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ETHNO-ARCHAEOLOGY OF MEITEI'S: SOME ISSUES

Introduction

Recent debate in Ethno - archaeological study is a very serious matter for its existence. Gosselain (2016) has lambasted about its methodology and procedure to collect the ethnographic data and its interpretation. Instead of giving any new approach to study ethno-archaeology he has opted out from this field. But author thinks it is one of the important branch of Archaeology, and its study should not be stopped. Ethno-archaeological research is one of the most powerful tools to help in recognizing the relationship between human behaviour and material culture. It is assumed that contemporary primitive societies represent examples of past stages of human culture (Gould 1968). Analogies between living societies and past societies can yield important information to construct realistic models of prehistoric societies and their functions. It is not only the recording of material remains but also the interpretation of them by quantitative analysis, sampling strategies and observations (London 2000). Therefore, this approach gives extremely valuable insight into prehistoric and proto-historic human behaviour. In this respect, ethno-archaeology makes a live link between human and their artefacts (David 1992a, b; Stiles 1977). This approach is not only used by archaeologists for the explanation of pottery, stone tools and architectural remains, but it is also useful for the reconstruction of cultural system.

Potsherd is not just an archaeological object, but it is the end-product of the interactions of raw material, culture and technology. Different types of ceramics reflect specific time period and place zones. It is assumed that minute study of potsherd offers considerable promise in achieving an understanding of site chronology, culture and trade patterns (Spier 1956; Stark 1998; Sutton and Yohe II 2003). Thus, in archaeological studies, pottery is generally used to build chronologies, identify style zones and explain migration of communities and interaction between regional levels. With the help of ceramic artefacts, household size, economic differentiation craft specialization social structure can also be reconstructed (Kramer 1985). Potsherds are not only useful to know about shape, size, raw material and production techniques, but they

also reflect potters taste and idea towards beauty and significance (Glassie 2000).

Many studies were conducted on the ceramic ethno-archaeology in Europe and Asia. German scholars expressed the greatest interest, following the early work of Gatt (1885a, b) who recorded the work of potters in Gaza. Einsler (1914) and Dalman (1902, 1971) produced the only systematic record of local crafts and industries. The excavator of Beth Shemesh described the work of Ramallah potters as 'very suggestive' in terms of understanding ancient pottery, (Grant 1931). Tufnell (1961) incorporated her observations of traditional potters of Saudi Arabia and the Levant. Crowfoot (1932, 1940, 1957) refers to local potters in her Samaria pottery publications, and Hankey (1968) studied and recorded local potters.

Ceramic ethno-archaeological studies have now become an established tradition in archaeological research and in the last 25 years it has seen a proliferation of research on a variety of topics. Throughout this period, reviewer of the field (Arnold 1988, 1998; Berns 1993; Arnold 2000; Costin 2000; Hegmon 2000; Kolb 1985) have explicitly considered contemporary pots and potters in terms of particular problems with which the archaeologists frequently struggle (Kramer 1985). Previous scholars have the ceramic ethno-archaeological literature that concentrate on a particular topic which is the (Graves 1981; Longacre 1981, 1983, 1991a, b, c; Longacre and Skibo 1994; Costin 2000; David and Kramer 2001; Kolb 1985) focus and on specific geographic regions (London 2000; MacEachern 1996; Sinopoli 1991a, b, 1988; Arnold 2000; Hegmon 2000; Krishnan 1997; Matson 1995; Rice 1996a, b; Tite 1999; Vandiver 2001).

Few ceramic ethno-archaeological studies have focused explicitly on constructing general interpretive models (David 1992a). Such research, however, may ultimately revitalize the ethnological study of material culture through the development of theory relating to technology and culture (David 1992b; Lemonnier 1986, 1992; Pfaffenberger 1992; van der Leeuw 1994; van der Leeuw and Papousek 1992; Arnold 1998; Kramer 1985). Solheim II conducted many studies on pottery concerned with Oceanian pottery manufacture in South-east Asia (Solheim 1952a, b, c, 1964a, b, 1965, 1968, 1974) and also published seven papers on pottery manufactured by specific potters (1952c, 1964a, b, 1967; Solheim and Arnold 1977; Solheim and Mansoben 1977; Solheim and Schuler 1963). Most of the reports focus on pottery in South-east Asia is with the decoration of pottery through the use of a carved or bound paddle to form and finish the pots (Colani 1931; Solheim 1952b). Many reports on pottery manufacture have been published including studies on Kampuchea (Biagini and Mourer 1971); Burma (Reith 1997); Thailand (Solheim 1964b); Laos (Solheim 1967); Taiwan (Chen 1959; Sung 1957); and the Philippines (Solheim 1952c, 1954; Solheim and Schuler 1963; Scheans 1965). Mei Mei Burke did a study of the variations found in the pottery

