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THE STUDY OF TRADITIONAL POTTERY MAKING IN WEST BENGAL AND IT'S CONNECTION WITH MEGALITHIC CULTURE

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Introduction

The present paper is an attempt to explore the possibility for tracing the relationship of the pottery making activities between the potters of Megalithic culture and the others of eastern India. Though my basic knowledge about pottery making activities and the communities involved in such activities with reference to West Bengal, in this paper I have tried to trace the relationship of the above cultural matrix. We are aware about the fact that the Chhotanagpur plateau played an important role in the evolution of so called Megalithic Cultural tradition both informed as Sepulture and the non-sepulchral. It is also evident from the wide distribution of Dolman, Menhir and other types of memorial stones including Vir Sthambha (Hero stone) and other.[1] Pottery is also reported from such Megalithic site. In this context it is to be noted that Asura cultural sites of the core areas of Chhotanagpur plateau like Palamo, Ranchi, Santal Pargana, Singbhum areas had association with Megalithic tradition.[2] Hope my paper will also focus on the pottery making activities of Asura culture and its association with West Bengal pottery making activities. Excavation at Saratkhel (Ranchi) confirmed the pottery making activities of Asura culture bearing social groups and their association with so called Megalithic Culture. Therefore, I will also try to trace the relationship between the tribal communities and the non- tribal communities of Eastern India in the context of pottery making activities. This

study is based on an ethnographic survey in seven districts of West Bengal namely North Dinajpur, South Dinajpur, Malda, Bardhaman, Birbhum, Bankura and North 24 Parganas The survey was conducted among the traditional potters of Bengal as well as with the migrated ones who have migrated from Jharkhand, Bihar and Uttar Pradesh during last 50- 60 years.

The excavations in different Megalithic sites of North Eastern hilly areas as well as in Chhotanagpur plateau have yielded a good number of potteries which are known as Megalithic potteries.[3] So far the shape, fabric, form and slips are concerned the potteries and shards unearthed from Saratkhel and from other sites in Jharkhand, Bihar and in North Eastern regions shows almost more or less same with that of those used and produced by the non- Bengali potters group, specially the tribal ones who have migrated from Bihar, Jharkhand and Uttar Pradesh and are now residing in different districts of West Bengal. Considering its shape and fabric, whether it is Megalithic or Chalcolithic, the pottery manufacturing technology remains the same, as it is seen today by modern potters of West Bengal.

Megaliths in India, particularly in peninsular India include a variety of sepulchral and commemorative monuments which are either built of large stones or else associated with a somewhat homogeneous group of the Black and Red ware and an equally homogeneous group of iron tools and weapons. By and large they are collective burials in which post exposure bones of more than one person are found buried.[4]

The Megalithic tradition was a live one in the Chhota Nagpur region until very recent times. A village called Chokahatu, dist. Ranchi, and contains thousands of tombs, mostly of the Dolmen or cromlech form where burials used to take place as late as the second half of the 19th century. It is usually believed that the Mundas are responsible for this practice which was brought by them from outside India, but this lacks archaeological corroboration. A megalithic site excavated at Khuntitoli, dist, Ranchi, yielded evidence of a pit dug within a larger pit containing grave goods including pottery. The whole pit was filled with earth with a capstone supported on builders placed over part of it. The jars were of plain red colour as distinct from the black and red ware of the South Indian megaliths.[5]

Megalithic Pottery

The bulk of potteries and pot shards recovered from the different Megalithic sites of Ranchi (Jharkhand), Bihar and Chhotanagpur region are of different nature. Most of them are wheel turned with some red wares being handmade. The clay used for manufacturing the vessels is not well levigated though they are well fired. The ceramic assemblage consists of red ware, Black and Red ware and black slipped ware. Red ware forms the major assemblage is generally of thick section, medium to coarse in fabric.[6] This type of ware is represented by the shallow, convex sided and deep bowl, dish, shallow bowl cum cover, shallow and deep basin, large and medium vase with carrinated neck, Hundi or cooking vessel and dish on stand etc. **(Fig. -1, A & B)**

