or other water sources on elevated plains or hilltops. This seems sensible if one thinks that the rest of the areas were not merely plains but heavily forested zones.

In the Hazaribagh region, there is found more stone hammer than block-on-block technique. A type of handaxe called ‘amygdaloid’ is found. There are fewer flake cleavers. Kusumdh shows a sustained human population staying over long periods. In Singhbhum, the sites are more Upper Acheulian and Upper Palaeolithic in content. Hazaribagh and Singhbhum seem to vie for first position with human occupation in this period with Singhbhum perhaps becoming the first area of human settlement and spread. The spread of the population came probably from Mayurbhanj district in Orissa. From Singhbhum, it then spread to Midnapur, Bankura, Purulia and then to perhaps parts of remote Hazaribagh. Palamau and Ranchi seem to have fewer sites in this period, though Ranchi seems to have many in the late period, Jayaswal’s Industry II. However, this still seems to be true that in all these regions small wandering groups of Lower Palaeolithic populations were moving around (Jayaswal’s Industry I), some of whom continued to the later period. The finding of these tools is restricted to small numbers, occasional sites and no surface deposits, exactly as expected. When the context becomes disturbed, they are found with tools fashioned in later periods, often after heavy rolling or patination. However, some authors may have made the mistake of classifying tools of different types found in
between the Neolithic and the Mesolithic or between the Stone Age. There seems to be no clear differentiation years BP. In India, it is considered to be a part of the Late about 9,500 years BP and supposedly ends by about 5-6,000 ends about 10,000 years BP. The classical Mesolithic begins this time. According to the textbook case, the Pleistocene the total population that may have possibly stayed there at tools out of stone. Studies now need to be done to estimate other, a huge population has ended up making microlithic issues, including heavy-duty tools. Thus, it does not compare with the Maharashtra-Karnataka mousteroids. As the population stuck to the same region, there were no changes in raw material from the lower to the middle Palaeolithic artifacts. The range of hills extending from Palamau to Gaya districts seem to yield Upper Palaeolithic artifacts on their slopes in the surface humus but no neoliths. Unlike the Vindhyan region they use crystalline quartz as the raw material.

As far as the Upper Palaeolithic artifacts are concerned, they seem to be represented fairly well in the Damin region of the Santal Parganas with microlithic artifacts. The humans seem to have lived a long time in the Damin region and even up to the recent past using the local communities as opportunities for seasonal work or labour. A transfer of raw material in this region as well as the Tarafeni region of Midnapur district also indicates a transfer of materials for trade between two zones in the later period. The Rajmahal industry linked to the local tribal population seems to also be a local tradition that continued over time. Over time, a recurrence of older types that may have occurred due to cultural reasons would be hidden by the disturbed context of these sites.

It must be recognized at the outset that there is no clear cut Mesolithic in the context of the Chotanagpur region. Whether one calls it the blade-bladelet element or the microlithic, it comes invariably mixed with other sites and issues, including heavy-duty tools. Having said that, it can be seen from the huge number of sites that at one time or the other, a huge population has ended up making microlithic tools out of stone. Studies now need to be done to estimate the total population that may have possibly stayed there at this time. According to the textbook case, the Pleistocene ends about 10,000 years BP. The classical Mesolithic begins about 9,500 years BP and supposedly ends by about 5-6,000 years BP. In India, it is considered to be a part of the Late Stone Age. There seems to be no clear differentiation between the Neolithic and the Mesolithic or between the Chalcolithic and Mesolithic, or even with the Iron Age! As a result, Sankalia in 1974 calls it a Neo-Chalcolithic Age, Chakrabarti in 1993 calls it a Ferro-Chalcolithic Age, while A.K. Ghosh and R. Ray call it a ‘blade-bladelet’ industry. When we consider the spread of dates involved there seems to be utter confusion. Narayan claims that the Mesolithic in this region was non-geometric, non-vegetarian in food habits and constructing temporary shelters for living in.