manufactured by one person over 2 months and of variations among different potters in the North-east Thai village (Burke 1970; Solheim 1984). Calder (1972) wrote her master's thesis for the University of Otago in New Zealand. Her research topic was 'to examine the breakage and distribution patterns of pottery within a village in North-east Thailand'. She adopted two types of methodology for her study. The first was the collection of ethnographic information to construct hypotheses about concerning the breakage and distribution patterns of pottery. The second was the use of archaeological procedures in the form of excavations to test these hypotheses (Calder 1972; Lefferts and Cort 1999).

In 1982, Griffin and Solheim II have reported about the pottery manufacturing by two ethnic groups in Yunnan. The first was an attempt to explain methods of ancient pottery manufacture through observation of present-day methods of the Kava people in Yunnan (Kaogu 1959). And the second was less ambitious and presented only a description of manufacture, including information on the different types of vessels made and their uses (Chang 1959). The most ambitious ethno-archaeological project concerned with pottery in Southern Asia was done by Daniel Scheans in the late 1960s. He spent about a year working in several locations in the Philippines to produce a descriptive survey of contemporary Filipino earthen wares and working with market potters only. He has studied not only the manufacture of the pottery but also the potters, the economics of pottery manufacture and the socio-cultural characteristics of the potters (Scheans 1977).

Between 1962 and 1965 Malti, Nagar of Deccan College, Poona carried out an ethnographic study of the rural population in several villages of Mewar with a view to find affinities, if any, between the second millennium B. C. Ahar chalcolithic culture and the present-day rural culture of the area (Nagar 1966, 1969, 1970, 1973, 1975a, b). The study was concentrated mainly in the villages around the site of Ahar near the city of Udaipur in Rajasthan. Some 50 sites of the Ahar Culture are known in the valleys of the Banas River and its tributaries. Ahar was a farming culture with copper metallurgy and very limited use of stone technology, plentiful use of painted and incised pottery, and stone and mud architecture. The population of the villages in this area comprises Bhils and several farming and Hindu castes. The economy of the people is based on agriculture and pastoralism, especially breeding of sheep and camels. The study revealed that there had been little change in house types, building materials, and techniques between the prehistoric culture and the present-day society. Some of the pottery forms and techniques of surface treatment like slipping and burnishing are common between prehistoric and present-day pottery. A most striking affinity is seen in some of the Ahar Culture pottery designs and present-day Bhil clothing designs. The most distinctive Ahar ceramic design is a black-and-red ware with white dotted and linear designs over a black background. Identical designs in white are found on

the *odhnis* (an unstitched long piece of printed cloth used for covering the upper part of the body) of Bhil women. The *odhnis* are also printed in black and red and carry printed designs in white on black borders. H. D. Sankalia was so impressed with this resemblance that he christened the 'pottery' as 'Bhil ware' (Griffin and Solheim II 1982).

Some ethno-archaeological researches have been undertaken in some parts of India by archaeologists and anthropologists to describe and explain the construction and development of ceramic production (Behura 1964, 1978; Saraswati and Behura 1966; Bose 1982; Ghosh and Bhattacharya 1997; Sinopoli 1988, Sinopoli 1991a; Kramer and Douglas 1992; Kramer 1994, 1997; Bala 1997). Bala (1997) has done valuable work with ceramic ethno-archaeological approach in middle Ganga plains. She has illustrated correlation of ethnography and archaeology to explain earthenware. Carol Kramer's ceramic ethno-archaeological studies in India are notable here. In 1980s, she conducted her ethno-archaeological research on Hindu and Muslim traditional earthenware potters of Jodhpur and Udaipur in the state of Rajasthan. She published her work in some research articles (1991, 1992, 1994) and a book entitled 'Pottery in Rajasthan: Ethno-archaeology in Two Indian Cities' (1997). Her work is significant to understand the ceramic production, distribution and interaction in pottery manufacturing communities and the style characteristics of ceramics in Rajasthan.

O. K. Singh has done never been done before extensive and systematic exploration and excavation in Prehistoric sites of Manipur. He has worked on Neolithic Culture of Manipur (Singh 1986, 1991, 1997a, b, 1998–99). Further, M. Manibabu Singh of Manipur University has studied the pottery of Andros of Manipur in (2005). These people are pottery making community. They make good number of technological wares of both plain and decorated varieties. A unique feature of the craft is that they make earthen vessels for their household purposes and not for disposal or distribution outside the community and none of their pottery is found in the market for sale.

