SYNOPSIS

The proposed research work entitled **Socio-cultural traits of Vidarbhan Megaliths based on Archaeo-metallurgical and Ethnographic Studies** is an attempt to define the societal formations of the Megalithic society of Vidarbha. This is achieved through the study of various Iron tools (Typo- Technologically) and its associated archaeological contexts by considering Naikund, (21° 21' 58.23" N 79° 11' 36.66" E), located 42 kms away from Nagpur, as the type site, followed by incorporating the data from other megalithic sites falling within the same geographical zone. The methods of study adopted involves a comparative analysis of the material assemblage excavated from all the megalithic sites both burial and habitation within this region. An inter-site and intra-site comparative analysis is attempted to assess the degree of specialisation within specific activity areas of the megalithic society. Approximately 1000 of iron objects (complete, incomplete) have been unearthed from the megaliths in Vidarbha. Its metallographic analysis has brought to light the different smithery methods adopted by them. A steady development from casting to steeling is observed within the entire assemblage of tools.

The Iron Age in the region of Vidarbha is characterised by burials of sepulchral nature. Megalithic culture as understood in its nascent state of perception was mostly constituted by sepulchral burials with human remains interred along with various offerings, amongst which metal objects dominate the assemblage. With the appearance of corresponding habitational remains, co-relation with the burial remains initiated a new sphere of study. The present study will analyse the relation of metal assemblage between the habitation and burials within the context of Vidarbhan Megaliths.

The chronology of 'Iron Age' and its related cultural remains differs from region to region within the sub-continent. Earlier studies like (*Tewari, 2003*) have dated the beginnings of Iron Age to the early part of the second millennium B.C. Within the Megalithic burials, along with the deceased a large amount of burial goods and offerings are incorporated. Till date the number of burial sites recorded within the Megalithic context exceeds the number of habitational sites. Vidarbha is a typical zone for studying socio-cultural affinities in Megalithic Cultural context, since the

region has evidence of habitation alongwith the burials and we do have ethnographic parrallels. The term '*Socio-cultural affinity'* denotes a society marked by a distinctive way of living built by a group of people. The culture of the society is based on a body of shared knowledge and values of a society. The megalithic culture at Vidarbha region is characterized by several satellite settlements and they are connected by the similarity in tool types, pottery and burial practices. The present study is aimed at examining the socio- cultural affinities of the Vidarbhan Megalithic culture based on metallographic studies of iron artefacts in association with other cultural or archaeological assemblages. Thus social structure, inbuilt social customs and cultural traits of the community could be extrapolated from this sample space.

As far as the study of Megalithic Culture is concerned, Vidarbha and South India are the best explored and excavated regions of India. During the Pre-Independence era Rivett-Carnac (1867) and G.G Pearse reported "fifty-four cairns, a smaller group of ten was situated 300 m. away, and there were other nearby clusters to the north and south. More isolated burials were noticed within a radius of several kilo- metre" (*Leshnik, 1970*) reported at Junapani , 9 kms away from Nagpur City, where the association of ferrous material with megaliths was established. However during the course of exploration by the researcher it was observed that the burials were not isolated and were located next to each other and some were even overlapping each other. The magnificent nature of these megaliths were first noted from the writings of Rivett-Carnac who, reported the diameter of the cairns ranged between 7-19 m (*Carnac,1879*). Subsequently these were also the first megaliths to be excavated by Lyell, Blandford and Rivett-Carnac (*Leshnik, 1970*). However, the megalithic sites falling on the southern side of river Tapi, were more widely studied and recorded. Meadows Taylor reported megaliths from the Shorapur Doab region in Karnataka, Taylor had first noticed the megaliths in the year 1850, "near the village of Rajunkolloor, in the principality of *Shorapoor* (an independent native state, situated between the Bheema and Krishna Rivers, immediately above their junction)" *(1873).* Subsequently the '*cromlechs*' later identified as dolmens were excavated but no ferrous material was found associated with these megaliths. It was Mortimer Wheeler's excavation of 1947 at Brahmagiri which placed Megalithic culture in a stratified context. Based on the material remains Wheeler dated this culture to around 2nd Century BC to about middle of 1st Century AD *(Wheeler, 1948).* However prior

to Brahmagiri , Alexander Rea's work on the megaliths of the Adichanallur and Perumbair region had given a great impetus to the study of South Indian Megaliths (*Rea,1915*). In the Post-Independence era, with the setting up of departments in various universities dedicated to archaeological studies, megaliths in the Vidarbha region came under the radar of survey. This led to the excavations of sites like Takalghat-Khapa (*Deo, 1968-69*), Mahurjhari (*Deo, 1970-72*), Naikund (*Deo and Jamkhedkar, 1978-80*), Raipur Hingna (*Deglurkar and Lad, 1985-90*), Dhamna Linga, Dhaulameti, Vyahad (*Ismail,2009*) etc. With the discovery of Iron smelting furnace at the site of Naikund, the mystery about the introduction of Iron technology in the Indian sub continent was on the verge of being resolved.