Though the bulk of the megalithic pottery is plain, decoration is found in few cases. Some sherds of red ware and Black and Red ware bear black paintings, white painted oblique strokes, dots, incised and applied designs, vertical, horizontal and wavy lines etc. The Iron Age megalithic pottery of the region is well baked, durable and thrown on wheel. The principal types are black and red, black slipped, red and thick, grey wares, bowl, cooking vessel, storage jars etc. Some pots in this assemblage bear restricted slip in both the sides. A few sherds bear incised designs consisting of floral and creeper designs, wavy lines, cross and vertical, bow and arrow marks etc.[7]

Whether it is in India or abroad, the community or the group of people who make pots are known as potters. The potters are known by different names in different parts of India but in general they are known as *Kumhars* throughout the country whereas in West Bengal the potters are known as *Kumor*. In Bengal we find four groups of potters namely, *Radhi*, *Varendri*, *Chourasia* and *Khottai*. Ethnically these four groups belong to two chief communities, Bengali community and non- Bengali community. The Non- Bengali group may again be subdivided into two- *Konnoujia* and *Maghaiya* group of potters.[8] Besides, there are a large number of potters belonging to different tribal communities. Each of these four groups not only socially and culturally differs, but each group has some different techniques, tools typology, customs and taboos relating to the sociology of manufacturing earthen ceramics. So we should focus on the techniques followed by these groups specially the migrated ones and the tribes residing in West Bengal through generations. It would help us to trace the technology and personal choice of the ancient potters of Jharkhand, Bihar and of Chhotanagpur region who made those vessels which are being unearthed today through different archaeological excavations.

Pottery Manufacturing Technology in West Bengal

Potteries generally are of two types-handmade or hand- moulded and wheel made. In both the cases a potter has to follow some common methods and techniques. So far the pottery manufacturing technology is concerned, the first and foremost thing is the preparation of clays. The preparation of clay is perhaps the most important work in the ceramic manufacturing technology. Because if the clay is not prepared well or in required consistency the vessels would must get destroyed or receive ill shape after throwing or even after firing.[9]

Most of the traditional rural potters in the district of Purba Bardhaman, Bankura and Birbhum procure clay from fields or ditch (*Bill*), though clays from pond or from cannal has also been reported from a number of kumhars' settlements. The potters of North and South Dinajpur prefer river clays. But the *Konnoujia* and *Maghaiya* potters and the tribal potters of Malda and South Dinajpur use alluvial clay for their work. A suitable or a good quality of clay is not always available from a particular field or land so the potters have to procure clay of two to three types with different composition and use them after mixing in required proportion. Tempering materials such as sand, ash and paddy husks are also mixed with the clay to bring required plasticity and adhesiveness. The potteries and sherds recovered from the megalithic sites of Ranchi

and other areas of Jharkhand, Bihar and in different parts of Chhotanagpur plateau bear signs of the use of sand with clay.[10]

Tools and implements

In pottery manufacturing, as in other crafts the makers require some tools, implements and materials to make their product. So far the tools and implements for manufacturing earthen ceramics is concerned, potters' wheel (*Chak*) is the most important. In West Bengal the potters use several types of wheels. But here we will concentrate only on the types that have been found in the districts during my survey. Considering its form, the different types of wheels used by the potters may be classified into two major groups- slow wheel and fast wheel. The former is turned by hand and is used only by the migrated Bangladeshi potters of South Dinajpur and North 24 Parganas. The fast wheel or single wheel may further be divided into two sub groups i.e. traditional wooden wheel (Manual) and motor run or electrical wheel. Traditional wheel may further be subdivided into two broad types pivoted type and socketed type. Both of these may be of two categories i.e. spoke wheel and block wheel. So the traditional (manual) wooden wheel is of four types-(i) Pivoted spoke wheel (ii) Pivoted block wheel (iii) Socketed spoke wheel (iv)Socketed block wheel.[11]

Similarly, a number of traditional urban potters use mechanical or motor run wheel instead of the traditional wooden ones. Motor run or electrical wheel is quite familiar with the *Konnoujia* and *Maghaiya* kumhars as well as to the Bangladeshi potters who have been residing in the state for at least 40 to 60 years.

