
Megalithic Culture in Vidarbha: Studies and Ideas

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Abstract: *The study in the Megalithic culture of Vidarbha has been carried out for almost 150 years now. The study has revealed many facets of the culture. The researchers have from time to time carried out excavations and explorations at various sites. The changing trends in the field of archaeology have also influenced the researchers in their methodology and interpretations about the culture. This paper is an attempt to understand the studies carried out so far and the various ideas guiding the research so far.*

Keywords: Megalithic Culture, Early Iron Age, Vidarbha, Settlement System, Technology, Processualism, Cognition

Introduction

Vidarbha is the name given traditionally to the region comprising of most parts in central part of India. The region is famous in ancient Indian history and is well known through various literary texts especially the Mahabharata (for details see Sawant 2006, 2012). This region is also known for its rich mineral deposits and good agricultural production which has made the region as one of the most prosperous regions of Maharashtra. On the archaeological map Vidarbha is well known for its widespread Megalithic/ Early Iron Age culture (Fig. 1). The region is also well known due to the Early Historic rulers like the Satavahanas and the Vakatakas. It was in fact the major activity zone of the Vakatakas who ruled during 3rd-6th cent AD. Thus it can be easily deduced that the region of Vidarbha was under human occupation from the end of second millennium BC till today. This complete social and cultural development was only possible through the initial seeds that were sown during the earliest agro-pastorals of the region. Since very meagre data has seen the light of the day on the Chalcolithic (IAR 1988-1989: 51, Nath 1989, 1992) culture of the region it is not biased to consider the Early Iron Age/ Megalithic people as the earliest agro-pastorals of the region.

Early Iron Age/ Megalithic Culture in India and Vidarbha

Use of loose abundant stone started on a wider scale only in the Early Iron Age period of the peninsular India to commemorate the dead. Such types of elaborate burials are

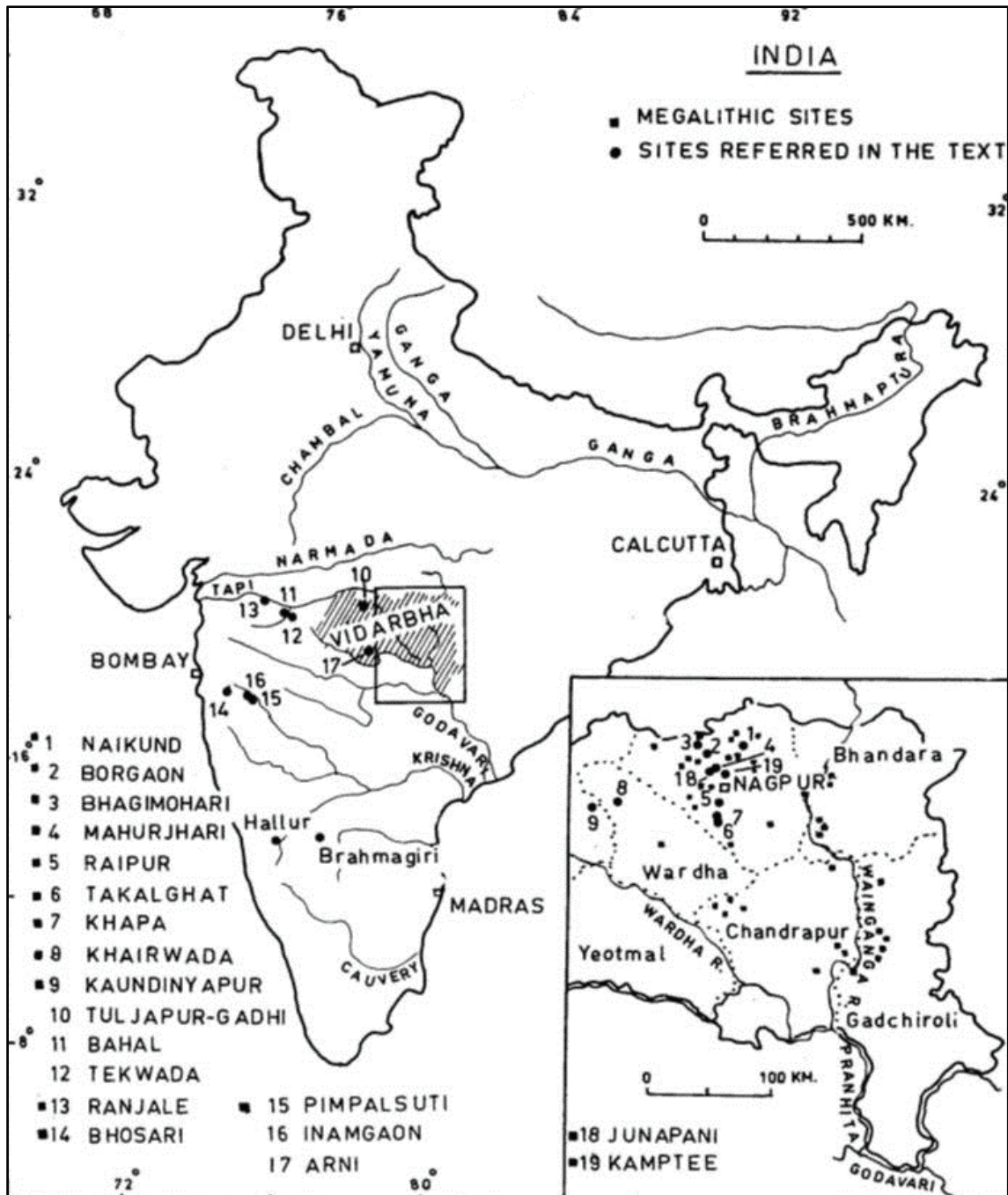


Figure 1: Map showing Major Early Iron Age/Megalithic sites in Vidarbha (after Joshi 1993)

termed as Megalithic burials. However, it has been noticed that the practice of use of stones for burials also continued in the Early Historic period in the extreme southern tip of the Indian peninsula (Mohanty and Selvakumar 2002). Therefore the use of term megalithic has wider implications. There is also a known fact through various researches carried out that there are sites which may yield the cultural material of the megalithic culture but may not yield burials. Yet they are called megalithic due to their

cultural affiliation. Though this may not be a common practice and some may also refer them as only Early Iron Age sites. Yet they are all part of a contemporary and a common culture within a given region though there may difference in the record available (Mohanty and Joshi 1996; Mohanty and Selvakumar 2002). This short discussion about the terminology has been done here only to avoid confusion among the readers regarding Early Iron Age and Megalithic culture. Also the time bracket of Megalithic Culture is to be confirmed. It should be understood that the use of the term Megalithic burials can extend to later period but the use of the term Megalithic Culture can only be applied to the burial building culture during the Early Iron Age period currently. This is because during this period it was practised on a wider scale not only in peninsular India but also in many other regions of the subcontinent such as Central India, Allahabad, Mirzapur, Kumaon, etc. But after the advent of the early Historic period the practice lost its wide-scale importance and use. Hence the use of the term Megalithic Culture can be applied to the Early Iron Age culture taking in to consideration the present status of studies. It is needed to reform the terminology since the practice of megalithism is still in vogue. One needs to imbed the use of terms such as Early Iron Age burials of the Megalithic tradition instead of using long-used terms such as Megalithic culture.

Researches began in the peninsular region by Babington (1823) and later at the site of Jewargi (Taylor 1841, 1851). Such work also started around the same time in Vidarbha by Rev. Stephen Hislop and the research though incipient was not guided by the interest in antiquity hoarding and adventure (Sawant 2010; Thakuria *et al.* 2012). The real impetus however came after the investigation at Brahmagiri and Chandravalli (Krishna 1931, 1941; Wheeler 1948: 180-310). The megalithic monuments were later searched, documented and classified (Krishnaswami 1949; Sharma Y.D. 1956). The excavations, surveys and documentation work done later has helped to pile up an immense data about the burial architecture, typology and the sites associated with them (Dikshit 1969; Leshnik 1974; Sundara 1979; Agrawal 1982; Allchins 1983; Moorti 1994; Rao K.P. 1988, Mohanty and Selva 2002). Moorti (1994) has given a very detailed yet lucid classification (Moorti 1994: 2). Among all the types only the stone circle with cairn filling which is a part of pit burials is extensive in Vidarbha. There are sporadic references however to other types such as dolmens and menhirs (Mohanty and Selvakumar 2002; Thakuria 2010; Sontakke 2011, 2012, 2013; Pawar 2012). The dates of the Early Iron Age in Vidarbha go back 1200 BC (Nath quoted in Tewari 2003) whereas the younger dates range near 400 BC (Deo 1998).