The use of raw material is no guide also, since technology may not change over many hundreds of years as the basic hunting-gathering economy also does not change. Many agricultural tribes even today have hunting festivals, however ritualistic they may have become. Deer Park and Paruldanga in Birbhum district used fossil wood to make microliths, which may have continued to the Chalcolithic. There seems to be a typological evolution at the Deer Park site of a shift from backed flakes to backed blades. In Burdwan district, fossilwood has been used to make choppers/chopping tools, handaxes and cleavers as well as microliths. At Dihar in Bankura district, microliths were made on glass, a recent phenomenon, probably made by other communities. The microliths were associated with Neoliths and Black-and-Red Ware pottery as well as iron implements. There is speculation that this might imply a microlithic usage of certain pockets in 11th century AD Bankura and Purulia. In the Tarafeni valley, Midnapur district, some sites like Laljal, Srinathpur and Asri show linkages between each other. A later study sees a lot of tools but the raw material is scanty and missing in local areas. As a result it was thought that partially decorticated cores may have been transported here for further flaking and may have been part of a hunter-gatherer’s usual tool-kit, somewhat like the one Otze was carrying in Europe. In this area, flakes were discarded after use while those which were hafted were rarely discarded and were often found with retouchings. Clusters of blades were found at places of manufacture and then scattered tools over a wider area. The Tarafeni valley was used due to the availability of water in an arid period.

It seems that at least part of the Mesolithic or microlithic usage period seems to have a dry period. If so, then the drying of water could lead to the types of food seen at Islampur, Gumla district, a definite possibility, with shells of mollusks seen as calcareous concretions. Yet, the site shows fewer fish bones. The site could also be an older one but has a longer continuation with it spreading later to Purnapani. Further, since neoliths are found from the fields, either these groups evolved to a full-blown Neolithic, or continued with
Mesolithic tools while conducting agriculture or lived on a sharing basis with groups that conducted agriculture. These hypotheses need to be proved for each specific zone. The Paisra dates may apply here, from 7,000 to 10,000 BC or even earlier to the third millennium BC. The real truth is, we just do not know for certain.

The Acheulian tradition seems to have come into India about 200,000 BP while the chopper/chopping tool component has been seen here in the Soanian region from about 300,000 to about 400,000 BP. It is possible that the origin of Acheulian cultures may be pushed even further into the past. The Indian Middle Palaeolithic seems to be from more than 38,220 BC (Mula Dam) to 8484 + 260 BC (Dhamner) according to radiocarbon dates. The Upper Palaeolithic dates fall between 26,210 + 2200 BP (Didwana) to 6460 + 180 BP (Bagor III). The Mesolithic dates fall between 38,220 + 3296 BC (Nirgudgar) to 40 + 103 BC (Bhimbetka). The thermoluminescence date for the Middle Palaeolithic from Didwana is 163,000 + 21,000. The Upper Palaeolithic date for Riwat is above 420,000 BP. The Mesolithic dates stretch between 20,280 BP (Langhnaj) to 2100 BP (Bagor). The Uranium/Thorium dates for the Lower Palaeolithic fall between 190,000 BP (Umrethi) to 69,000 BP (Junagadh). The dates for Middle Palaeolithic are between 166,000 BP (Didwana) to more than 56,000 BP (Jetpur) \(^{18}\). The Acheulian population seems to have adjusted widely to many zones. Many authors have argued that it might not be true that two populations living side-by-side with different traditions did not interact and exchange these traditions. However, data by Mohapatra seems to show that it did happen. However, this does not mean that in Orissa these two traditions ultimately linked up and created intermediate types. We need much more data before we can show this. In the Chotanagpur region, furthermore, we see both tools made from pebbles as well as Acheulian types and there seems to be, so far, no indication that they were made by separate populations.