Pivoted spoke wheel

In rural *Radha* Bengal i. e. the potters in the districts of Purba Bardhaman, Birbhum and Bankura use pivoted type of spoke wheel for throwing pots. Besides, the traditional *Radhi* potters of N. 24 Parganas, the *Varendri* potters of Malda and some of the migrated Bangladeshi *kumhars* residing in the district of South Dinajpur also use this type of wheel. **(Fig.-2)**

Socketed block wheel

Socketed block wheel is a solid wheel made of cement or wood. So there is no spoke, nave or felly to be seen separately in this type of wheel. The wheel rests on the wooden pivot kept buried in the ground. The non-Bengali potters' community i.e. the migrated *Konnoujia* and *Maghaiya* potters and most of the tribal potters group of Malda, South Dinajpur are noticed to throw vessels in this type of wheel.

Beating tools

Among the various tools that a potter uses to make pots the beating tools i.e. beater and anvil comes after wheel. **(Fig.-3)** The process of beating is required for both wheel thrown as well as for handmade pottery. Without the process of beating a vessel cannot be completed. Beating includes enlarging, shaping and

smoothening of the vessels. In this sense an anvil and a beater play an important role in the manufacturing process. And in case of handmade vessels its use is much more important. The potteries unearthed from different megalithic sites of Saratkhel and in other areas of Jharkhand and Chhotanagpur areas bears the signs of beating, which invariably indicates the use of beating tools while making them.

Anvil- Anvils are made of stone, clay (Terracotta) and cement. Among these the use of stone anvils is becoming limited and the clay ones are gaining its popularity among the rural potters. Cement anvil is quite familiar with the non- Bengali and the tribal potter groups, who have migrated from Jharkhand, Bihar and Utter Pradesh. Again it has also been recorded that cement and terracotta anvils are chiefly used by the women potters while beating a vessel in molding or in the process of hand modeling. Anvils with a flat and convex surface are required for beating vessels.

Beater- The potters of West Bengal both rural as well as urban use two kinds of beaters either made of wood or of baked clay or terracotta. So far the shapes are concerned two types have been recorded, rectangular and circular and in both cases they two faces, plain and concave.[12] The traditional Bengali potters use only the rectangular ones, while the *Kannaujia*, *Maghaiy*a and the tribal potters of Malda and South Dinajpur are noticed to use a circular type of beater.

Throwing on wheel- So far the process of throwing on wheel is concerned we can divide it into some phases though these phases or steps change very quickly and of course are almost uniform and happens to differ slightly from vessels to vessels and region to region technically and linguistically. The number of steps varies according to the size and shapes of the vessel and of course the characteristics and utility (purpose of function) of the vessel. For example, the steps which are followed in making a wide mouth *Handi* is not as same as in case of a *Kalsi*, or the steps required for manufacturing a cooking ware is quietly different from that of a ritualistic pot. In sincere observation the following steps are maintained. These are Centering, Coning, Plunging, drawing up, thinning the wall, forming, Collaring, Smoothening and Cutting etc.[13]

Centering - Centering refers to the proper setting of the clay lump on the nave of the wheel.

Coning- Throwing actually starts with coning. Here the potter presses the lump with both of his hands against the two outer sides of the chunk. With the firm pressing of the palms the lump of clay raises up.

Drawing up *(Kali Tola)* - Plunging is followed by drawing up. In this step a potter is observed to press the concave plate like clay lump from the two sides and with this the outer wall is raised to the required height and forms like a hollow pipe or like a cylinder.