The Beginning of Megalithic/Early Iron Age Research in Vidarbha

Research on the Vidarbha megaliths began with the finding of the stone circles by Rev. Stephen Hislop at a place called Takalghat and Khapa almost 25km south east of Nagpur on Hinganghat road. He excavated a few barrows in 1849 (Hislop 1857: 671-672) and later he was recalled as an expert when the site was again re-excavated by Captain H. Mackenzie in 1863. However while returning from the site, he met an accident and died on the spot. Recently his work was highlighted (Sawant 2010,

Thakuria *et al.* 2012) to show that he was not a mere antiquarian but a person who was really interested in understanding the cultural dynamics of these megalith builders. His observations have been recorded by his biographer (Smith 1888):

1. The large number of circles and tumuli suggests a large of number of population.
2. The dead were either burned and then buried or buried directly.
3. They used iron since a pan/cauldron and spear head were found along with flint arrows and pottery.
4. They were migratory in nature yet a major part of the population resided at a certain place for a considerable period of time since many burials are found.
5. At some instances there were multiple burials within the same burial.
6. They were worshippers of some spirits or elements or some sacred grooves.

This observations show us his outlook towards their culture which cannot be called as antiquarian. He however called these as Druidical burials based on the studies carried out in Europe.

Rivett Carnac surveyed the site of Junapani and was impressed by the huge number of burials over there. He excavated the site of Junapani and published a report (Carnac 1879). Carnac writes about the burial types, gives their sketches and also prepared a site map. He documented the cup marks. The excavations were yielded iron tools and pottery as grave goods. According to Carnac:

- 1) Shapes of tumuli in India and Europe are the same.
- 2) Barrows are always South facing as they are in Europe.
- 3) The remains in the burial are similar to those found in European counterparts.
- 4) The Cup marks are similar to the European counterparts.

Carnac was more inclined to assign the authorship of these barrows to the same people who were responsible for their erection in Europe. The European megaliths were generally assigned to Celtic- Druidic people.

Major Pearse was an officer in the British Army. He excavated a stone circle at Kamptee (Kamthi) in 1869 (Pearse 1869). He has given excellent and long lasting observations. The observations of Pearse on Megalithic people are enlisted below.

1. Pre 330 B.C. and they can go back up to 1200 B.C.
2. Neither Buddhist nor Hindus.
3. Civilized
4. Tall and Strong
5. Numerous in number
6. Makers best of steel
7. Agriculturalist
8. Eating food like wheat cakes and fried food.
9. Users of oil

10. Possessing goldsmiths and horses.
11. Drove chariots or carriages
12. Users of Potter's wheel
13. Gave fair representation of animal and birds
14. Copper smelters
15. Traders of various items (cocoanut)
16. Makers of systematic burials

All these observations show that Pearse had a reasonably good understanding of the culture. His observations though at a very initial stage are much relevant till today.

Carey (1871) explored and reported the site of Khairwada for the first time. It is a very extensive site known for its burials more than 1600 in number and also an extensive habitation of more than 5ha in size. The interest continued; Hunter (1933) explored the stone circles of Mahurjhari. He feels that since not many stone circles were excavated properly and scientifically archaeologists should start studying them before they get destroyed by various human activities. He also has recorded the cup marks on these burials which according to him were sacrificial tokens and religious in nature. Along with this he has also recorded that the burials especially Dolmens (Pimpalgaon) are associated with the Telis and Dimaris.

After an overview of the early colonial workers in Vidarbha it is clear that they have shed a comprehensive light on the megalithic culture though their works were in an incipient stage. The results of their researches bring to the notice of the researcher that:

- 1) These colonial researchers though impressed by the antiquarian values were scientific in their approach.
- 2) They had a deep influence of the religious approach towards mortuary practices which was later conceptualized by Durkheim.
- 3) They compared the burial traditions with those found in European countries which show that the diffusionist approach was dominating their research mind.
- 4) They however were also interested in understanding the technology, subsistence and culture in general. For this they also resorted to ethnography. Pearse observes the continual use of bird motifs on Indian lamps and utensil lids which he found on the copper lids. He also tried to understand whether they were agriculturist, traders on the basis of the evidence of ploughs found and the find of cocoanuts which are not locally produced.
- 5) Almost all of the writers were concerned about the nature of sedentism which these people might have achieved. They discuss about the group size, occupational pattern which might have shaped the economy and society.
- 6) They also discuss about the religious beliefs of the megalithic people.
- 7) Pearse is also credited with giving a very close date of 1200 BC to this culture. He argues with help of the known historical dates like invasion of Alexander, date of Buddha.

- 8) Pearse was also aware of their technological advancement since he records the steeling achieved in ploughshares and also the good quality of bronzes. He was thus not only interested in the artefacts and cultural material but also in the cultural attainment of the people.

In the post-independence period research had begun on the same lines of cultural history paradigm since it was dominating the then researcher's mind. However, the approach to know the dark periods and the chrono-cultural approach was adopted in Indian archaeology due to the leadership of Sir Wheeler (Wheeler 1946). The same can be seen in Vidarbha where early excavations at Junapani (IAR 1961-62: 32-34) and Kaundinyapur (Dikshit 1968) were directed towards the same goal. At Kaundinyapur, Dikshit was the first excavator to identify a distinct cultural deposit of the megalithic period. He did it on the basis of etched carnelian beads and the Micaceous red ware found in the lowermost layer of the excavated trench. He leniently ascribed it a date of 2000 BC. Around the same time Paunar was excavated (Deo *et.al* 1968) in Wardha district. Over here too the excavators found a distinct layer yielding painted pottery and black and red ware which could be related to the megalithic phase. They dated this phase to around 1000 BC since the next phase yielded iron and the antiquity of iron was believed to be around 800 BC in those days. But these excavations helped to fix a chronological and stratigraphical position for the culture in Vidarbha. This excavation also encouraged further work and Deo excavated the site of Takalghat and Khapa (Deo 1970a). Deo thinks that the studies in megalithic culture till that period have led only to understand typology and also the advanced iron technology. However, the burials form an important constituent since they are monumental in form, rich in content and have a living tradition (Deo 1970a: 1). He writes that this excavation was undertaken since the ceramics from the burials and the habitation were similar and also to confirm whether the earliest phase at Kaundinyapur, the stone circles of Junapani and the earliest phase at Paunar which show affinity with each other have the same cultural relation with the cultural material at Takalghat and Khapa or not. This excavation was also helpful to know the earliest cultural substratum of the region and to know the indigenous cultural growth. Soon Deo continued to investigate the megalithic culture of the region by a series of excavations which contributed to the better understanding of the culture. He excavated the sites of Mahurjhari (Deo 1973b, IAR 1978-79: 71), Naikund (Deo and Jamkhedkar 1982), Borgaon (IAR 1980-81: 40), Khairwada (IAR 1981-82: 51-52), Bhagimohari (IAR 1982-83: 61-62, 1983-84: 57-58, 1984-85) and Raipur (IAR 1984-85: 53-55). Raipur was also later excavated by Deglurkar and Lad (1992). They also excavated Bhagimohari for a second time (Deglurkar and Lad: unpublished field notes, Deccan College). Mahurjhari was investigated and excavated for the third time by Mohanty from 2000 to 2004. He was able to trace the hitherto unknown settlement at the site of Mahurjhari. Excavations were also conducted at Dhamna-linga, Dhavalameti and Vyahad by Nagpur University (Ismail: per. Comm. and Ismail 2006). Excavations at sites like Kaundinyapur (Dikshit 1968), Arni (IAR 1978-79), Adam (Nath 1992, IAR 1988-89), Tharsa (IAR 1985-86), Shirikanda (IAR 1991-92) and Arambha yielded evidences of habitational layers having affinity to the megalithic culture. The

strata yielded micaceous red ware, black and red ware as well as etched carnelian beads which were typical of the megalithic culture. Hence these sites of the Early Iron Age were associated culturally with the megalithic culture. The excavations have yielded evidences which have helped to understand the following aspects.