Study Area

The village Thongjao is located at a distance of 67 kms from the state capital Imphal, North-eastern part of India. This village is one of the villages of Schedule Caste people located in the eastern part of Manipur under the Jurisdiction of Thoubal district (see Figure 1). This village is inhabited by the Meitei's. To the east of the village is Phandu hills range, to the west Pumlun pat, to the north Elangkangpokpi village and to the south Waikhong village (Singh 1994). The village Thongjao is divided into two parts, Mamang and Makha leikai.

The present study has been conducted during the season of 2015 and 2016. The author and his team has tried to do an ethno-archaeological study,

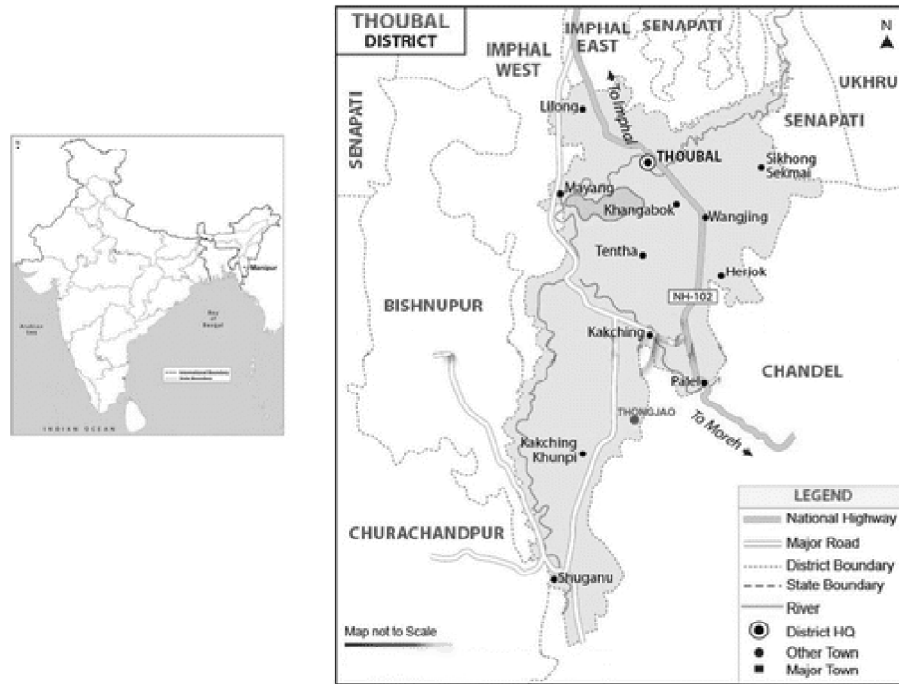


Figure 1: Map of Thoubal District showing the study area of Village Thongjao

which is based on extensive ethnographic data. In this paper the author has described the different stages of manufacture of the pottery with their techniques. The author also collected the data on folklore, which tell about the origin of the village and population.

Folklore Regarding Origin of the Village

According to the village elders, the first settlers prior to the establishment of this village were the inhabitants of Thongjaorok (a land of pottery), in Lamangdong under the Bishnupur district, Manipur. From the very beginning, their main occupation was pottery and sericulture. It is believed that the present Thongjao village was established during the reign of king Garibniwaj, (1709–1748). Their earlier settlement was near the Thongjaorok River at Lamangdong (present-day Bishnupur). The present name of the village is also taken from the Thongjaorok River. The present name of the village, Thongjao, is derived from the word 'ThongjaoLok' their native village which means the bridge and river (Samjetshabam 2008; Jhalajit 1992).

As narrated by the elders of Thongjao village, there was a salt manufacturing work recognized by the king of Waikhong. A metal pot cannot be used in salt production hence, the supply of earthen pot was essential for

the local salt industry. Since, they faced a problem of not having any nearby pot making village therefore they have to travel far to procure salt pans. To restrain their painful problem, the king managed a group of pot makers to settle there at the present-day Thongjao Village.

According to another slightly different version, a group of artisans from Thongjaorok practised this craft to earned a wage. Because of their trade of earthenware was on the salt producers of Waikhong village on one side, and earning for their subsistence by their counterpart on the other, they formed a separate village close to the Waikhong village. The two villages were on the two sides of a river called *Lai Turel*. But still today, their sacred place for the deity *Mayang Ngamba* remains on the bank of *Lai Turel* within the Waikhong termination (Imoba *et al.* 1999).

