Social Hierarchy and Mortuary Variability: The Iron Age Culture of Peninsular India with Special Reference to Kerala

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***Abstract**: The concept of Iron Age in southern India is reviewed here based on recently discovered archaeological sites in Kerala. Sites provide vital clues for iron-making, iron-working and lithic tools. It shows that Iron Age covers a wide chronological bracket from late prehistoric to early historic periods. There is a marked change from prehistoric social formations with the introduction of iron. Its two phases, Early Iron Age and Late Iron Age can be broadly identified with the Megalithic and Early Historic periods respectively. Textual and material evidences indicate that during Late Iron Age the peninsular Indian coast participated in Indian Ocean trade network and urban sites in middle Ganga valley and peninsular India seem to have interacted regularly with each other. Iron technology fuelled a visible change in the cultural past of Kerala. The megalithic mortuary practices are indicators of social variability during Iron Age and maritime trade changed the social makeup in coastal Kerala during Late Iron Age.*

Keywords: Social Hierarchy, Mortuary Variability, Megalithic Culture, Muziris, Malabar, Indian Ocean Trade, Urbanism

Introduction

Organizational changes are introduced as societies make technological advances. Since the 1960s, the origin and impact of Iron in India have been studied and the term 'Iron Age' began to emerge in archaeological and historical discourses (Banerjee, 1965). Scholars who studied the topic thereafter have been in general agreement that, iron technology was an indigenous invention in India and that its growth was polycentric.

The beginnings of Iron Age have been pushed back to the closing centuries of the second millennium BCE. The term 'Iron Age' began to replace 'Megalithic Culture' in the 1990s though these two terms have not been not adequately explained most often. The Megalithic culture is indicated by the tradition of erecting megaliths or monuments both big and small and this term continues to be popularly used. The megalithic monuments in Kerala were considered prehistoric, in nineteenth century.

However, recent studies have shown that most of the megaliths found in Kerala are not prehistoric but belong to the Iron Age that has been broadly divided into two phases; Early Iron Age and Late Iron Age. Iron-using as well as lithic-using megalithic cultures coexisted in the Early Iron Age. Early Historic phase of urbanization emerged during the Late Iron Age in south India.

Figure 1: Agrarian and other Tools from Niramakulam (Courtesy: Ambili)

Iron Technology and Social Hierarchy

The introduction of iron has played a significant role in social change (Chakrabarti 1994, Sahi 2006). The term 'megalith' denotes a landscape with monuments visible on the landscape erected in memory of the dead. The two broad implications of iron technology are; a) iron-making (production through the process of smelting) and b) iron-working (making of tools). . Iron fuelled a visible change in the various facets of culture and hence, megalithic cultures belong to the Iron Age. It was the period of marked development in the field of metal technology and ceramic technology. The presence of specialized artisanal groups such as blacksmiths suggest expansion or agriculture, surplus production and craft specialization. Objects made of iron occur frequently in burials and include tools and artifacts with agrarian, artisanal, defense and multiple purposes (Figure 1). The impact of iron is well known from sites in the Ganga valley where the introduction of iron technology led to expansion of agriculture, demographic increase, emergence of a hierarchical society and the rise of reforming religions (Srimali 2011: ix).

Both the classical Tamil texts (dated between fifth century BCE and fifth century CE), and classical Greek and Latin texts (dated between second century BCE and second century CE) mention iron-working in south India. The earliest archaeological sites in Periyar basin can be dated to the Megalithic culture. The most common monument types are urn burials and cists (Chedambath 1998, Peter 2002, Paul 2004: 86-7). Recently, Neolithic celts and polishing stones have been retrieved from the dry river beds and the beds of Periyar and its tributaries such as Kottamamthodu.

The corpus of works in classical Tamil known collectively as *Sangam or Cankam* deal with two broad themes; *akam* and *puram*. The *puram* poems in *Patinenkilkkanakku* or eighteen anthologies give us details of iron-working such as the use of iron-tipped ploughs, iron-tipped digging sticks and sickles made of iron. Wet-rice cultivation was prevalent in both the *vanpulam* and *menpulam* tracts (Gurukkal 2014). Across peninsular India, there are archaeological evidences the use of iron-tipped plough. A model plough in cast iron was unearthed from a Cist in Angamaly also in the Periyar basin in the 1980s.