Thinning the wall *(Kali Tola*) - In this stage the potter inserts his left hand inside the hollow pipe like clay and puts the right one pressing the outer wall of the clay from the right side. With the rotation of the wheel the thick clay wall gets thinner in a uniform manner and raises up to the desired height smoothly and with a regulated. **(Fig.-4)**

Forming (*Garan Kara or Uchho Dewa*) –The stage of forming succeeds thinning the wall. In this stage we observe the use of a tool first in the process of throwing. The tool which helps to some extend to give the desired shape of the vessel is called *Uchho*. It is a bamboo shaper.

Collaring- It is the technical acumen of a potter that forms various types of rim and neck of a pot with his fingers and the bamboo shaper. Here is an interesting point to be noted that each and every wheel thrower of a village has got a distinct feature of his product so far the neck and rim of a vessel is concerned**. (Fig.-5)**

Smoothening- (*Nyata Dewa***)** Smoothening of a vessel while on wheel, takes place after the stage of collaring. Smoothening is done generally either by a wet mop which the potters call as '*Nyata*' or by the bamboo shaper (*Ucho*).

Cutting off- (*Pagui Namano)* – Once the act of smoothening is completed the potters get them ready to detach or cut off the vessel from the remaining clay. Here an important point is to be noted that thread is used only in cases of small vessels, which are made complete on wheel. On the other hand a needle or a small thin bamboo slice is used to detach those vessels which are made half or incomplete, keeping a hole on the lower portion for luting to make them complete. The *Konnoujia* and *Maghaiya* potters of Malda, the tribal potters and the traditional potters of Bengal use thread to detach pot since all of them make large and medium size vessels pots on wheel.

The megalithic vessels recovered from Ranchi District and from other sites of Jharkhand and Bihar are mostly wheel turned and medium to thick fabric. The bowls, dishes, large and deep basins, large and medium vase and handi or other cooking vessels recovered from those sites must had required joining or luting as it is said earlier.

Beating after throwing- Beating of wheel thrown pots is entirely done by the potter himself or by any male member of his family. It is only in case of handmade vessels where female potters are seen to beat vessels to make them complete one. It is to be noted that the potters of various groups entirely depend on their women folk for manufacturing handmade pots. Beating is done to enlarge a vessel as well as to give it the required shape with the help of an anvil and beater. The *Konnoujia* and *Maghaiya* potters in the districts of Purba Bardhaman, Bankura and Birbhum do not require beating since they manufacture complete small pots.

Slip treatment- Use of slip in earthen ceramics is a well known phenomenon in pottery manufacturing technology. It is important to note that categorization of ceramics in India is done according to the slips applied on them. For example, when we say Northern Black Polished ware, it presumes the slip of black applied to them. Archaeological excavations in Ranchi district as well as in other areas of Jharkhand, Bihar and in Chhotanagpur plateau areas unearthed kinds of potteries not only with various shapes and fabrics but with different slips as well. They are black ware, Black and Red Ware, red ware, buff ware etc.[14] This signifies that the potters of those regions had the habit of applying slips on vessels before they were fired. The Bengali potters as well as the tribal potters and the *Konnoujia* and *Maghaiya* potters living in the state use one kind of slip made of barks of mango tree or from a mixture of colour clay with caustic soda. On the other hand, the traditional potters of Bengal use two kinds of slips which they call as *Banak.* It is of two types *Sada* (white) *Banak* and *Lal* (Red) *Banak.* [15]

Polishing- Polishing on vessel is done to give it a shiny look and in Bengal only the handmade vessels are polished by the potters. The megalithic vessels recovered from those sites are more or less polished.

Painting- The potters of West Bengal paint their earthen ceramics with inorganic materials either before or after firing. Painting is done on the exterior surface of a pot. Various floral and geometric designs are drawn with these pigments on the neck and belly portion of a vessel before firing. The non-Bengali potters community such as *Konnoujia* and *Maghaiya* and the tribal ones who have come from various districts of Jharkhand, Bihar and Uttar Pradesh and some of the Bangladeshi potters have had the habit of painting vessels. These include various geometric designs, parallel and wavy lines, zigzag patterns, various floral designs etc.[16]