If we are to assume that Mayurbhanj district, among other areas in Orissa have ‘seeded’ this area with people to begin with, their own region seems to be also growing and spreading. A fantastic number of rock shelters have been uncovered from all over Sambalpur, Jharsuguda, Nuwapara, Sundargarh, Mayurbhanj and Cuttack districts in Orissa some with petroglyphs. Were these petroglyph-creators the microlithic users like those the world over? So far the data and excavations seem to indicate this \(^9\). The skeletal information and other data also occasionally show mollusk usage and a hunting-gathering economy rather than a pastoral one. The people seem to be genetically gracile and short of stature. In Deulga hills, Sambalpur, there seems to be potsherds associated with heavy-duty pebble tools, and petroglyphs. The petroglyphs show major variations and types in such a manner that generalizations seem to be near impossible. However, what is clear is that they differ from those individuals who created the rock art of Central Indian sites.

If we are to believe the evidence, rice has come into the region only about 2000 BC. However, it must be noted that the Chotanagour region has upwards of a hundred varieties of locally grown rice. Such a large variety has thrived till today in the usages of the indigenous communities. This might argue for a more extended usage so far not substantiated by our records, since the longer the species remains in the region, the more its variation. The use of millets or jowar seems to extend further in the past. Wheat is still not grown in the region in great amounts though some people have begun growing it recently.

The Hos, Mundas and Bhumij are Mundari group in their linguistic affinity and have also been noted as being shifting agriculturists. The Neolithic sites like Dugni, Ukri, Barudih, etc. found in the local region of the Sanjai river valley, district Singhbhum, Jharkhand were all seen to be directly the ancestors of these tribes in the region \(^{20, 21}\).

Neolithic celt first begin to be apparent between 15,000-25,000 years ago, according to an estimate. However, overwhelmingly, especially in the plateau region, we see (as at Chirand) the evidence of sporadic Neolithic celt use but a lack of storage pots or jars. The tribals still preferred (until the last few years) liquid food including rice gruel. A multi-pronged economy with rice as only a small part of it seems to have been the trend. I believe it is extremely useful to see the entire region up to the plains areas as having all these economies simultaneously. The pure Neolithic farming to the pure hunter-gatherers are extreme forms of a continuum that stretch through all the ranges of economies as it suited them, with the hilly Chotanagpur areas having more of non-farming activities. The plains areas also may be seen as having two-way interrelations with other groups in the hills exchanging (for them) exotic meats, honey, and other goods. Further, a root-crop horticultural expertise in the Chotanagpur region may not be discounted (as proposed by D.K. Bhattacharya and Dilip Chakrabarti) as a legitimate economy. It might account for the small handaxes and ring-stones. Further, it must be
remembered that economies frequently do not work at optimum levels. They often function to merely survive. Keeping this in mind, it would be well enough to note that tribes exist now in the forested areas of Chotanagpur who have the indigenous knowledge to survive long-term droughts as well as hungers. The Thapar model of two Neolithic types may be the visible outcome of just this kind of a continuum operating simultaneously in different areas. A lack of a surplus created would ensure fewer leaders/chiefs or kingdoms/states. Further, a hierarchy, though seen in some areas need not exist everywhere. This is possible where a part/section of a segmentary lineage becomes wealthier and creates a state, or a chiefdom from indigenous populations. The Kaimur hills region show a large number of early farming communities coming up. They may have been coming down from the hills to this new mode of life or may have been coming from the plains of Mirzapur or West Bengal also. In fact, this multiple economy mode would ensure that not much internal change occurs, as we see at Senuwar (especially IA). This multiple-economy mode may have continued in regions closest to the Chotanagpur area all the way to the early historic period through the exchange of iron, copper, brass, etc. The finding of jadeite miniature celts from Lohardaga region have been linked to a trade being open with Yunnan in China. However, such tools made of green polished symmetrical stones have also been found in Hazaribagh also by Bulu Imam. As a result, it is not impossible that such tools were actually made right here in Chotanagpur, though the stones may be imported from other areas. It is also a possibility that such tools may also have ritual functions, and may have been made for that purpose only.