Settlement System of the Early Iron Age/Megalithic Period

The settlement pattern aspect of this period has been studied in detail only by Joshi (1993). Though some observations have been made by Deo (1970b, 1982, 1985), Joshi extensively wrote on the settlement system of the period. Deo (1982, 1983) suggests that burials are on the foothills or barren undulating landscapes since it was easy for burial building and habitations were situated on river banks (Deo 1991). He also feels that eastern Vidarbha was more preferred than the western one since the eastern one was abundant in natural resources like coal, iron ore, manganese and forest lands (Deo 1985). Joshi (1993: 80-109) however analyses the various aspects influencing settlement pattern. Mohanty and Joshi (1996) divide them into three groups: a) Burial sites (B) b) Habitation sites (H) c) Habitation cum Burial (HCB) sites. Attempt is made to emphasis on the importance of such diversity in sites as an important aspect suggesting cultural variation (Mohanty and Joshi 1996). In his analysis about settlement pattern however he considers the third group of HCB as one unit. Joshi in his analysis tries to relate the settlements with the environment.

Joshi opines that the Megalithic/ Iron Age people were dispersed over the landscape for agro-pastoral purposes. They are not nucleated which is needed for defence and to meet the scarcity purposes. Mohanty and Joshi think that the community comprised of both the sedentary people and also of those pastoral and nomads. They indicate towards the evidence of agriculture coming from sites, iron smelting, mounds indicating continuous habitation and a series of C14 dates suggests sedentary lifestyle. Joshi thinks they were also mobile due to many pure burial sites and also increased use of horses in burials. Along with that there are two factors namely lack of many habitations and their contemporaneity with burials. These had led Allchins call them pastoral (Allchins 1983) and Leshnik (1974) calls them nomads. Deo (1985), Thomas (1992) calls them mobile pastorals and agro-pastorals whereas Walimbe (1992) thinks they are completely wanderers, hunter- gatherers. Joshi and Mohanty (1996) think that the Megalithic/ Iron Age people were having a dual cultural system where many people were mobile and remaining were sedentary. This same idea was elaborated and the importance of agricultural settlements was suggested by Mohanty and Joshi (1996).

Excavations at settlements like Takalghat (Deo 1970a), Naikund (Deo and Jamkhedkar 1982), Bhagimohari (IAR 1982-83: 61-62, IAR 1983-84: 57-58), Mahurjhari (Mohanty 2005: 106-107), Adam (IAR 1988-89: 58-60) have yielded many evidence about the structural activity of the period. The structures were mostly domestic in nature. Structures were both rectangular (Takalghat) and circular (Naikund) in shape. They were manufactured by using mud and rubble. At Mahurjhari chips of stones were used in paving the structures. The floors were plastered with lime and probably cow dung.

The structures were wattle and daub in nature. But at Takalghat, Deo has noticed post-holes which could support a light roof above. He opines that the structures were firm in the earlier phase.

Recently the author has conducted explorations in the region and has brought to light 12 new settlements of the Early Iron Age (Vaidya and Mohanty 2010, 2012; Vaidya 2014). The analysis by the author shows that the settlements were influenced mainly by the idea of increasing agricultural production and hence they were located in fertile alluvium zone and in close proximity to the rivers or major tributaries. The sites were creating an agricultural economy which was helping the craftsmen to grow and prosper. Evidences of craftsmen activities were found mostly at HCB sites which could prosper due to the agricultural settlements. The newly found sites support this claim. Sites had a hierarchy amongst themselves with regards to size. Sites were ranging from 15-20 ha to 2-3 ha in size. They were also supporting different crafts like bead manufacturing (Mahurjhari), iron smelting (Naikund, Shirkanda), and iron working (Bhagimohari). Thus sites observed a functional complementarity amongst themselves. They were supporting both crafts and necessary community defence system as well as agriculture played a major role in guiding the settlement pattern. The use of terms such as 'wanderers', 'mobile' and 'nomads' can be applicable to some sections of the society. Settlements found by the author below 3 hectares suggest limited and small habitation. However, it cannot be applied to the entire community. It has to be kept in mind that many settlements known earlier and found by the present author are purely habitation sites without burial association. Thus the community might be having various groups with varying lifestyles such as agro-pastoralism, hunter-gatherers, mobile pastorals and so on.

Studies on Technological Aspects

Studies on Megalithic technology have been carried out in various aspects so far such as ceramics, metallurgy, beads and transport techniques.

Ceramics

The whole repertoire of ceramics in Vidarbha is wheel made and kiln fired (Deo 1983: 75). The ceramics mainly include Black and Red ware (BRW), Black Burnished ware (BBW), Micaceous Red ware (MRW) and red ware (RW) painted on exterior. Megalithic Black and Red ware differs from the one found in chalcolithic cultures of earlier date. It differs because it has a glossy polished surface and thin sections. However it continues the tradition of black interior and black colour extending up to the rim and neck and the exterior body is red. Gogte (1992), Singh (1982) however thinks they were fired in inverted way thus oxidising the exterior and reducing the interior and there is no crucial role of the raw material as such. The black burnished ware does not differ much in fabric, texture, firing and shapes than the black and red ware. Plenderleith (quoted in Deo 1973a) thinks that the black polish on pottery is due to colouring clay in the form of an alkaline slip. Hodges (1964: 31) is of the opinion that burnishing was done by rubbing with a smooth round faced tool or water worn

pebbles or bones or leather. This seems quite applicable to megalithic black and red ware and black burnished ware. Micaceous red ware is abundantly found in megalithic habitations and burials. It is thick in section, coarse in fabric and under-fired with a blackish core. It has profuse use of sand, hay and mica. The presence of mica in section and the exterior surface gives it a glittering look (Deo and Jamkhedkar 1982). Deo (1973b) thinks that the use of mica was for ritual purposes.

There is also Mica Slipped Red ware (MSRW) and it differs since it does not have mica in its sections. Among red ware with paintings on exterior there have been noticed four fabrics (Deo 1970a): a) thick fabric, gritty core, matt red slip externally or sometimes dull red exterior b) thinner than the earlier one but bright red burnished externally, c) burnished both sides otherwise similar to type a, d) having a medium thick section. Gogte (1992), Gogte and Kshirsagar (1992) have carried out studies on pottery such as XRD and chemical analysis. The XRD has helped to find out three groups within the burial pottery from Raipur which has led them to believe that either some people were socially and economically different or geographically from different region. They also have said that probably some burials were contemporaneous and others might be later or earlier. Thus they have tried to highlight the cultural contacts of the megalithic communities.

Metallurgy

They were makers of finest quality of bronze and steel and it was first noticed by Pearse (1869). Copper metallurgy was much advanced than the Chalcolithic cultures (Deo 1983). Artefacts include domestic utility objects such as bowls, lids, dishes, basins and finials having bud, bird and geese motif and ornaments such as bangles, rings, necklaces and horse ornaments. Horse ornaments are zenith of craftsmanship since the riveting is done by iron pins and it is of different type. There are pendants of various types and have been described earlier (Deglurkar and Lad 1992). Copper bangles were mixed with tin and zinc. Tin is found in Khapa (Deo 1970a) and zinc at Mahurjhari (Deo 1973b). Khapa copper has hence been termed as bronze. Casting by either open or piece moulds or lost wax techniques was probably the way of manufacture (Joshi 1993). Bangles were probably casted and then hammered against a tapering rod (Hodge 1964: 74) (Joshi 1993). Ornaments were joined by welding. Horse ornaments were sewn on a leather base probably to be mounted on the face of the horse. Engravings were done on such ornaments by various engravers.