Handmade or Moulded pottery

Handmade or hand modeled pottery as is known throughout India is also very popular in our state of West Bengal. The most important and remarkable feature of this type of ceramics is that these are mostly made by the women potters not only in West Bengal, but throughout India. A male potter is hardly seen to make hand modeled pots barring some large vessels such as big storage jar, (*Jala*) flower tub and vessels for feeding cattle (*Naad or Daba*) only. The role of women in ceramic manufacturing technology in India is immense and above any question. Not only in hand made vessels but in wheel thrown as well, women play a pivotal role in this field. And since archaeologically handmade vessels preceded the wheel thrown ones and that handmade ceramics are almost manufactured by women folk only it will perhaps not be wrong to presume that the women should be considered as mother of pottery as a whole**.**

The potters use a number of moulds with different size and shapes made of terracotta, cement or wood for hand modeling. Various types of cooking pots, troughs, lids of different pots, large storage jars, plates, small

and medium size pots, flower tubs, open mouth small and larger bowls used for different purposes are some of the important vessels that can be made by hand modeling.

Technique of Firing

The last and the final stage of manufacturing earthen ceramics is the act of firing. In India we find broadly three types of techniques of firing. There are- 1) Firing in an oven and 2) Firing in a kiln and 3) Firing in open. [17] But in West Bengal I found mainly kiln firing. Though Saraswati and Behura have mentioned of 'Oven firing' in different states, but I think these are some variations of kiln firing, as far as West Bengal is concerned. I have succeeded in finding these two types of firing among the various groups of *kumors*. The traditional *kumors* of Bengal and the Bangladeshi *kumors* living in the districts of North Dinajpur, South Dinajpur, Malda, Purba Bardhaman, Birbhum, and Bankura and in North 24 Parganas follow mainly kiln firing. 'Oven firing' is quite popular among the *Konnoujia* and *Maghaiya* potters. Kiln firing is mainly found in West Bengal, and in some parts of Orissa, Bihar, Jammu and Kashmir, Punjab, and Gujarat and in Andhra Pradesh.

The potteries and sherds unearthed from the megalithic sites of Ranchi and in other areas of Jharkhand and Chhotanagpur areas bears signs of well firing though some are ill fired too. But all these surely indicate that the potters' community of that particular period had a good knowledge of firing vessels in kiln or in oven though the type of these are not known.

There are two types of kilns-a) Vertical kiln and b) Horizontal kiln, which are known to the Bengali potters as *Gol Poan* (circular kiln) and *Kulo* (winnowing platter or tray) *Poan* respectively. Besides circular, vertical kiln is sporadically found in square and rectangular shape also. It is recorded that more than 90% of the traditional *kumhars* of *Radha* Bengal use first type of kiln or Gol pon, though they maintain that both type of kiln can work for 7 to 8 years after which they require repairing or new construction.

Firing in a vertical kiln

The most important feature in a vertical kiln firing is that here the flames go up straight through the perforations in a vertical direction and then circles and diffused into the pile. And with the process of oxidation the vessels are baked well and take a shiny red or buff colour according to the slips applied on them.[18] The hearth or the platform is convex in most cases though instances of concave hearth have also been recorded in a number of settlements in the district of Purba Bardhaman and in some villages in the district of Bankura and Birbhum, Malda and North 24 Parganas. **(Fig.-6**) Large sizes of rectangular kilns have been found in the districts of Bardhaman and North 24 Parganas.

Firing in a horizontal kiln

Besides the vertical ones, horizontal type of kiln is popular among the *Konnoujia, Maghaiya*, and with the tribal ones. This type of kiln firing has been observed in the settlements occupied by those potters 'community in the districts of North Dinajpur, South Dinajpur, Malda,Purba Bardhaman and Paschim Bardhaman and in North 24 Parganas. **(Fig.-7)**