According to folk history their ancestors came from Lamangdong and settled for the first time at the place called Kairam Pungdong at Waikhong Laimanai, just adjacent to this present Thongjao village on its south. But in 1709–1748 due to unfavourable conditions and over population, they migrated to the present area, the Thongjao village (Samjetshabam 2008).

According to the elders of the village, it is also said that at the beginning only fifteen households of seventy-five people were settled in the area. Those original seventy-five people belonged to the following yumnaks (lineages):- Shamjetsabam, Leimapokpam, Kharaibam and Wangjam. Another reason for their settlement in this particular locality is the availability of a particular type of soil, locally called *leimu* (black clay), which is used in pot making.

Techniques and Methods of Pottery Manufacture

The clay (*Leitan*) used for pottery preparation is not found everywhere. Thongjao potters do not consider the upper layers of the soil to be suited for the manufacturing a pot. The villagers informed that after digging few layers, if the potters find a sort of glisten and soilless clay reddish in colour called *Leingang*, they use such type of clay for pottery. The first found reddish clay, *Leingang*, is used to make objects of rough and thick surfaces such as culvert, but the pot made out of it is brittle. Beneath the *Leingang*, is the black clay or locally called *Leimu* and it is the best clay. They believed such type of clay is found after digging 3 layers around 6 ft from the surface layer.

The villagers believe that those the families or the household where this type of clay has been found, are lucky people, because the families having such kind of possession or areas with this clay are like the owners of the goldmine. They can definitely live a better livelihood than the others. Most of such clays are commonly found in the southern part of the village an area known as Thongjao Makha. Most black clay *Leimu* that is used in making pottery is found only in Makha leikai. Thongjao sand (*Nungjreng*) is collected from the nearby river banks of *Lai Turel*, *Keirak Turel* and *Serou Turel*.

After collecting the fine black clay *Leimu* and sand, they are stored separately in a shed. If the *Leimu* is found to be hard, then it is kept mixed with water for someday. For the preparation of the paste, first the sand is sieved of the coarse materials over the ground and then spread out. The potter padded over it and later pounded with a long wooden pestle. This process is repeated until the clay and sand are suitably mixed for making pot. Thus, prepared paste is then rolled up in a bundle and stored in a shed.

Social Organization of Meitei's

In Manipur, pottery has been practiced from ancient time and Thongjao Village is one of them. Thongjao is a pottery making village, and pottery plays an important role in the socio-economic life of the village. Next to pottery, agriculture plays an important role in the economy of the village. Traditionally, this occupation has been exclusively practised the women folk. Men were tabooed in this craft. But nowadays few men have also started making pottery. Earlier, men folk could only assist in out door works such as quarrying and transporting materials. The Thongjao village belongs to the agrarian patriarchal society and they subsist on wet cultivation. However, there used to be the successful occupation of cultivating mulberry worms as well as silk weaving in the past. The reason for discontinuation of such activities was said to be the reduced production capacity of the mulberry cocoons and reduced silk threads which affected the technology of silk production. The Thongjao villagers were assigned the duty of paying silk cloths as an annual tribute to Manipur's king. Besides pottery, they were also good silk weavers.

In the hilly region, pottery making is a feminine work. For example in Oinam, a village located in the Senapati district where Mao tribals are settled pottery is made by female only, like other places of the valley. In hilly region, hunting is more important than pottery making. While, men go for hunting, women do all the domestic chores as well as the agricultural activities, which could be the reason that pottery making became a domain of women. However, in Nungbi, village of Tangkhul tribes at the Ukhrul district of Manipur, pottery making is central to men. This village is the only place where men traditionally make pottery. According to Imoba, in this village, the pottery is made after powdering the rocks and firing it in the deep jungle at the expense of uneconomic fuel ie. use of both dry and green branches and leaves. But still, women are not restricted from making pottery (Imoba *et al.* 1999).

Despite being an agricultural society, potters serve various need of society. They supply earthen pots for both ritual and ceremonial use. As mentioned by Imoba *et al.* (1999), Nungbi potters barter pots for their accommodation and food on their way to sell pots. This system of exchange is known as *Samset* (Imoba *et al.* 1999). But in Thongjao village, potters sell their goods for cash. Sometimes potters house is also a shop where goods can be purchased directly. Usually, pot making villages are situated in the remote

areas. Instead of potters being the direct sellers in the market, people from neighbouring villages and far away villages come to buy from potters' house at reasonable price but bargain is done with the buyer. Sometimes, some potters act as a buyer as they gather pots from other potters and go to the market along with their own product.