With regard to social hierarchy, the early historic heroic poetics of Tamilakam suggest a composite culture, emergence of chiefdom polity and co-existence of literate and non-literate societies (Gurukkal 1995, Champakalakshmi 1996, Abraham 2002). The numerous megalithic sites in Kerala and their associated artifacts particularly ceramics and beads denote social complexity and coexistence of different modes of production. The different types of monuments and variability in mortuary practices including non-local artifacts among funerary goods suggest social hierarchy. Indicators of social change during Iron Age in Central Kerala are:

- Long-distance interaction
- Expansion of agriculture
- Expansion of population
- Emergence of a hierarchical society
- Emergence of new religions

Muziris and Beyond: Maritime Trade and Urbanism

There are ample evidences to suggest that Malabar Coast or the coast of Kerala had participated in maritime trade from c.200 BCE onwards. This is indicated by the presence of non-local ceramics such as the Mediterranean ware amphorae found recently at Pattanam in Periyar River basin Cherian et al. 2009). Mediterranean and Chinese wares have been reported from a couple of other sites in Kerala such as Vizhinjam. There is evidence for non-local trade from the excavated sites in Kaveri and Vaigai basins in Tamil Nadu, in Tungabhadra basin of Karnataka as well as in the Periyar river basin of Kerala. Muziris is a prominent port mentioned in Greek and Roman accounts like the *Periplus Maris Erythraei*. In the accounts of both Pliny and Ptolemy in first century CE, Muziris in Periyar basin figures as a prominent port. Pepper was an important crop during Iron Age. Pepper and other spices were

gathered from the forests and were exported Maritime trade was certainly not a homogenous system (Ray 2009: 35). Tamil-Brahmi inscribed potsherds (Figure 2) have been found in sites in Persian Gulf and Egypt. Pepper from Malabar has been found at Berenike in Egypt on the Red sea coast (Sidebotham 2006: 60).

Figure 2: Tamil Brahmi Inscribed Pottery from Pattanam (Courtesy: KCHR 2010)

Coastal landforms have dramatically affected the distribution and preservation of archaeological sites in the coastal regions (Jardine and Morrison 1976: 175). Due to floods and change in course of rivers as a result of various fluvial activities locating ancient ports is challenging. Besides, marine activities such as sea level changes, also made locating ports along the old coastlines extremely difficult. Besides, geological and geomorphological processes were active in Kerala during the late Quaternary. During this period, sand ridges were formed parallel to the coast in central Kerala by ca. 5000-3000 BP (Paul 2004: 83).

Recently, Pattanam in Periyar basin has yielded conclusive evidence for both Early and Late Iron Age or Iron Age and Early Historic periods. Excavations have revealed settlement remains and artifacts of both these periods for the first time in a stratigraphical context (Selvakumar et.al 2005: 57, Cherian et.al 2007). Apart from iron

tools; coins, jewellery, ritual artifacts and pottery have been found in association with the Iron Age burials in Kerala. Coins are indicators of trade and urbanism. Punch Marked coins were found in a burial urn at Eyyal while twelve sites with Roman coins have been found in Kerala. The Arabian Sea had a tremendous impact on the native society of south India in the Early Historic period. The *yavanas* coming in their ships laden with gold and returning loaded with black pepper and other exotic spices are mentioned frequently in both *Akananuru* and *Purananuru* poems. Tamil literature also speaks of social groups such as traders, farmers and fishermen with sea-going vessels.

Sites

In 2002, 628 megalithic sites were reported from Kerala (Peter 2002:163). In 2009, it increased to 866 (Historical Atlas of South India Survey). Since then, many more sites have been reported particularly under the Megalithic Gazetteer Project and the number of sites have gone beyond 1000 although quite a few sites are denoted by a single monument. Forty Iron Age sites have been excavated in Kerala of which around twenty were excavated in the past two decades. The Iron Age sites are found in the three zones in Kerala; Southern Zone, Central Zone and Northern Zone. The size of sites and the type of burials vary (Figure 3).