The vessels are arranged on the hearth or on the perforated floor in an inverted manner and in a circular way. Big vessels such as *Handi, Jala, Kalsi, Khola,* and *Khapuri* are put first and smaller ones arranged on them. Strips of wood and small branches of trees are put between and among the vessels. Finally the entire pile is plastered with mud. The technological reason behind this is perhaps not to allow the fire or flames to come out, rather force it to sneak into each and every vessel to make them well fired. The potters leave some small holes on all sides of the mound for oxidation, which are also known to them as *Gali or Gala.*

After the whole process is completed now the *kumhars* get the fuels ready to be burnt. Fuels that are used for firing the vessels consist of wood, straw, bran, chaff, husk and saw dusts generally and are inserted through the mouth. In order to make black pots the *kumhars* apply slightly different technique. All the openings and stoke holes are put to closed with mud plaster so that smokes could not be come out in any way. They insert some coal dusts or rice husks through the pores into the pile of vessels before they are being closed. This pouring takes place at the last stage of firing to be precise after 3 to 3.5 hour of baking or at the end when supply of fuels are stopped. The smoke finding no way to come out, circles into the pile and the resulting carbon deposit makes all the vessels shinny black.

Firing in an oven- Firing in an oven is widely prevalent in south India, and sporadically it is also found in Orissa, West Bengal and in Assam in the east and Maharashtra in the west. So far the plan and structure of this type of firing is concerned, it may be divided into two-a) Firing in an 'unenclosed oven' and b) Firing in an 'enclosed oven'.[19] But in Bengal we cannot find the process of firing in an unenclosed oven.

Conclusion- From the above ethnographic study it would be no wrong to conclude that the shapes, fabric, section and slip of potteries and shards unearthed from Jharkhand and Bihar megalithic sites shows that the manufacturing technology remains the same as it is being followed by the migrated tribal, and non- Bengali potters' community as well as the traditional potters of West Bengal. It is also confirmed from the present study as well as from the previous ones that the migrated tribal communities as well as the *Khottai* groups of potters such as *Konnoujia* and *Maghaiya* who came to Bengal almost 50-60 years back are following the same tradition as we see with the *Asura* cultural bearing social groups of Jharkhand associated with Megalithic culture. So, I think my study will must throw some glimpses on the relationship between the tribal and non-tribal communities of eastern India in the light of pottery making activities.

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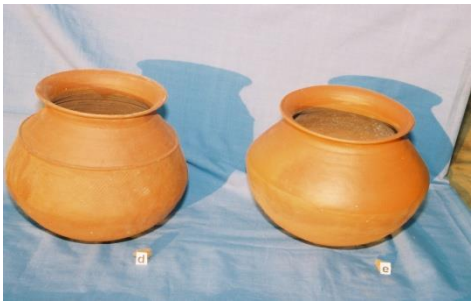

Fig. 1/A Pottery used by tribes

Fig. 1/B Pottery used by tribal groups

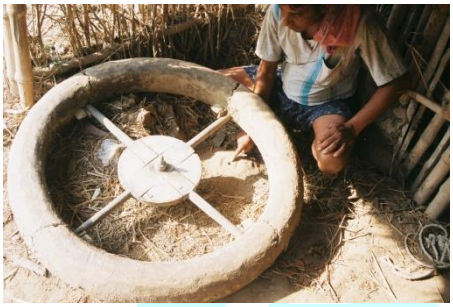

Fig. 2 Pivoted type of spoke wheel

Fig. 3 Anvil and Beater

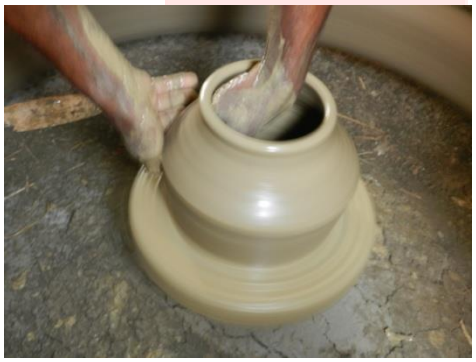

Fig. 4 Throwing (Thinning the wall)

Fig. 5 Making the rim and collar

Fig. 6 Vertical type of kiln

Fig. 7 Horizontal type of kiln