Iron technology was very well advanced and it is evident in the finds. Iron was smelted which is a very complicated process which requires generating a temperature of around 1200 degrees to smelt iron out of its ore. This was achieved and such an iron smelting furnace has been found during the excavation at Naikund. The furnace is about 25 cm and having a diameter of 30 cm. The walls were made of clay and even two tuyeres were found. The evidence there suggests that 3-4 kilograms of iron could be smelted out of 10-12 kilograms of iron ore (Gogte 1982a and b). Iron was free from impurities and had almost 98% iron in it (Gogte 1982b). At sites this percentage went

up to 93% (Gogte 1984). Yet it showed that iron was much pure in its content. Artefacts such as agricultural tools (hoes, sickles, ploughshares), craftsmen tools (chisels, adzes, nail parers, axes), offensive tools (spikes, spears, lances, daggers, swords, arrowheads, battle axes) all suggest the varied use of iron technology in everyday community life. Gogte (1984) feels that these were all produced at Naikund and then transported or exchanged with other sites. The steeling of iron was achieved by these people (Gogte 1984, Deshpande *et al.* 2010). This suggests the multifarious utility of the iron artefacts. Along with these there was an advanced technology of manufacturing gold objects. Spiral rings, gold leaves and small pieces were recovered from burials.

Beads

They were made out of semiprecious stones such as carnelian, jasper, chalcedony and terracotta and formed a part of burial goods. The etched carnelian beads having affinity to Megalithic culture of South India are found at Kaundinyapur (Dikshit 1968), Mahurjhari (Deo 1973b, Mohanty 1999: 59-69, 2008: 459-476) and also other sites. Mahurjhari has ample evidence of bead manufacturing during the early Historic period. Beads of megalithic period are however studied in detail and it has been opined that beads were exotic items and not used by commoners. They were also probably not manufactured by the megalithic folk and were procured from outside for their ritual fulfilment or status symbol (Thakuria 2010).

Subsistence Strategies of the Vidarbha Megalithic Culture

The excavations carried out have led to a better understanding of the subsistence strategies of the Vidarbha megalithic culture. Various scholars have written at length about the subsistence strategies (Deo 1982, 1985; Walimbe 1988; Kajale 1982, 1989; Thomas 1992a and b, 1993; Joshi 1993; Moorti 1994; Mohanty and Selvakumar 2002; Vaidya and Goyal 2008, 2012; Thakuria 2010). Deo opined a semi-nomadic base for Vidarbha Megaliths (Deo 1985). McIntosh (1982) suggests a gradual shift from a semi-nomadic economy to sedentary economy from early to later Iron Age phase. In Vidarbha there was a mixed economy of stock farming, hunting and exploitation of aquatic resources according to Thomas (1992b). This economy was however dominated by cattle. Kajale (1989) on the basis of archaeo-botanical remains asserts that the people were practicing double cropping and hence might be sedentary and settled at a place around the year. Dental pathological studies at Mahurjhari (Rao 1973; Lukacs 1981), Naikund (Badam 1982), Takalghat and Khapa (Rao 1970) and Raipur (Walimbe 1988, 1992) have revealed considerable information about diseases and dietary patterns.

Turner (1979: 619-636) gives the mean percentage of carious teeth which is 10.43% for agriculturists, 1.3% for hunter-gatherers and 4.84% for a mixed group depending upon both. Lukacs (1981: 234) suggests a mixed economy on the basis of 7.7% (n=196) carries on the teeth at Mahurjhari. The low proportion of masticatory stress on dentation suggests abundance of soft food. Thus a diet high in carbohydrates is suggested which can be related to an agricultural economy. However at Raipur (Walimbe 1992) has found severe wear exposing dentine patches on molar teeth, heavy accumulation of

tartar and enamel hypo-plastic lesions in the form of a pit on the labial surface of RI. It shows nutritional deficiency of Vitamin D and also childhood stress. He has suggested moving around and hunting as the mode of life. Even Lad (1992) suggests that communities might be coming to this Raipur burial ground only for burial ritual.

Joshi (1993) feels that the economy was mixed since artifacts like hoes, sickles, ploughs used for agriculture and also weapons useful in hunting were produced. Along with this there is evidence of bins, dough plates, pestles, grinders, cauldron suggesting the use of plant food on a large scale. Soil is medium to deep black and conducive for cultivation. Rainfall is 1000-14000cm. Forests helped in hunting and gathering. The region also witnessed occasional floods and famines (Cox 1978) in which an either way is useful in surviving.

Opinions about subsistence can be summarised as agricultural subsistence (Lukacs 1981; Kajale 1982, 1989; Mohanty and Joshi 1996), Agro-pastoral (Deo 1985, 1991; Moorti 1994, Vaidya and Goyal 2012), Hunting and Nomadic (Walimbe 1992), Mixed economy (Thomas 1992, Joshi 1993). Some important observations are:

- i) Deo (1985, 1991): Agro-pastoral mode of life with large herds of cattle, mostly concentrated to rural sites, more pastoral and mobile, horse is a sign of Ahirs, Lamans who are nomads and has no significance to agro-pastorals, itinerant pastoralism also can be confirmed due to no brick structures and no large storage jars.
- ii) Moorti (1994): Agro-pastoral economy and a ranked society with individuals bearing super-ordinate and sub-ordinate ranks in the society. These might be springing out from the economic activities such as agriculture, warfare and protection or smithery, carpentry, pottery making, lapidary, basketry, oil crushing, stone cutting, leather works.
- iii) Mohanty and Joshi (1996); Vaidya and Goyal (2012): Agricultural economy coupled with pastoralism and animals used for multiple purposes than for only primary purposes. Animals such as horses and cattle were also responsible to create economic and social dynamics in the society through their utilities and the prerequisites they governed.

All these opinions are based on the finds of agricultural products, animal bones, craftsmen tools, weapons and ornaments like beads, bangles from the burials. Thakuria (2010: 59) suggests that making of bullock cart was very much a part of their professions since they have deep cutting chisels. Along with these he suggests that carpentry was advanced as one comes across different types of chisels (Thakuria 2010: 58) which might be used for deep cutting, cleaning and smoothening the deep cut surfaces, curving/ scooping and angular cutting.

Earlier to this Deo (1973b) had illustrated eight different types of chisels from Mahurjhari. He also suggested the use of chisels for making wooden posts for houses at sites (Deo 1970a). Thus it is understood that megalithic people were engaged in

agriculture and pastoral activities simultaneously. Along with that they were also engaged in activities which required high quality of craftsmanship like blacksmith, coppersmith, goldsmith, carpentry, horse rearing, basket and bamboo work, stone working, lapidary, leather working, warfare and protection along with hunting. All these evidence point out towards a society which was rural in nature yet was engaged in some kind of specialized crafts which might have depended on this basic mode of subsistence to thrive and flourish.

Thus a social and economic stratification was possible in the society to maintain these crafts and backed by an agro-pastoral base. This has been suggested that the society was a stratified one with various occupational groups (Joshi 1993; Moorti 1994; Mohanty and Selvakumar 2002; Thakuria 2010: 63). Along with these Thakuria (2010: 64-67) and Joshi (1993) suggest that there were good exchange networks prevailing and trade was carried out. They point out the use of gold, the presence of eye beads, etched beads and also the use of iron from Naikund at all sites (Gogte 1982b, 1984) as an evidence of trade and exchange.

Along with these the established contacts is considered as a precursor to the standardization in tools especially chisels (Thakuria *et al.* in press). Thus Iron Age community was a well-established rural community with a probable settled and probable mobile lifestyle. There were various occupation groups which might not be very strict in their disposition and continuance (Deo 1985). The recent study about settlement pattern by the present author (Vaidya 2014) has indicated towards a more settled agricultural and animal keeping way of life at majority sites whereas the exchange, transportation and purely pastoral activities were also a part of community life.