K. Paddayya classifies Iron Age burials in Peninsular India into eight or ten major types (2006:17), while Peter classified the Iron Age burials in Kerala into six major types based on material, technology and morphological features (2002: 47, 2014: 159). These major types are as following:

1a Cist
1b Dolmen
1c Dolmenoid Cist
2a Hat Stone
2b Hood Stone
3 Menhir
4 Umbrella Stone
5a Rock Cut Cave with central opening
5b Rock Cut Cave without central opening
6 Urn (legged and pyriform)

Scholars have noticed changes in burial types and new styles of burial architecture in regions within peninsular India during the Iron Age (Figures 4 and 5). These are indicators of mortuary variability. New forms of treating the dead appeared during the Early Iron Age. Charred human bones have been found in many sites in Kerala indicating secondary burial of select bones after cremation. Bones are absent in many sites which could be also due to poor collection strategies whereby bones were not recovered from sites. This is probably because most sites were accidental discoveries and burials were found in a highly-disturbed conditions due to continued human occupation.

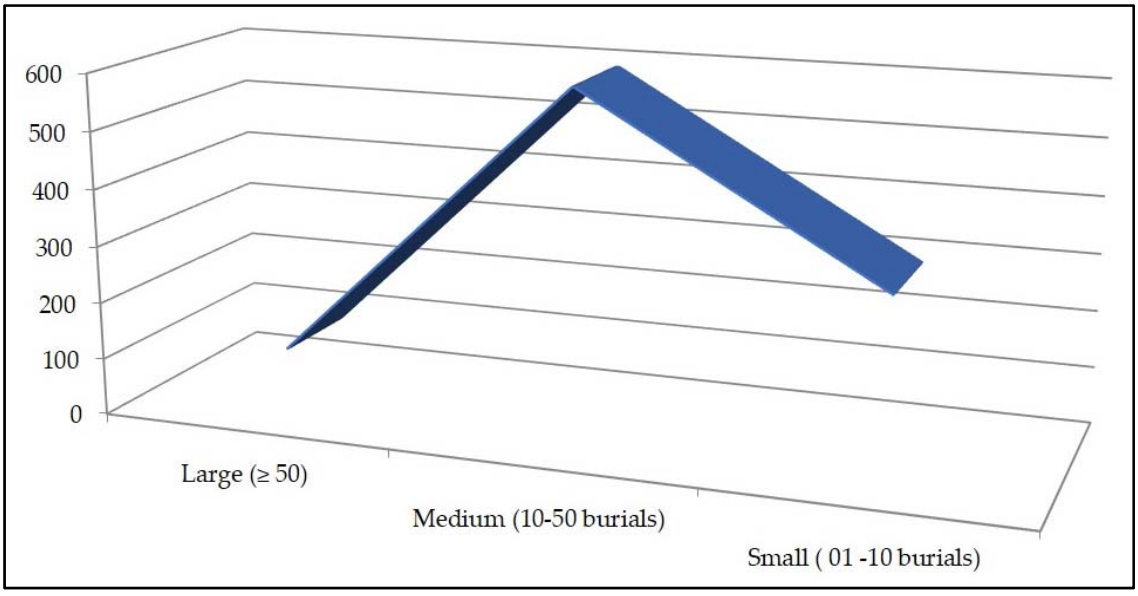

Figure 3: Intra-site Size Variability in Kerala during the Iron Age

Figure 4: Rock Cut Cave, Peelikode, Kasaragod (Courtesy: IGNCA 2016)

Figure 5: Umbrella Stone at Cherumanangad, Thrissur (c.f. Abhayan 2018)

Ceramics

Ceramic typology of the Iron Age in Kerala is well established from various sites excavated since 1820s. Ceramics of Early Iron Age in Kerala are grouped into four major wares based on ware, fabric and production techniques. These are; red ware, black ware, black and red ware and russet coasted painted ware. On the ceramics of Late Iron Age there is substantial data from Vizhinjam in Thiruvananthapuram district and Pattanam in Ernakulam district. Both sites are adjacent to the coast and are historically known to have functioned as major ports. A significant aspect of Late Iron Age ceramic typology is the presence of non-local wares such as amphora, torpedo jars and fine rouletted ware.