According to one estimate the total population of Bengal in the early farming stages of history could not have been more than 10,000 with Birbhum having not more than 6000-7000 persons at any one time. The calibrated radiocarbon dates place the Early Chalcolithic at 1690-1035 BC, Late Chalcolithic at 920-795 BC whereas Iron Age may have begun to develop at about 820-595 BC in this region. In no way did the early farming communities have a uniform culture since sites like Pandurajar Dhibi show east-west orientation of burials while Haraipur shows north-south burials. At this time, there also seem to be few urban centres in the region up to 5-6 centuries BC. The dates for Chalcolithic Khairadil in Uttar Pradesh are beginning at 110 BC, while those for Pandurajar Dhibi are 1012 + 120 BC, Mahisadal 855 + 100 BC and Chirand 1300 - 700 BC. In the Rohtas region, new settlements came up since Senuwar, Sakas and Daindih show the Neolithic converting to a Chalcolithic, the other sites like Kushuridih, Raja ki Ankori, Akorhi, Madhuri and Shaharidih have only Chalcolithic layers as the beginning. There is a similarity of pot forms between all these sites and with Chirand, Taradih, Koldihwa and Narhan. A fairly thick occupational layer at many of these sites presents the idea that they had survived for a fairly long period. Many excavated sites in eastern U.P. also show a lack of a lithic tool assemblage indicating perhaps a migration from an already well-established Chalcolithic heritage or that the stone tool-makers were a smaller group within which did not migrate to the new area.

It is quite likely that people migrated from one area to another. It suits them very much if a number of economies are practiced as a result of which migration to another part of Chotanagpur causes no ill-effects or major changes in lifestyle. As seen from primate behaviour studies, each group has some ranging area and a ranging behaviour or pattern. This has been seen in hunting-gathering groups like the Birhor also. They may move up to 25-50 kms on a hunt of one-three days. Nor do they always move in a straight line though they may. Keeping this in mind, it is clear that migrations over long distances in very brief periods are possible. However, we have no idea to what extent they have been done and with what regularity. It seems from the long-term traditions that are seen existing over the Chotanagpur region, that migrations were often involving smaller groups. As a result, their absorption into a tradition without showing sudden or major changes seems assured (and possible since hunter-gatherer bands have this kind of a loose bonding even today). Further, any differences in tool traditions brought by them would take years to become large enough for us to see them as statistically significant (as Stephen Jay Gould’s theory of punctuated equilibrium dictates). Also, some groups migrated much less than others, showing long-term single tradition use over tens of thousands of years.

In the same way that nothing works at optimum levels, individuals show variation in tool use and preparation. Very few studies take this into consideration but it is apparent that some would inevitably be better flint-knappers than others and would become more valuable for the community. Hence, more studies are required on these aspects as well as on the handedness of the users, for instance, the proportion of right-handed to left-handed single side scrapers. A ratio of minimum tool making for an individual or group could show us how many possible tools are possible to be made in a lifetime and thus how many people might have occupied a
site at any one time. Further, for this region, there are no studies (perhaps due to lack of evidence) of violent inter-community contact as part of inter-group cohabitation models (for instance, on the model of Highland Papua New Guinea tribes or those in the borders of Venezuela). Those older would be more proficient in technique but would have less strength and hence use less force in the production of tools 25. Hence, these differentials would exist but would be mixed in the context found now, and could never be separated. To find them in a separate zone and to think of them as different traditions would be wrong.

As far as the Copper Hoards are concerned, it seems a peculiarity that began in this region only and spread to some other areas. Could it be that it was a fear of robbing (as wealth began to be amassed this might be a new possibility in hidden forested areas)? The Chotanagpur region and Bengal have historically been known for thievery and dacoity. Could they be a protection from such depredations or even the caches of loot kept by the thieves for later recovery? There is no evidence to say for certain. They seem to be dated to between the 1st - 2nd millennium BC and coeval with the Neolithic and other cultures of the region. Further, there may even have been traders or travelers between zones who barter their expertise for items or food, who transported these items from one region to another. From here, they then shifted to the Doab region.