Mortuary Practices

The culture is mostly known from its burials. The most dominant type of megalithic burial is the stone circle type. However there have been reported dolmens and menhirs (Sontakke 2011, Pawar 2012) in some regions. The abundance of the stone circle type firstly led to a feeling of lenient community differences. But the surface survey at Bhagimohari (Mohanty 1993, 2012) has helped to identify ten sub-types among the stone circles. Thus there existed varied mortuary practices in Vidarbha.

The dead were buried in a pit, oblong or ovalish in shape. The pit was filled with black cotton soil which is actually black sticky clay. Then the grave goods such as iron and copper objects, pottery, ornaments, horse were interred. The grave was then filled with rubble and pebbles. The whole area was then encircled by stone boulders.

Within the pit there were primary as well as secondary remains of the dead. The burial also contained many secondary burials (Mohanty 2005b: 106-107) and multiple burials (Deo 1973b) too. Many a times, the burials were symbolic in nature.

The burials have helped to a large extent to the study of the palaeo-pathology of the

period. On the basis of the evidence from burials, the estimated age at death is in between 18-32 (Mohanty and Walimbe 1993, 1996; Walimbe 1988). At Raipur, Walimbe (1992) has found severe wear exposing dentine patches on molar teeth, heavy accumulation of tartar and enamel hypo-plastic lesions in the form of a pit on the labial surface of RI. It shows nutritional deficiency of Vitamin D and also childhood stress. He has suggested moving around and hunting as the mode of life. The studies on the skeletal material of Mahurjhari have helped to identify that the people were active horse-riders (Kennedy quoted in Deo 1985).

It has been said that the element of racial affinity is difficult to know since at sites like Brahmagiri (Sarkar 1960) they have been associated with the Scythian-Iranian people whereas in the sites like Yelleswaram and Adichannallur there have been mixed results (Guha 1926: 307). The study of Kennedy and Levisky (1985) have however helped to refute the racial theory and showed that there was in reality a mixture of local populations by the Early Iron age and there are no evidences for any foreign invasion as such.

Ideas Guiding Research

After a brief review of the research on the Early Iron Age there is also a need to write a brief appraisal about the various lines of thought that have guided the research till today. During the colonial period there were people and scholars who were working at an embryonic stage about the Early Iron Age/ Megalithic period. The scholars were influenced by the religious approach which guided the studies of mortuary remains then (Binford 1971). This can be clearly seen when Pearse (1869) writes about the religious beliefs of the megalithic people and when Carnac also equates them with the ancestors of the Celtic folk (Carnac 1879: 10). The approach was also influenced by the principles of diffusionism. This is reflected when Carnac (1879: 10) tries to correlate the cup marks and orientation on the burials from Junapani to those found on European burials. They however wrote about nature of subsistence, sedentism and burial types and rituals in their own capacities.

However, as written earlier it was the appointment of Wheeler which changed the outlook of Indian archaeologists. He put forth the importance of cultural chronology and excavated Brahmagiri (Wheeler 1948: 180-310). Guided by the chrono-cultural approach of Childe and Wheeler, one can witness the same being applied in sites of Vidarbha megaliths. Dikshit excavating at Kaundinyapur wanted to put the cultural history of the region in stratigraphical way. Deo (1970a and b) writes how there is a problem in understanding the archaeology of Vidarbha megaliths. He says this because there is a distinct habitation layer of Iron Age at both Kaundinyapur and Paunar. Along with these Takalghat was excavated which was useful in establishing contact between the habitation, burials and the other two sites. Thus Deo paved a way for understanding the chrono-cultural aspect. Keeping this aspect in mind he tried to find some relation between the painted potteries from Takalghat with Jorwe ware (Deo 1970b). But he found no striking similarities in fabric, firing and shapes. However his

later excavations were directed towards understanding this aspect of contact and chronological development (Deo 1973b, 1973b, Deo and Jamkhedkar 1982). In his writing one can come across the mentioning of Scythian-Russian elements in the burials at Naikund and Mahurjhari (Deo 1973a and b). This shows that he still had the influence of the diffusionist idiom of research.

But by this time there were scientific studies conducted such as Resistivity probe survey, floatation techniques, phosphorus test, chemical analysis of metal objects and skeletal analysis which aided in the understanding of the subsistence, technology in a better way. Excavations at Naikund and Mahurjhari were conducted and these techniques were used. This contributed more to the knowledge about the various aspects already discussed above. The Application of all these techniques came out of the increasing influence of New Archaeology propounded by Binford (1962). Binford also wrote about mortuary analysis (1971) which brought forth the ideas such as the *Social Persona* of the dead. These seem to have influenced Deo (1985) when he wrote in detail about the megalithic chronology, culture, technology and ecology. He made an analysis of the percentage and number of different tool types appearing in respective burials from Borgaon to show how the society was more dominated by the pastorals. Thus the influence of Binford and his social approach was seen in studies in Vidarbha. Moorti (1986, 1989, and 1994) has also categorized the tools according to technomic, sociotechnomic and ideotechnomic variety to find out the super-ordinate and subordinate individuals in the community. Moorti was deeply influenced by the methodology of New Archaeology and its workers. He has tried to understand the ranked society against the background of an agro-pastoral economy, a small representation of industry with ample raw materials from Vidarbha and possible trade routes. He also assigned ritualistic importance to burials. Thus there were attempts to identify the society and economy of the megalithic people. Later studies Joshi (1993) were also directed towards understanding these social perspectives. Lad (1992) tries to highlight the cultural perspective of the burials. Her writing reveals the social and ritualistic symbolism associated with the burials.

However Mohanty (1993) and Mohanty and Joshi (1996) mark a change in the research methodology and the approach towards the megalithic research. Mohanty (1993) suggests in changes towards field based techniques and investigations to understand the megalithic burial ritual. He carried out an intensive surface survey at Bhagimohari. It shows a clear distinction in use of space by different communities, the economic status and the period of burial construction. He documented and observed in a micro level ten different varieties among the stone circle types. Later he also enunciates the application of these sub-types in understanding the cultural and social dynamics. This is somewhere helping to understand the cognitive aspect of the burial builders. He tries to write more about their interaction with the environment, their utilization of the landscape as reflected in tools and also the burials. Mohanty and Walimbe (1993) have also brought the demographic approach in the research arena. They reconstructed a standard stone circle burial at Bhagimohari which helped to make out that 70-80

workmen were needed to work for 10 days to complete such a burial. This in a way suggests the number of working population, the total population of the settlements and the number of burials found. They also concluded that burial was a status symbol and not everyone got an elaborate burial. Mohanty also suggested that the burial was constructed during a specific time of the year i.e. post-harvesting season. Thus he tries to understand the communal/labour engagement and the capacity of the deceased and his family. Mohanty and Joshi (1996) bring out a set of various questions related to the purpose of the erection of burials, its affiliation socially, geographically and culturally, the system of management of the various social and economic activities and also the ritual beliefs.

These reflect the cognitive approach which might have built up upon the earlier social approach. This might have developed since the understanding of the individual mind was also the new trend in research due to post-processualism. There was now an addition upon the way the research was carried out. The result was seen when a new settlement of megalithic period was found at Mahurjhari (Mohanty 2004, 2005: 106-107) and also peripheral burials were found at Dhamna-Linga (IAR 2000-01: 97-107, Ismail pers. Comm.) and Mahurjhari (Mohanty 2005b: 106-107). The burials at Mahurjhari were not actually peripheral. The excavation was taken in the surrounding area. It was intended to look for the activities in the burial ground. Peripheral burials were associated with the central burial which is not the case at Mahurjhari. The burials were found away from the stone circles, thus reflecting the normal burial, which is a variation of the megalithic culture (Fig. 2).

The work of Ismail especially at Dhamna-Linga and Vyahad has also reflected the cognitive aspect. Similarly Mohanty's research at Bhagimohari (1993, 2012) and Mahurjhari (2005: 106-107) has also been a result of this cognitive aspect. This can be said since the peripheral burials have helped a new understanding of the mortuary system altogether. The possibility that burial building was not done all of a sudden and the time needed was compensated by such simple burials or the disposal system of the lower status groups were now thought upon by these scholars while excavating such burials outside the stone circles. Thus there was now an attempt to highlight and find the different evidence which can provide markers for further social groups, economic activities and also resource utilisation. But above all, an attempt is made probably to understand the person for whom all such effort of burial construction was made. Thus they have moved above of studying only social process or social identity.