Division of labour at the village level seems to be quite prominent on two grounds. One is on the basis of one's sex, while the other is as per the age of the individual member. Men and women all participate in agricultural activities, fishing and fire wood collection. However, the nature of taking responsibilities in the above-mentioned three areas vary as per the differences in sex. Menfolk are involved more in heavy activities and specifically ploughing, tilting, levelling the fields, spraying pesticides, cutting and shaping the *louris* (bandhs/ridges created in between the field to compartmentalize the areas for proper plantation and cultivation), while womenfolk engage in plantation, weeding, cutting the harvest, collection of grains etc. It can be further divided based on the age factors. Children are allowed to help the parents in the household chores, specifically the girl child while the boys are expected to play, roam in and around the field to help the menfolk in agricultural activities. Middle-aged people are all expected to engage in active activities of earning and household level unlike the old aged who advise and spend time at ease. However, it has changed in its nature of involvement, as recently men started their participation in the pot making process in the sense that it becomes the domain of both men and women.

Religious Dimension

In the religious context also, pottery plays an important role. For every religious practice, pots are essential an item. For example, a pot name *Khumnao* or *Chaphumacha* is used in a ritual phenomena particularly when an individual is experiencing misfortune in everyday phenomena. Which may lead to the difficulties in handling lifecycle rituals resulting into illnesses and diseases. During such times, this particular pot has been used as a ritual ingredient where many of the items such as rice grains, flowers and ghee and other items of importance are put and used as per the priest or healers suggestions. Again in the rite-de-passage ceremony, pots are needed on and off. During the time of child's *Ipanhaba* function (social recommendation of child as human being), pots are used. In marriage ceremonies for grown up persons, pots named *Kuja Kambi* and *Piba Kambi* are used as '*Kuja Yaba*' [the ritual where the bride and groom are solemnized after giving kanyadan (social process of giving the daughter to the groom) by the bride's father to mark the purity and prestige of the bond] ceremony performed in the Mandap of the marriage. This pot is kept over the hands of bride and groom which is then tied by the bride's mother using a sacred thread. The plate contains ingredients considered to be necessary in life such as banana, coconut, rice, scissor, knife,

dhoti of the groom, betel leaves and nuts. *Piba kambu* is used at times of gift giving to the groom's side on the marriage day. However, this ritual has diminished to a great extent, replacing it by using simply any plate available. Besides this, at the time of one's death, the earthen utensils are willingly broken expressing the sorrow of the relatives (from the metal utensil only cleansing is done). During the cremation, function pot is used as *Meikoi Chaphu*. In this process, the relatives of the deceased person or his/her son carrying the pot on his shoulder and moves around the funeral pyre before torching the corpse.

Till today, earthen pots are kept in every house of the Manipuri's at the site of household deities as symbolic representation of *Ima Leimarel*. In these pots, water is stored. And, again pots are also used in ritualistic phenomena of *Lai Haraoba (the pleasing of Gods and Goddesses)* festival especially at times of bringing the souls from water bodies or places to be believed to be the resting place of Gods and Goddesses.

Change and Continuity

Pottery has become a very important artefact of the human society. Moreover, this technological skill has become the specialized work of few people and many people depend on the products of these few people who engaged in making pottery. Therefore, these few specialized artisans have become very important asset of the village (Singh 1935).

Like Manipur, in South-east Asia, female potters are dominant, and male potters are less common (Singh 2008). As mentioned by Singh, male potters are found mostly in Formosa and rarely in Philippines it is reported that male potters mainly involve in preparing the body of pots, while women potters use many variations of the paddle and anvil technique to give the final shape to the pots. But in Nungbi, village of Thangkhul tribes located in Ukhrul district, Manipur, consider men folk as the only potters. Nowadays, in the Thongjao village also, men have started making pottery. The Thongjao village potters also use paddle and anvil technique method for shaping their pots like the same method used by the potters of Philippines. The usual pattern in South-east Asia is that one small village or area specialized in pottery manufacture, and their pottery is then traded over a considerable area (Solheim 1974; Stark 2003). The distribution of the modern pottery villages in Manipur also suggests similar pattern as in South-east Asia like Philippines.