The earliest systematic use of Iron in India seems to be about 7th century BC. In Bihar the early historic period begins with the NBP in about 7th century BC. The earliest Chalcolithic seems to be about 1600 BC for Bihar and the first appearance of iron in Bihar is about 1000 BC. It seems to have grown together as an offshoot of copper technology. However, the local people seemed to have used it less than to sell it off. Whatever be the cause, restricting them to Asurs only seems to be mistaken. At this time, many communities were smelting, collecting and transporting iron. They included whole villages of different communities. As a result, the Asurs and other communities are only a small remnant of that huge population which was engaged in iron working in that period. Some of them became iron-working castes or Lohars and joined up villages to work for them. Others maintained their multi-economic mode of life. They are neither Assyrians (hence no sudden changes in lifestyle) nor outsiders. They are inherently local 26.

One simple way of dealing with these complexities would be to look for local area congruitities (LACs). Further, one could look for variations of materials in the same zone, in the way Pratap has done or, much earlier, classically conducted by Binford. These could be called local area diversifications (LADs). From these one could find a partly congruent but extended circle of relations which have similarities but have a much more extended area of coverage. Thus, one could look for EACs or EADs, much like the copper hoards or the Asura site similarities. Some explorations need to be conducted to see whether pastoral nomadism in these areas could affect the economy of the region 27. One would also, of course, require a much more photographically and analytically detailed database on all these sites, which would require much funding but which should preferably be in the public sphere. Also, one needs to understand not merely the commercially exploitable strata within this area as seems to be the rule at present but would also require to understand the geological history and ecological successions of this area in much greater detail. This will perhaps show us why some traditions prefer to use chopper-chopping tool materials and techniques while others tend to use handaxes while still others prefer to use both traditions simultaneously. Under such complex and little known conditions, these techniques will perhaps show the way to a truly regional archaeology that looks for similarities in local areas.

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Figure 1

A COMPARISON OF EUROPEAN AND INDIAN DATES FOR THE MESOLITHIC YEARS IN B.P.

- 10,000 (Pleistocene ends)
- 9,500 (Mesolithic begins)
- 6,000 (Mesolithic ends)
- 5,000 (Late Stone Age in India)
- Mottled clay
- 350,000
- 300,000 (Pebble core tools)

Figure 2

AN ARCHAEOLOGICAL TIMELINE OF THE EASTERN INDIAN REGION (YEARS IN B.P.)

- Compact, pebbly, secondary laterite
- Wet Period
- Beginning of Pleistocene
- Dry period
- Choppers/handaxes
- SINGHBHUM (JHARKHAND)/CHENKANAL (ORISSA)
- Microolithic Age in India
- Blade-Boradle Industry in India
- Lower Palaeolithic
Figure 5

Bangladesh formation (7,000 – 6,000)
- 5,950 Forest to open grasslands up to 4,900
- 5,000 (Senuwar IA)
- 4,900
- 4,250 (Stage I Mahagath)
- 4,000 (Chirand)
  Copper-Gold: Iron mining in Chotanagpur
  Copper hoards
- 3,700 (Kolihwa Stage II) Silt bed
- Stage II Kalmur Dry period
- 3,600 (Taradhi Neo-Chalcolithic) Flake tools/Levalloisian
- 3,550 (Pandu Rajar Dhibi, PRD I)

Figure 6

Recent silt Mesolithic, Neolithic and Chalcolithic
- Senuwar III 2,849 (PRD III)
- 2,760 (Iron smelting at Bahiri II)
- 2,750 (Iron at Mahisdal II)
- 2,510 (Bahiri III)
- 2,549 (PRD IV)

- 2,115 ± 250 (Bulandibagh and Kumrahar)
- 1,970
  Late B.C. to early A.D.
  Overlap with copper objects
- 1,850
- 1,625 (Hatikra)
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Figure 7

References

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