

POTTERY TECHNOLOGY AND ITS SOCIO-ECONOMIC IMPLICATIONS IN EASTERN INDIA

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INTRODUCTION

Pottery, with its highly specialised technology, dates back to at least 10,000 BP in some parts of the world. In India it may have appeared somewhat later. Pottery is still made by specific groups in India today and both the retention of earlier traits and innovations can be detected. In recent times occupational changes have occurred among the Indian potters, primarily due to economic pressures.

Information on many compositional and technological traits can be acquired from the study of Neolithic pottery, but direct data on the societies of the potters are scarce. Therefore, the aim of this paper is to use data on present day potters in order to understand more about the lifestyles of prehistoric potters. The potting villages chosen for the study are in West Bengal, Bihar and Orissa, in regions where Neolithic pottery assemblages are also common. Demographic data on a number of potters' villages have been collected, with special emphasis on the families of the potters. Information on genealogies, educational qualifications, occupational statuses, daily labour inputs, incomes, expenditures, types of pots used in the household and so forth was collected. In the course of collecting data on individual families ten-year age groups below the age of fifty were used. With regard to the pottery, distances to sources of clay, tempering materials, fuel and markets have been measured, as have the distances to the villages of consumers. Techniques of manufacture have also been recorded.

A total 17 villages has been studied; four, seven and six in the states of Bihar, Orissa and West Bengal respectively. All are located on comparatively flat plateau land and not on hill slopes. Earlier the area had a thick cover of sal forest but deforestation has minimized this. The area is covered by alluvium from which the potters collect the clay. Sand temper is collected from the stream beds and fuel used to come from the nearby forest, although most is now bought in the local markets with cash or in exchange for pots.

Reports of Neolithic sites in this region began early (Ball 1875; Anderson 1917). Sites are located along the Sanjai, Kharkai, Brahmani and Tarapheni river valleys. Important

excavated sites include Chirand (Narain 1970; Verma 1970-71), Barudih and Dugni (Sen 1969) in Bihar, Kuchai in Orissa and Sildah (Ghosh 1961) in West Bengal. These sites are usually located in elevated positions and have produced large numbers of potsherds together with stone axes, adzes, chisels, saddle querns and pounding stones. Neolithic sites are generally found to occur near to present-day potting villages.

Generalised stratigraphy in eastern India shows that just below the top mantle there is a thick deposit of black soil underlain by a bed of red soil. This in turn is placed on a thick deposit of detrital laterite which overlies the Archaean bedrock (Ghosh 1966). Neolithic tools come from the black soil deposit, together with crude red pottery. About half way up this black soil profile a black pottery appears. Orange and buff wares appear a little later. These later pots are finely made with thin cross-sections, fine textures and are often slipped. The early red ware is hand made, but wheel made pottery appears towards the middle of the black soil deposit.

A comparison of the prehistoric pottery with that of the present shows that there are some strong similarities between the pottery of the late phase of Neolithic, after the introduction of the wheel, and pottery made in the area at present. Tribal communities are today the largest consumers of pottery but they do not make it, depending on local Hindu potters for supply.

THE PRESENT-DAY POTTERS' CRAFT

The potters' wheel used today has a circular outer rim (110 cm in diameter) and is made of straw, rope and mud. The inner disc (25 cm in diameter) is made of wood. Four wooden spokes join the rim to the disc, the whole being shaped like a spoked wheel with a very thick outer rim. On the lower surface of the inner disc a pebble is fixed at the centre, provided with an indentation. The wheel revolves on this indentation, which is placed on a wooden point fixed in the ground.

Clay is collected from the neighbourhood of the villages, prepared by picking out foreign particles and grit, and then mixed with sand, kneaded with water into a pliable consistency and stored for use. Initially the pots are shaped by throwing on the wheel. Then they are detached from the wheel and finished by beating the bottom with a paddle and anvil into a globular shape. The paddle is of wood and the anvil is a small convex stone. In some cases the pots are red slipped, giving rise to smooth outer surfaces and bright colours. After air-drying they are fired in a kiln in inverted positions, arranged in rows one on top of the other. The spaces left between the pots are filled with straw and light wood and the whole setting is finally covered with mud. Usually kilns in this area are also located under a thatched roof. The tools used for making the pots are varied in nature (Saraswati and Behura 1966), but each usually has a specific purpose. The range of tools favours the workman in terms of precision in the finished product. Hand-made pottery is also made in small amounts, again using the paddle and anvil.