Stone Beads

Stone beads have been reported from thirty two Iron Age sites in Kerala. Machad in Trissur district had 147 beads mostly in stone with a few in terracotta and glass (Mehta and George 1978). In fact, the largest single cache of 136 stone beads were found inside a burial Urn in Kunnukara in the Periyar basin during trial excavations in 1996 (Peter and Uesugi in press). Semi-precious stone beads are found in approximately 10 % of the Iron Age burials in Kerala. These are made of carnelian, quartz, chalcedony, agate, jasper and feldspar (Abhayan 2018: 175). These beads are non- local and must have come through some form of exchange during Early Iron Age. The nearest source of

beryl and quartz is the Kangayam mines in Karur region in Tamil Nadu. The possible source of agate and carnelian is the Khambhat region in Gujarat which was exploited since the Indus Civilization. The carnelian beads with etched designs are similar to those found in other parts of peninsular India and have been dated to both Early Iron Age and Late Iron Age. The etched beads from Kunnukara in Periyar basin, Niramakulam in Pathanamthitta (Figure 6) and sites in Palakkad and Malapuram in Bharathapuzha basin are also similar to each other suggesting their contemporaneity.

Figure 6: Carnelian beads from Niramakulam (Courtesy: Ambili)

Spatial proximity to resource was not a major criterion as far as the distribution of beads is concerned. During the early historic period, the Indo-Pacific glass beads seem to have travelled long distances and are found in Kerala as well. Glass beads are not found in association with the Iron Age burials in Kerala and Machad is the only exception. However, glass and stone beads are found in the early historic and early medieval period in sites with maritime linkages.

This suggests that non-local goods were entering the local market during the Iron Age. Hence, trade is a major factor and non-local aspects can be taken as indicators of trade. In each site, beads are found only in one or two monuments suggesting that certain members of the society in whose memory these monuments were erected, had some sort of differential social status or differential access to non-local goods.

Landscape Studies

The modes of treating the dead, rituals, funerary goods and burial architecture and past human-nature interactions together are covered under the ambit of landscape archaeology. For the Iron Age societies, landscape was both sacred and profane. In comparison to monuments, the Iron Age settlements and landscape have been largely ignored in previous studies. Landscape studies by C. Tilley and others and the Post-Processual school have attempted studies of landscape in Iron Age Europe and have given new interpretations to the Iron Age burial monuments as geographic markers or as signifiers or as astronomical observatories.

As vast majority of the Iron Age sites in Kerala are burial sites most of the discussions on Iron Age are based on the archaeology of death. All burials are not meant to be visible. Ethnographic studies of the burial practices of the Malarayan tribe in Pinavoorkudi in Periyar basin suggest that, burial ground was separated from the settlement by a stream and that they deliberately do not leave any visible marker on the surface. Instead, they try to conceal the burials or make them appear conspicuous. The *aintinai* concept in Sangam works have been applied to the study of landscape during Iron Age in south India.

Iron Age: Paradigm Shifts in Chronology

The megalithic culture represents the beginning of habitation by iron-using people in Kerala (Abhayan 2018: 183). With regard to chronology, the Megalithic culture of peninsular India has been assigned to varying temporal frames by the previous scholars. In the nineteenth and early twentieth centuries the Megalithic culture was considered as prehistoric. With the presence of iron tools in Megaliths this culture emerged out of prehistory and moved to the historic framework. Since the 1940s, after considerable typology-classificatory studies of the megalithic monuments and relative dating of stone beads, ceramics and iron tools found in the burials, the Megalithic culture was considered as preceding and sometimes coeval with the Early Historic period. An exception to this is the practice of living Megalithism or the practice of erecting megaliths and following old burial rites. This was first noticed in parts of central and north-eastern India was later noticed in southern India including the highlands of Kerala (Mackenzie, Aiyar 1967).

Table 1: Relative Dates from Iron Age Sites in Kerala

Name of the Site	Time Range	References
Porkalam	c. 300 BCE to c. 300 CE	Thapar 1952
Cochin Caves	c. 300 BCE to c. 300 CE	Sharma 1956
Cherumanangad	c. 300 BCE to c. 300 CE	IAR 1989-90
Machad and Pazhayannur	c. 200 BCE to c. 200 CE	Mehta and George 1978