Thus now it can be seen that the studies have been more concentrated towards not only understanding the cultural changes and social process but also to understand the nature of the thought which prevailed in the mind of the megalithic people and their society. The studies at this stage are keener to know various aspects about Vidarbha Megaliths such as:

1. The interaction of the dead with the entire society and his immediate kin

2. The interaction of settlements and burial with each other as well as within themselves
3. The continual use of burials and burial grounds suggesting family, communal and hereditary ties
4. The exact nature of the tools i.e. ritual, functional and symbolic
5. The role of the environment in influencing the settlement-burial nature of the culture

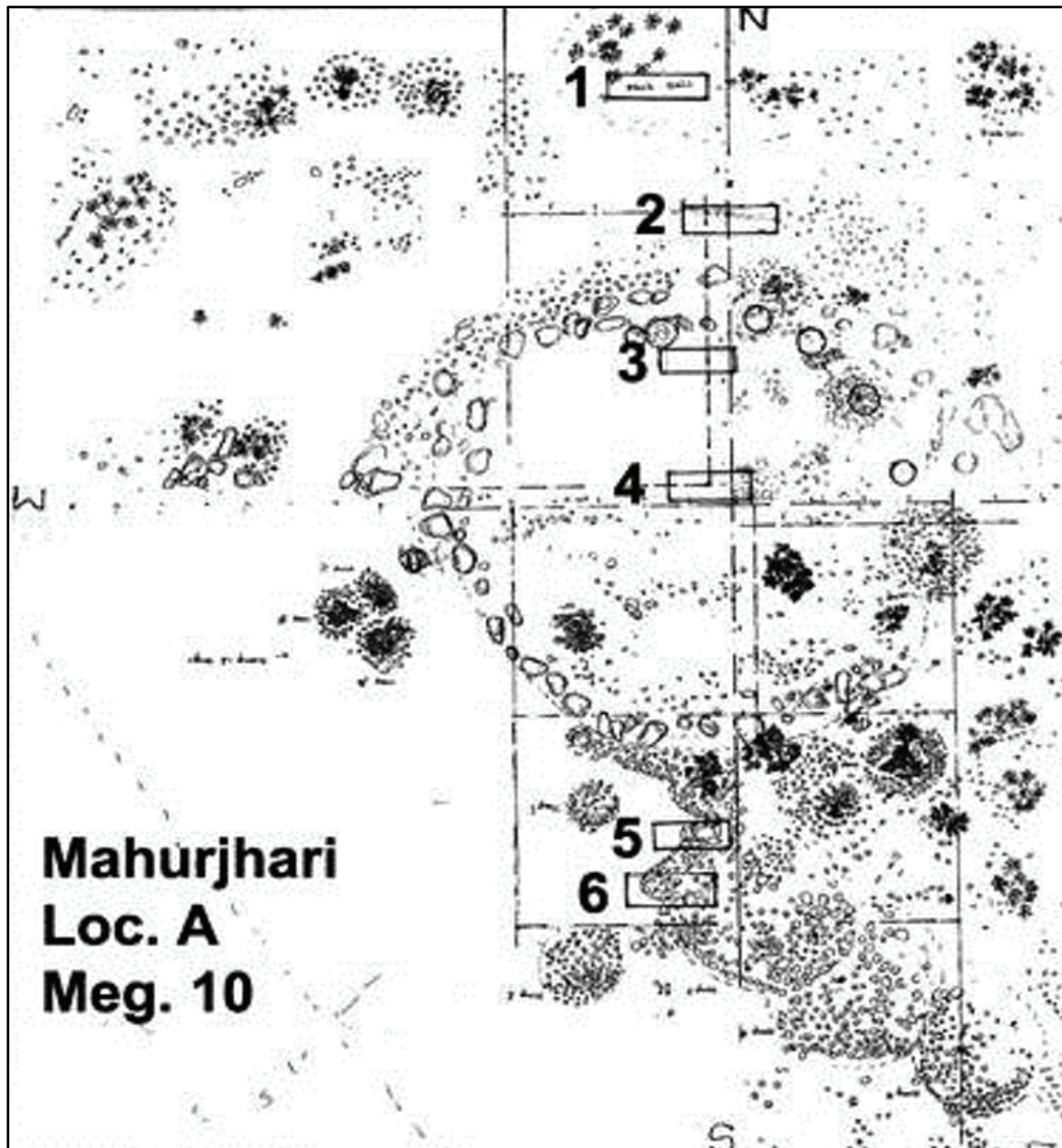


Figure 2: Multiple Burials at Mahurjhari (after Mohanty 2005)

Thus the social (processual) and cognitive approaches have taken the studies in Vidarbha megaliths far ahead than the earlier era. This has influenced recent studies in the region (Vaidya and Goyal 2012, Sontakke 2014, Vaidya 2014).

References

- Allchin B. R. 1960. *Piklihal Excavations*, Hyderabad: Govt. of Andhra Pradesh.
- Allchin, B. and F.R. Allchin 1983. *The Rise of Civilization in India and Pakistan*, New Delhi: Select book service syndicate.
- Babington, J. 1823. Description of the Pandoo Coolies in the Malabar, *Transactions of The Literary Society of Bombay* 3: 324-30.
- Binford, L.R. 1972. Mortuary Practices: Their Study and their potential. in *An Archaeological Perspective*. (L.R. Binford Ed.). New York: Seminar Press: 208-243.
- Binford, L.R. 1962. Archaeology As Anthropology, *American Antiquity* 28 (2): 217-225.
- Binford, Lewis, R. 1971. Approaches to the Social Dimensions of Mortuary Practices, *Memoirs of the Society for American Archaeology*, No. 25: 6-29, (1971), pp. 6-29.
- Carey, J.J. 1871: Stone Circles found near Khairwada, Wardha districts, in *Proceeding of the Asiatic society of Bengal* 238-39.
- Deglurkar, G.B. and G. Lad 1992. *Megalithic Raipur (1985-1990)*, Pune: Deccan College Post Graduate and Research Institute.
- Deglurkar, G.B. and G. Lad 1992-93. *Bhagimohari Excavations*, Unpublished Field Notes, Deccan College, Poona.
- Deo, S.B 1973a. *Problems of South Indian Megaliths* (B.S. Kulkarni Ed.) Research Lecture. New Series 4. Dharwad: Kannada Research Institute.
- Deo, S.B 1973b. *Mahurjhari Excavations (1970-72)*, Nagpur: Nagpur University.
- Deo, S.B 1973c. The Dating of Megaliths in Maharashtra: Evaluation of some New Evidence, in *Radiocarbon and Indian Archaeology* (D.P. Agrawal and A. Ghosh Eds.): 131-37. Mumbai: Tata Institute of Fundamental Research.
- Deo, S.B 1982b. *Recent Researches on the Chalcolithic and Megalithic Culture of the Deccan* (K.V. Raman Ed.). Madras: University Archaeological Series No.5.
- Deo, S.B 1991. New Discoveries of Iron Age in India, *Indian Archaeological Heritage* (C. Margabandhu, K.S. Ramchandran, A.P. Sagar and D.K. Sinha Eds.), pp. 189-197. Delhi: Agam Kala Prakashan.
- Deo, S.B 1998. Iron in Peninsular India, *Dating in Indian Archaeology: Problems and Perspectives* (T.P. Verma Ed.): 57-61. Mysore: Bhartiya Itihas Sankalan Parishad.
- Deo, S.B and J.P. Joshi 1970. *Pauni Excavations (1969-70)*. Nagpur: Nagpur University.
- Deo, S.B. 1970a. *Excavation at Takalghat and Khapa (1968-69)*, Nagpur: Nagpur University.
- Deo, S.B. 1970b. The Personality of Vidarbha Megaliths, *New Indian Antiquary*.13: 23-31.
- Deo, S.B. 1982a. The Vidarbha Megaliths: A Review, *Bulletin of the Deccan College Post Graduate and Research Institute* 41: 64-88.
- Deo, S.B. 1983. Some Aspects of Megalithic Technology, *Madhu* (M. S. Nagraja Rao Ed.) Delhi: Agam Kala Prakashan: 33-35
- Deo, S.B. 1985. The Megaliths: Their Culture, Ecology, Economy and Technology, *Recent Advances in Indian Archaeology* (S.B. Deo and D. K. Sinha Eds.): 89-99, Pune: Deccan College.