The decade prior to this discovery, various scholars ascribed various theories about the diffusion of iron technology. The first and foremost theory is of the indigenous origin, Banerjee (*1965*) ascribed it to the authors of the Painted Grey Ware Culture, Black-and red Ware culture was also considered as the introducers of iron *(Subrahmanyam, 1966*). The second theory that gained importance was diffusion through migration. Under the heading of migration origin, the Aryan invasion was considered the primary reason for the introduction of iron (*Lallanji Gopal, 1960*) followed by Allchin and Allchin (*1968*) propounding the theory of Foreign origin of Iron Technology. According to him, Asia Minor was the nucleus of Iron technology and by the mode of travellers it spread to the Indian sub-continent. Extensive studies have been done on the distribution of burials, understanding the role of landscape, mortuary practices, tool typology, technology pertaining to bead manufacturing, subsistence economy and trade networks (Deo, 1970, 1973a, 1973b, Joshi 1993). However metallurgical studies undertaken are limited in nature. Reviews of earlier works indicate that most of the studies were a mere typological analysis of material culture; Joshi (1993) has superimposed models based on data from different geographical regions. However these studies were mainly based on the archaeological occurrences, typological classification and no detailed study dealing with socio-economic aspects of the society where results of the scientific analysis of Iron Age implements are incorporated. This is attempted within the context of Vidarbha Megaliths.

As the Early Iron Age Culture of Vidarbha have the benefit of very distinctive characteristics of its own in comparison to the South-Indian megalithic culture and to understand the attributes of the culture a holistic study is deemed necessary. However the holistic study would be incomplete without scientific analysis of all metal products and by- products (slag and other wastes) and the relationship with the society and its impact on culture. The morphometric analysis was done on the entire iron assemblage and selected representative samples were subjected to chemical analysis. The results of the chemical analysis have brought to light the high ferric content of the samples proving the excellence in smelting activity by the society. The typological classification of the artefacts also help us to segregate the different labour groups in the society and the role played by them within the social system, for example the number of spears and javelins found from the sites primarily denotes warring activity.

Major Objectives of the Research:

- To understand the processes involved in the manufacturing of iron implements and how the processes had evolved and expanded.
- To understand the manner of working with the metal to produce a variety of materials.
- To understand the functional values from use wear analysis of the implements.
- To understand the functional values of household iron objects on the basis of their shape, context of the find as well as similar objects used by the present day ethnic society inhabiting Vidarbha.
- To understand the level of economic prosperity on the basis of the purity of the metal content.
- To understand the Iron Technology and its relation with societal formations in Vidarbha region.

To achieve the above objectives the iron artefacts were typo-technologically studied and a degree of standardisation was visible suggesting the probable existence of a centralised administrative system. The microscopic analysis of the artefacts suggests that artefacts from all the sites do not show the steeling technique. Artefacts from Naikund prove that casting technique was commonly used, therefore the assemblage

within the megalithic society suggest the gradual development from the nascent of technology to the most advanced stage.

The following write up shows division of the thesis in to six chapters. They are:

Chapter I Introduction

This chapter will outline the significance of the research work. The first half of the chapter forms the theoretical background of the thesis. It deals with the concepts of Early Iron Age and megalithism practised within the region of Vidarbha. Before constructing the societal formations prevalent during the megalithic period, the features and divisions within a 'society' will be defined. Finally by implementing the societal theories, the cultural processes within the society as reflected through its archaeological records will be identified.

Finally the chapter will sum up by defining the significance of understanding the socio-cultural stratification of the Vidarbhan Megalithic Society.

Chapter II Study Area and Its Cultural Facets

This chapter deals with the region of research. It deals with the region of research. It deals with the region of Vidarbha situated in Maharashtra. This section deals with the Location, Physiology, Topography and Drainage System.

This chapter is further divided into the cultural dimensions of Vidarbha. It deals with the archaeological cultural sequences and historical and literary references of this region.

Chapter III Materials and Methods

This chapter deals with the methods adopted for the study. The chapter comprises of the nature of the samples, methods and aims adopted for sampling. The methods for analysis have been sub-divided into five segments. They are Typological analysis, Morphometric analysis, Wet Chemical Analysis, Micro-structural Analysis and Ethnographic Survey. While dealing with each method individually, the constraints while implementing the techniques have been also discussed.

Chapter IV Results

The results chapter deals with the analysis and results in three parts. The first segment of the chapter deals with the typological as well as morphometric analysis, the artefacts types are grouped on the basis of utility and sub-groups are also made based on the differences in morphology within the same type. Second segment deals with the scientific analysis, the selected samples underwent microstructural, EDAX and Wet Chemical Analysis. The data recorded are grouped based on the elements recorded. The 3rd segment deals with the ethnographic survey in and around Vidarbha region.

Chapter V Discussion

This chapter talks about the inferences derived from the results mentioned in the earlier chapter.

The first segment will deal with the technological know-how of the Megalithic iron smithers. Based on the micro-structures the practised smithery process and based on the Wet Chemical and EDAX analysis the prevalent smithery process has been discussed.

The second segment deals with the probable trade nexus which existed within the Vidarbhan Megalithic Society. This inference is drawn from the typological and morphometric analysis.

The last segment of the chapter deals with the social stratification amongst the present day Gondi tribe residing in Bhamdagarh district of Gadchiroli. This tribe continues the practice of building megaliths in memory of their dead clansmen and they practice iron working as livelihood. This tribe throws light on the probable continuity of megalithic culture within the same cultural and geographical zone.

Chapter VI Conclusion

In this chapter, the researcher will conclude the study by validating the concept of standardisation and by constructing a probable model of the trade nexus between the producing centre and the utilization centres. Eventually this will lead to the final

evaluation of a probable centralised administrative unit within the Early Iron Age Megalithic Society.

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