The present ethnographic study suggests that the potters of Thongjao village use slab building and anvil—beater techniques. The potters of this village also used orbiting technique in shaping the rim and neck of the pot. According to Singh (2008), these techniques are also used in other pottery making villages of Manipur like Andro, Sekmai, and Nungbi. Moulding and anvil beater techniques are the most primitive methods adopted by the Oinam

potters (Mao tribe of Senapati District, Manipur). These techniques might be in continuation from the prehistoric times (Singh 2008). The raw materials used by the Thongjao potters and other Neolithic sites in Manipur reveal similarities in respect to their composition. This shows the closer affinity of the raw material of Laimanai and Napachik pottery. In the Laimanai site, fine black clay (*Leimu*) is duly tempered with charcoal and coarse quartz granules and in the Napachik site also fine clay is tempered with sand, weathered rock granules and charcoal powder.

Through the ages, in Manipur, in the process of pottery preparation, we find changes in respect of the forms and surface decorations. Earlier, in the Thongjao village, perforated type of pottery was made but nowadays, people have stopped making that kind of pottery. Nowadays, people make new types of pottery ie. flower pots. The pre and proto- historic pottery of Manipur are all handmade by beating with a paddle which is either plain or cord wrapped or carved. The same technique is still continuing and we can see the same in the Thongjao pottery. But, in the present day, the Thongjao potters also use another technique for producing black clay ware. Imoba mentioned that the production of black pots by Thongjao potters uses oxidized firing since 1960. It was informed that to produce black pots, the pots are kept inside a larger pot/ jar and then husks and saw dusts are put inside and baked. The carbon present in the smoke have the effect of reducing the oxides which provide permanent black stain. The present-day Nungbi potters also produce black polished wares resulting from the post-firing surface treatment while in red hot (Imoba *et al.* 1999).

The process of making cord marked pottery is still continuing in Manipur since the prehistoric time. Corded wares are found from the pre and proto-historic sites of Nongpok Keithelmanbi Locality 1, Napachik, Laimanai, Phunan, Sekta, Chibu and historic sites of Ningel. The cord impressions are either in the linear or crisscross pattern (Singh 2008). However, the use of multi-edge (comb-like) tools in the incised decoration of the Phunan, Sekta and Kangla pottery is evident among the modern potters of Thongjao also. Vertical parallel designs present on the shoulder of the Thongjao pots are also evident from the prehistoric sites of Phunan and Kangla pottery.

The decoration of the pottery surface by impressing it with the designs carved on the paddle is evident in Thongjao Potter. The carved paddle designs, including herringbone, basketry, small quadrilaterals, alternate vertical and horizontal parallel lines, vertical lines and four triangles facing one of vertices, etc., are important features of the pottery that can be seen in Thongjao Village. These impressed designs were also found during the proto-historic and historic periods. 'The unearthing of clay slabs with the incised lines in the herringbone and crisscross patterns from the Kangla suggests that the ancient potters must have used such clay paddles before the invention of carving these designs on the wooden paddle' (Singh 2008).

There are also changes in the pottery types. The tripod wares that were found during the prehistoric and proto-historic periods of Manipur have disappeared during the historic and present day. Nowadays, in Thongjao village also, tripod wares are not found. According to Singh (2008), the tripod ware tradition did not persisted beyond the proto-historic period.

According to Xiaoqin (1996), the features of the pottery types of the Late Neolithic (3000–1500 BC) of the coastal South China include, round bottomed jars and covers, bowls, round bottomed cookers (Fu) and globular bodied containers (Weng). Majority of the pots are decorated with cord marks, incised designs and perforations. However, Paddle and anvil techniques were used to form the pot shapes. Similarly, same method is used in the Thongjao village. As mentioned by Singh, Fu is a term for pottery by the Meitei community of Manipur. According to Singh (1983), the royal history of Manipur also recorded about the existence of a separate department named Furungba to control the requirements of the pottery both for ritual and domestic uses. Wang or Walong is also another term used among the modern potters in the valley of Manipur. Still in Thongjao village, people make Walong, which is a type of pottery used in cooking utensils in *Tarpan Ushop*, a feast usually offered to all the deceased ancestors, but nowadays it is not used for making wine. Hence, it seems that there was at least a culture contact between South China and Manipur (Singh 2008). The carved paddle impressed pottery originated in South-eastern China during the 3rd millennium BC (Solheim 1996). However, in Manipur, only a few patterns of the Chinese wares like chevron, herringbone and basketry are found. This type of decoration is still found in Thongjao village.