- Deo, S.B. and A.P. Jamkhedkar. 1982. *Naikund Excavations (1978-80)*. Bombay: Department of archaeology and museum Government of Maharashtra.
- Deo, S.B. and M. K. Dhavlikar. 1968. Report of Paunar Excavations (1967) in *Nagpur University Journal (Humanities)*, Vol. XVIII. Nos. 3 & 3. Nagpur: Nagpur University.
- Deshpande, P. P., R.K. Mohanty and V.S. Shinde 2010 Metallographic studies of a steel chisel found at Mahurjhari, Vidarbha, Maharashtra, *Current Science* 99(5):636-639.
- Dikshit, M.G. 1968. *Excavations at Kaudinyapur*. Bombay: Government Central Press.
- Gogte, V.D. 1983. Iron and Copper in Mahurjhari Megaliths: Chemical and Metallographic Analysis, *Bulletin of the Deccan College Research Institute* 42: 74-82.
- Gogte, V.D. 1982a. Megalithic Iron Smelting at Naikund (Part –I): Discovery by three-Probe Resistivity Survey *Excavations at Naikund (1978-80)*: 52-55, Nagpur: Nagpur University.
- Gogte, V.D. 1982b. Megalithic Iron smelting at Naikund (Part II): Efficiency of Iron Smelting by Chemical Analysis, *Excavations at Naikund 1978-80* (S.B. Deo and A.P. Jamkhedkar Eds.), pp. 56-59. Bombay: Department of Archaeology and Museums.
- Gogte, V.D. and A.A. Kshirsagar. 1992a. Chemical Analysis of Megalithic Pottery from Raipur, *Megalithic Raipur 1985-1990* (G.B. Deglurkar and Gauri P. Lad), pp. 116-22. Pune: Deccan College.
- Gogte, V.D. and A.A. Kshirsagar. 1992b. XRD Investigations of Megalithic Pottery from Raipur, in *Megalithic Raipur 1985- 1990* (G.B. Deglurkar and Gauri P. Lad), pp. 107-15. Pune: Deccan College.
- Gogte, V.D., V.N. Bhoraskar and P.S. Lahoti. 1984. 14 Me V Neutron Activation Analysis of Megalithic Iron Objects, *Bulletin of Deccan College Research Institute* 43: 49-52.
- Guha, B.S. 1926. A comparative study of the human crania excavated at Aditanallur, *Proceedings of the 14th Indian Science Congress*.
- Hislop. 1857. Letters (Excavations at Takalghat), *Journal of Bombay Branch Royal Asiatic Society*: 671-72.
- Hunter, G.A.P. 1933. The Antiquities of Mahurziri, *Shardashram Varshik* Vol. 5 (Y.M. Deshpande Ed.): 30-35.
- IAR. *Indian Archaeology- A Review*. Archaeological Survey of India: New Delhi.
- Ismail, Kellellu, 2011. *Personal communication* Dhamanlinga (2000-2002) and Davalameti Excavation (2005-06).
- Ismail, Kellellu. 2006. *Excavation at Vyahad*, (paper presented in XXXIV annual Conference of ISPQS), Raipur.
- Joglekar, P.P. and P.K. Thomas. 1992. Faunal remains: an application of contingency tables, *Man and Environment* XVII (2):65-70.
- Joglekar, P.P. and P.K. Thomas. 1997-98. Faunal remains from Tharsa, *Puratattva* 28:121-125.

- Joshi, A.P. 1973. Analysis of Copper and Iron Objects, *Mahurjhari Excavations (1970-72)* (S. B. Deo Ed.): 77. Nagpur: Nagpur University.
- Joshi, P. S. 1993. *The Vidarbha Megaliths: A Cultural Study*, unpublished PhD Dissertation submitted to University of Pune, Department of Archaeology.
- Kajale, M. D. 1974. Ancient Grains from India, *Bulletin of Deccan College Post Graduate and Research Institute* 34 (1-4): 55-75.
- Kajale, M. D. 1982. First Record of Ancient Grains in Megalithic Habitation Context from Excavation at Naikund (1978 Season), Dist. Nagpur, Maharashtra, *Excavations at Naikund (1978-80)* (S.B Deo and A.P. Jamkhedkar Eds.). Bombay: Department of archaeology and museum Government of Maharashtra.
- Kajale, M. D. 1989. Archeological Investigation on Megalithic Bhagimohari and its Significance for Ancient Indian Agricultural System, *Man and Environment* XIII: 87-100.
- Kennedy, K.A.R. and C. Burrow (in press). An Osteological Analysis of Human Skeletal Remains from Iron Age Mahurjhari, in *Further Excavations at Mahurjhari* (S.B. Deo and A.P. Jamkhedkar). Bombay: Directorate of Archaeology and Museums, Government of Maharashtra (quoted in Deo 1985).
- Kennedy, K.A.R. and J. Levisky, 1985. The Element of Racial Biology in Indian Megalithism: a Multivariate Analysis Approach, in *Recent Advances in Indo-Pacific Prehistory* (VN. Misra and P. Bellwood Eds.), 455-64. New Delhi: Oxford-IBH.
- Kennedy, K.A.R., C. Burrow, and J.R. Lukacs 1982. Note on Human Skeletal Specimen from Naikund, in *Excavations at Naikund (1978-80)* (S.B. Deo and A.P. Jamkhedkar), Appendix I, pp. 49-51. Bornbay-Pune: Directorate of Archaeology and Museums, Deccan College.
- Lad, G. P. 1992. Skeletal Remains: A Cultural Perspective, in *Megalithic Raipur (1985-1990)* (Eds. G. B. Deglurkar and G. P. Lad), pp. 137-138. Pune: Deccan College, Post Graduate and Research Institute.
- Lukacs, J.R. 1981. Dental Pathology and Nutritional Patterns of South Asian Megalithic Builders: the Evidence from Iron Age Mahurjhari, *Proceedings of the American Philosophical Society* 125(3): 220-37.
- Mohanty R. K. 2002. Excavation at Mahurjhari, *Annual report* (Deccan College, Pune) 2001-02: 45-47.
- Mohanty, R. K and P.S. Joshi 1996. The Megalithic Problems of Vidarbha: Retrospect and Prospects, *Spectrum of Indian Culture* (C. Margabandhu and K.S. Ramchandran Eds.): 157-69. New Delhi: Agam Kala Prakashan.
- Mohanty, R. K and S.R. Walimbe. 1993. A Demographic Approach to the Vidarbha Megalithic Culture, *Man and Environment* XVIII (2): 93-103.
- Mohanty, R. K and S.R. Walimbe 1996. An Investigation into the Mortuary Practices of Vidarbha Megalithic Culture, *Spectrum of Indian Culture* (C. Margabandhu and K.S. Ramchandran Eds.): 136-49. New Delhi: Agam Kala Prakashan.