Since the 1990s, a couple of radiocarbon dates from the excavated Iron Age sites in Kerala have evinced a renewed interest in the chronology. The available radiocarbon dates from Mangadu (Satyamurthy 1992), Niramakulam (Ambili 2017), Anakkara/ Nazranikunnu (Paul et al. 2014), Oliyani/Kunnonni (Rajendran 2001, 2005), Nannangadikunnu (Abhayan et al. 2018.), Kuttikol (Uesugi et al. 2018) and Pattanam (Cherian et.al 2007) leads to a paradigm shift in the chronological frameworks that are currently applied. Three of these dates range between tenth and fifteenth centuries CE. The earliest sample belonging to ninth century BCE is from Mangadu (Table 1). A detailed table of radio carbon dates for Megalithic period in Kerala is provided by G. Abhayan (2018: 176). If the three uncalibrated dates and the possible reopening of the urn at Nannangadikunnu being suggested by the excavators as the reason for the late dates of Neeramakulam are discounted, the Iron Age in Kerala can be dated from ninth century BCE to third century CE. The Early Iron Age phase is from ninth century BCE

to fifth century BCE. The Late Iron Age phase corresponds well with the early historic period in south India revised to fifth century BCE to fifth century CE (previously it was from third c BCE to third century CE) with the recently available dates from Pattanam, Kodumanal, Poruntal and Alagankulam (Rajan 2013: 279-285).

Discussion

Iron was used on a wider scale in Kerala during Megalithic culture primarily in the form of agrarian and artisanal tools. Iron artifacts occur more frequently than other antiquities like beads in the burials. Like the ceramics, iron seems to have been locally made. From a couple of sites, slag, iron ingots and other evidences of iron production have been found. These indicate local production or native iron-working and access to indigenous technology of smelting. The occurrence of iron tools in many burials indicate diffusion of iron-working artisans and its traditional knowledge in cultural zones within Kerala. This presupposes networks through which both iron tools and other goods might have been transacted. Hence, there is evidence for the twin aspects of Iron Age in Kerala- use of iron tools and diffusion of iron technology or iron-working and iron-making. These must have been the results of prolonged processes. This could explain the long period of Iron Age in Kerala and also its impact on society and economy.

Similarly, the introduction of iron brought major changes to south India. Trade was active during this period got intensified during Later Iron Age. There was a concomitant revival of urbanism and crafts during the early medieval period. Brahmanism, Buddhism and Jainism coexisted in Kerala at least during the early medieval period as known from the inscriptions. Inscriptions such as Tarisapally Copper Plate establish the presence of Jews and Christians by ninth century CE.

Among the most striking features of Iron Age in Kerala were expanding agricultural production capable of supporting a larger population, the earliest evidence of sedentarism, expansion of small settlements and their merger into larger political units, varied use of the landscape and the presence of burial sites across the landscape.

Though the antiquity of iron technology is well known, recent studies push the antiquity of ultra-high carbon steel to the Iron Age (Rajan *et.al*. 2017). Though Sharada Srinivasan identified Kodumanal and Kadebakele as high-carbon steel production centres with a secure time range of 880-440 BCE, its introduction in other parts of southern India is yet to be clearly established (Srinivasan 2009: 116-21, Rajan et.al. 2017). In the Greek and Latin texts it is mentioned that steel was manufactured and exported from ports in southern India during first century CE (Schoff 1912).

'Megalithic Culture' is a more dynamic concept while 'Iron Age' is a more inclusive term that helps us to understand the processes of social change. These two terms reflect differing approaches to death and its commemoration in past human societies. One privileges the negotiation of power relationships while the other approach tries to

see the importance of personal and emotional responses to bereavement and mortality (Tarlow 1997). The regional and sub-regional types of monuments indicate the use of iron in construction and in the forms of production, ethnic diversity and economic differentiation all being indicators of social hierarchy.

During the Late Iron Age we get evidence for regular maritime contacts, trade and urbanism. What emerges from the Sangam anthology is already discussed. From the *Periplus of the Erythraen Sea*, accounts of the Roman Pliny the Elder and *Muziris Papyrus* it is known that spices shipped from Malabar Coast fetched a high price overseas and its demand increased concomitantly with better maritime links. These economic advantages could have resulted in clearing of forests for cultivation, expansion of human settlements to forest areas and increase in population.

Any lasting memorial will assure lasting resources. The megalithic burials reflect cultural preferences of Iron Age societies for selective commemoration rather than patterns of actual mortality. The silent majority did not leave behind inscriptions or tombs. Their humble household have vanished and they rarely figured in texts. What a society seems to do in its leisure time is an important indication of how it seeks to organize the world (Kelly 2006: 83).

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