The archaeological research in Manipur cannot give a clear picture of the Metal age Culture. However, the ceramic remains so far discovered in Manipur suggest the wooden carved paddle impressed wares, clay slab paddle impressed wares in the herringbone and criss-cross patterns might have succeeded from Neolithic period. Though no definite date for the transition is known, the carved patterns impressed wares found throughout the proto-historic, historic and modern periods. The decoration patterns with the regional variations, resulting from the impression of the carved paddle, have wide affinity with those of the prehistoric pottery of China and South-east Asia (Chang 1978; Solheim 1959).

Discussion

A closer affinity is seen between the resources of Thongjao, Nongpok Keithelmanbi, Andro and Phunan, in the uses of raw materials for pottery manufacture. It is found that clay, sand and quartz particles are the ingredients used in making pottery of Nongpok Keithelmanbi, Andro, and Phunan but, in Thongjao, quartz particles are not used in making pottery. However, the pottery of Laimanai and Napachik uses charcoal powder in addition to the above-

mentioned resources. Sand and quartz granules are apparent on the surfaces of the prehistoric sherds, which gives the sherd a coarse surface.

Reconstruction of the typo-technology of the Neolithic ceramics from Manipur is only formidable since the entire find are fragmentary in nature. Not even a single complete pot has been unearthed from four Neolithic sites of Manipur. However, on the basis of the identified characters of handmade pottery described by the researchers, the manufacturing techniques may be postulated. It is held that a handmade pottery generally shows the 'irregularities of form, uneven thickness and body of the clay and imperfect rotundity' (Allchin 1976) as against those made on wheel 'by such diagnostic traits as the spiral swirl on the base, representing the mark of the string used by the potters to cut the pot off while the wheel is still turning or the greater regularity of the thickness, form and striations left by the fingers upon the surface and particularly the inner surface, of the pots' (Allchin 1976). The archaeological remains from Manipur having the following characters which essentially fulfil the criteria of hand making pottery. The thickness of the potsherds found from all the four prehistoric sites is not uniform even in a single sherd (Singh 1993). Depressions of finger impressions are seen on the inner surfaces of some sherds of Nongpok Keithelmanbi Locality-1, Napachik and Phunan (Singh 1993). This suggests that the pots of Napachik were initially built by the pressing a lump of clay between thumb and finger. And none of the archaeological potsherds exhibit striation marks on their surfaces. The bases of the reconstructed vessels are very frequently rounded and it is a general feature of handmade globular vessels. It is also stated that the final shaping of Nongpok Keithelmanbi pots are done with a beater (Singh 1993).

Surface treatment is suitably related to the porosity factors of the earthen vessels. Surface treatment in neolithic ceramics from the four prehistoric sites of Manipur is done with pre-baked slippings in the solution of water and clay, likely to give a 'green strength' to the produce. This forms an important attribute of the prehistoric ceramics. In the site of Napachik, however, unslipped wares were also found. Besides the coarse quartz granules, Napachik craftsperson used charcoal powder as tempering material and this was mixed with black clay, which is used in making pottery of Thongjao. It is likely that the paste of these raw materials might have had effective qualities of checking porosity and friable effect of the produce, and hence slipping was no more required. The unslipped wares unearthed from the Napachik site may be recognized as a new development in the process of manufacturing vessels. This innovation of technological development in the craft has attained its fullest development in the present-day potteries of Thongjao, accomplishing a more or less similar function of durability.

Decorations on pottery may be perceived as the craftsperson's idiosyncratic attitude of mind as well as behavioural response to the social imperatives. Discussion on the aspects of decoration have ethno-archaeological

significance since the decorative evidence is preferably used by the archaeologist over compositional evidence as a means of recognizing historical continuity (Neff 1993; Sullivan 1984). Though the Thongjao pottery exhibits fewer decorations than those of the archaeological ones, some analogies are observed between the two which help in establishing a sequence of ceramic tradition in terms of decoration. In the Thongjao pottery, the storage vessel that is *Ngari Chaphu* and *Walong* used in making wine and *Wanghum* used as lids are seen to be decorated. It is thus observed that decorations on the utilitarian vessels are made on the large globular pots which are not moved frequently. The neolithic pottery has six types of surface decorations. These include the corded, incised, appliqué, net-impressed, circular and grooved. Plain and corded wares are commonly found in all the four sites, whereas the other wares are found only at Phunan site. However, in Thongjao pots are decorated by marks of the beaters. Use of marks of more than one design is noted. Again beating of the pot is executed with the marks of the mid portion of the beater. The designs of the beater are not impressed so that designs can be seen perfectly. Instead, designs are found overlapping each other. The decoration with beater is found throughout the body. The plain pots are decorated just below the neck of the pots with *Mammit*, the design found at the top of the beater. The decorative patterns of the linear, herringbone, alternate vertical and horizontal parallel lines are found in Thongjao pottery, but the decorative pattern of criss-cross which is found in both the Napachik and Laimanai are not found in the present Thongjao pottery. A direct historical analogy can be established between the archaeological sites of Nongpok Keithelmanbi Loc: 1, Andro and the Thongjao village in the decorative design of herringbone that are present in the ceramics of all the three sites. But this type of decoration is not found in both sites of Napachik and Laimanai. The herringbone pattern of decoration on the Nongpok Keithelmanbi Loc: 1 pottery is likely impressed with the carved paddle having this pattern as is done by the present-day Thongjao potters. The above analogical application in terms of ceramic technology shows the direct utility in identifying the questions of continuity and discontinuity through time.