- Mohanty, R. K and V. Selvakumar. 2002. The Archaeology of Megaliths in India: 1947-1997, *Indian Archaeology in Retrospect- Prehistory: Archaeology of South Asia* (S. Settar and Ravi Korisetkar Eds.) Vol. 1: 313-351. New Delhi: Manohar Publication.
- Mohanty, R. K. 1993. Vidarbha Megalithic: a New Perspective for field Investigations, *Bharti20* (1-2): 59-69.
- Mohanty, R. K. 1999a. Significant of Bead Manufacturing Center at Mahurjhari, district Nagpur, Maharashtra India, *Man and Environment* 24 (2): 59-69.
- Mohanty, R. K. 1999b. Bead Manufacturing Center at Mahurjhari, Nagpur District, Maharashtra India, *Bead Study Trust Newsletter, London* 33: 6-8.
- Mohanty, R. K. 2003a. A Preliminary Report on the Excavations at Mahurjhari, 2001-02: A Megalithic and Early Historic Site in Vidarbha, Maharashtra, *Pratnatattva* Vol. 9: 41-48.
- Mohanty, R. K. 2003b. The Importance of Mahurjhari in the Archaeology of Stone Bead Manufacturing Centers in Ancient India, *Bead Study Trust Newsletter* No. 41: 8-15.
- Mohanty, R. K. 2004. Excavations at Mahurjhari and Exploration in Vidarbha, *Annual Report of Deccan College Post Graduate and Research Institute*, 2003-04: 50-52.
- Mohanty, R. K. 2005a. Excavations at Mahurjhari and Exploration in Vidarbha, *Annual Report of Deccan College Post Graduate and Research Institute*, 2004-05: 76-77.
- Mohanty, R. K. 2005b. Some Important Observation: Excavations at Mahurjhari (2001-2004), *Man and Environment* XXX (1):106-107.
- Mohanty, R. K. 2006. Excavation at Mahurjhari and Explorations in Vidarbha, Maharashtra, *Annual Report* (Deccan College, Pune) 2004-05: 76-80.
- Mohanty, R. K. 2008. Mahurjhari: A Bead Manufacturing Center in Central India, *Archaeology of Early Historic South Asia* (GoutamSengupta and SharmiChakraborti Eds.): 459-476. New Delhi: Pragati Publication.
- Mohanty, R.K. 2012. *Locational Analysis of Megalithic Burials at Bhagimohari and Mahurjhari: A SocioEconomic Dimension*, paper presented in the *Regional Workshop on Archaeology of Western India* of ASI and D.C. Pune, 5-6 Nov' 12.
- Mohanty, R.K. 2014 (in press). The Megalithic Problem of Vidarbha in Wider Perspective: Retrospect and Prospects, *Megalithic Traditions in India* (Archaeology and Ethnography) (Eds. K.K. Basa and R.K. Mohanty), Bhopal: IGRMS.
- Moorti, U.S. 1986. Socio-Economic Aspects of Megalithic Vidarbha, *Puratattva* 15: 56-57.
- Moorti, U.S. 1994, *Megalithic Culture of South India: Socio Economic Perspectives*. Varanasi: Ganga- Kaveri Publishing House.
- Nath, A. 1989. Archaeology of the Wardha- Wainganga Divide, *Puratattva* 20: 93-98.
- Nath, A. 1992. Adam- An Index to Vidarbha Archaeology, *New Trends in Indian Art and Archaeology*, Vol. I. (B. U. Nayak and N.C. GhoshEds): 69-79. New Delhi: Aditya Prakashan.
- Nath, A. 1998. *Further Excavations at Pauni* 1994. New Delhi: Archaeological Survey of India.

- Nath, A. 2002. Excavations at Pachkhedi: A Megalithic Habitation Site, *Puratattva* 32: 81- 88.
- Pearse, G. G. 1869. Notes on the Excavation of a Large Raised Stones Circles or Barrow near the Village off Wurregaon, One Mile from the Military Station of Kamptee, Central Provinces of India, *Ethnological Society of London*, Vol. 1, no. 3: 207-17.
- Rao, V. V. 1973. Skeletal Remains from Mahurjhari, in *Mahurjhari Excavations (1970-72)* (Ed. S. B. Deo), pp. 63-76. Nagpur: Nagpur University.
- Rivett - Carnac J. H. 1879. Prehistoric remains in Central India, *Journal of Royal Asiatic Society of Bengal* XLVIII: 1-16.
- Sarkar, S.S. 1960. Human Skeletal Remains from Brahmagiri, *Bulletin of Department of Anthropology, Calcutta* 11 (1): 5-26.
- Sawant Reshma 2010. Review of Archaeological Investigations in the Protohistoric and Historical Archaeology of Vidarbha, *Man and Environment* XXXV (2): 45-65
- Sawant, Reshma 2006. *Vidarbha: An Archaeo – Historical Approach*, PhD Thesis submitted to Deccan College Post Graduate and Research Institute, Pune.
- Sawant, Reshma 2012. *Historical Archaeology of Vidarbha*, New Delhi: Aryan Books Ltd and IGRMS (Bhopal)
- Sontakke Virag 2014. Early Iron Age of the Upper Wainganga valley with special reference to Gondia District, Ph.D. submitted to the Deccan College Post Graduate and Research Institute, Pune.
- Taylor, Meadows 1841. (reprint 1941). *Megaliths Tombs and other Ancient Remains in the Deccan*, Archaeological Department, Hyderabad State.
- Taylor, Meadows 1851. Ancient Remains at the Village of Jiwargi near Ferozabad on the Bhima, *Journal of Bombay Branch of Royal Asiatic Society*, Vol. III: 179-193.
- Thakuria, Tilok. 2010. *Society and Economy during Early Iron Age and Early Historic Period in Deccan with Special Reference to Beads (1000 BC to 500 AD.)* Unpublished Ph.D. Thesis, Deccan College Post Graduate and Research Institute Pune.
- Thakuria, Tilok, R.K. Mohanty and P.P. Joglekar (in press). Craft Specialisation and Socio-economic Behaviour of the Megalithic People of Vidarbha, Maharashtra, *Megalithic Traditions in India (Archaeology and Ethnography)* (Eds. K.K. Basa and R.K. Mohanty), Bhopla: IGRMS
- Thakuria, Tilok, R.K. Mohanty and Shantanu Vaidya 2012. *Rev. Stephen Hislop and Antiquity of Archaeological Investigation in Maharashtra*, at the 40th Annual Conference of ISPQS at Baroda, Gujarat, Nov'2012
- Thomas P.K. 1992a. Horse Remains from Raipur, *Megalithic Raipur (1985-1990)* (G.B Deglurkar and G.P. Lad Eds.): 133-136. Pune: Deccan College.
- Thomas, P.K. 1992b. Faunal Background of the Iron Age Culture of Western India, *Man and Environment* XVII (2): 75-79.
- Thomas, P.K. 1993. Faunal Remains from the Megalithic site at Bhagimohari, Maharashtra *Man and Environment* XVIII (1): 105-118.
- Thomas, P.K. 1995. Subsistence and Burial Practices Based on Animal Remains at Khairwada, *Bulletin of Deccan College Post Graduate and Research Institute*.

- Vaidya, Shantanu and PankajGoyal. 2012. Man and Horses in the Megalithic Culture of Vidarbha in *Kosala* 5: 238-248
- VaidyaShantanu and R.K. Mohanty. 2010. *Recent Explorations in Nagpur District*, paper presented at the 38th Annual Conference of the ISPQS, IAS and IHCS in Lucknow, 28-30 December 2010.
- VaidyaShantanu and R.K. Mohanty. 2012. *A new look at the Settlement pattern of the Early Iron Age and Early Historic period of Nagpur and Wardha Districts with special reference to Recent explorations*, presented at The Archaeology of Central India. Held at Bhopal on 13-14 October 2012 by Archaeological Survey of India.
- VaidyaShantanu2014. *Emergence of the Complex Society and Urbanisation During the Early Iron Age and Early Historic Period of Nagpur and Wardha Districts of Vidarbha*, Ph.D. submitted to the Deccan College Post Graduate and Research Institute, Pune.
- Walimbe, S.R. 1987-88. Human Skeleton Remains from Megalithic Vidarbha, *Puratattva* 18: 67-71.
- Walimbe, S.R. 1992. Human Skeletal Evidence, *Megalithic Raipur (1985-1990)* (Eds. G.B. Deglurkar and G. Lad), pp 125-132, Pune: Deccan College.
- Wheeler, R.E.M. 1948. Bramhagiri and Chandravalli 1947: Megalithic and other Cultures in Citaldurg District, Mysore State, *Ancient India* 4: 181-308.