Various excavated sites, like Daojali Hading (Sharma 1966, 1967; Sharma and Sharma 1971), Sarutaru (Rao 1973), Parsi-Parlo (Ashraf 1990), Manipur (Singh 1993), and many surface sites have yielded numerous potsherds, mainly consisting of cord impressed and other handmade wares. They share similarities with pottery from the sites of East Asia and South-east Asia and include simple forms of cord marked, combed, fingertip-impressed or incised vessels, often on tripods and pedestals. The overall homogeneity of the archaeological record makes it easy to visualize a common ancestral culture, located quite close in time, from which all the descendant cultures of the Yellow River basin originated (Bellwood 2005). This kind of pottery is found in many eastern and central Indian Neolithic sites (Sharma et al. 1980; Pal 1987, 1990), like Koldihawa and Mahagara. At the site of the Nongpok Keithelmanbi of

Manipur, mostly containing Neolithic tools and cord impressed pottery; a charcoal sample (BS-523) from the cord impressed ware stratum has been dated to 4460 ± 120 years BP. The cord mark in ribbed or criss-crossed impressions and the general decoration patterns like, parallel lines, circles and square or diagonals can be compared with the Lungshanoid ware decoration pattern of South China (Singh 1993). Excavations at the Neolithic factory site of Pynthorlangtein (Taher and Rao 2005) in Jaintia Hills, Meghalaya, have yielded typical Neolithic chipped and partly ground axes and Adzes alongwith handmade pottery with cord impressed decoration in the form of either parallel or crisscross lines. The pottery is coarse in texture, ill fired and gritty dull red in nature. Most of the vessels found at the early Neolithic sites of China bear linear incisions or cord impressed surfaces (Zhang and Hung 2008). The cord impressed pottery has great antiquity in East Asia (Yasuda 2002) and has possibly entered eastern India through contact with North-east India.

The Neolithic stone industry and the typical ceramic technology characterized by cord marked or craved paddle pottery of North-eastern India has no close parallels in the rest of the country. But their close similarity with South-east Asian cultures of the Neolithic and Bronze Age periods is convincingly demonstrated by a comparative study. On the basis of Dani's analytical study of tool types, Dani (1960) was of the opinion that South-east Asian elements came in different waves at different times through Myanmar (former Burma) and a definite chronology could be ascribed 'on the basis of a black polished ware associated with the specialized tools of the later complexes of Burma'.

Conclusion

Potsherds discovered from the four prehistoric sites of Manipur possess characteristics of handmade pottery like irregularities of form, uneven thickness, imperfect rotundity, beater mark and presence of depressions of finger impressions on the inner surface of the sherds. The Thongjao pottery, which is also a product of anvil and beater techniques, exhibits similar characteristic features. The similarities shared by Thongjao pottery and prehistoric potsherds in respect of their technique of manufacture seemingly suggests the continuity of craft from the prehistoric past to the ethnographic present.

A careful analysis of the raw materials used by the Thongjao potters and their prehistoric ancestor reveal similarities in respect to their composition and shows the closer affinity of the raw material of Laimanai and Napachik pottery. Similarities in the composition of the raw materials can lead to the generalization that the prehistoric potters might have lived in the same geo-physical environment similar to Thongjao potters. It may also be asserted that the technique adopted by the Thongjao potters might have also been employed suitably by prehistoric man.

The Thongjao pottery production is basically household oriented. Almost every household of the village has ceramic production unit. The origin and continuity of this tradition among the people are the resultant of easy availability of suitable and necessary ceramic resources. The culture of pottery production in Thongjao village still remains major means of production which is not only a seasonal but also a part time pursuit.

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