Clay, firewood and tempering materials are essential for the manufacture of pots. Most of the villages have sources of clay very near, within an average distance of 2 km. However, deforestation has made firewood scarce and some potters have to travel far,

within a range between 1.5 and 15 km (average 5 km). Perhaps in early days people had to travel less for firewood.

Most potting villages are situated in areas where motorable roads are not common. Journeys to market in the dry season are made by bullock cart or on foot. Usually both men and women carry the finished pots in baskets on their heads or sling them from the ends of long poles supported on the shoulders. Most potters go to market weekly to sell their wares. Sometimes they peddle their wares in the villages of the tribal (non-Hindu) populations. Potting villages tend to be located between the Hindu villages of non-potting castes and tribal villages; each potting village has a specific area as its market.

Village	Potting families		Non-potting families		Total No. of families
	n	%	n	%	
Billisole	40	95.23	2	4.77	42
Neguria	40	76.92	12	23.08	52
Siyalbindhaz	100	75.75	32	24.25	132
Belia	93	59.61	63	40.39	156
Hatiasuli	58	43.69	45	56.31	103
Nagsole	30	42.85	40	57.15	70
Manusmuria	292	35.22	600	64.78	892
Kanta	50	30.76	80	69.24	130
Kumar Mundakata	150	30.00	350	70.00	500
Keshda	17	25.76	49	74.24	66
Tamajuri	20	24.69	61	75.31	81
Patpur	14	18.91	60	81.09	74
Chadua	35	18.91	150	81.09	185
Matihana (Kuarda)	61	13.83	380	86.17	441
Kailashchandrapur	25	7.14	10	92.86	35
Kanko	19	3.76	486	96.24	505
Bhugtakata	22	1.56	85	98.44	107

TABLE 1: DEMOGRAPHIC DISTRIBUTION OF POTTERS IN THE VILLAGES STUDIED

PRESENT-DAY POTTING SOCIETIES

The demographic study of the potting villages shows the varying social relationships of potters with other families in each village. Out of the 17 villages studied (Table 1), Belia, Neguria, Billisole, and Siyalbindhaz are potter-dominated villages. The non-potting families in these villages are usually made up of Hindus and tribal people.

The potters are solely men. Women members of the family are completely barred from the use of the wheel. However, women can help in the collection and cleaning of clay, the drying and slipping of pots, and in carrying them to the weekly market or to consumer villages. The total population of people involved in potting activities in the 17 villages is 3769 (1775 males and 1994 females).

Age Group	Full Time Potters		Partial Potters		Non-Potters		No Occupation		Total n
	n	%	n	%	n	%	n	%	
10 years	-		-		195	42.29	266	57.70	461
11 - 20 years	5	1.29	5	1.29	238	61.65	138	35.76	386
21 - 30 years	32	9.46	107	31.66	192	56.80	7	2.08	338
31 - 40 years	24	11.43	85	40.48	101	48.09	-		210
41 - 50 years	9	4.68	94	48.96	89	46.36	-		192
51 + years	34	18.08	73	38.82	68	36.17	13*	6.91	188
Total	104	5.85	364	20.51	883	49.75	424	23.89	1775

* 3 invalid; 10 persons have retired.

TABLE 2: AGE DISTRIBUTION OF POTTERS AND NON-POTTERS IN THE VILLAGES STUDIED

The potting occupation has also been studied with respect to the ages of the potters (Table 2). Of the 1775 males only 104 are full-time potters (5.85%). There are 364 part-time potters (20.51%) who practice potting in addition to other jobs such as agriculture, daily labour, teaching or private business. 883 men do not practice the craft at all. Of the men above 51 years of age the proportion of full-time potters rises to 18.08%, whereas fewer younger people are joining the potters' ranks. However, part-time potters have more or less similar frequencies from 21 to 51 years of age and over, although there is still a maximum (48.96%) in the 41-50 years age group.

Children under 10 years of age are not mature enough to take up even an apprenticeship in potting, although they may help in cleaning and preparing the clay. In the 11-20 years age group members usually begin to learn the complicated skills necessary to make pots. It takes several years to become a skilled potter. In general, however, people are giving up the potter's craft and are becoming non-potters. This shift has been explained by potters themselves as due to increases in the costs of manufacture and to a simultaneous decrease in demand, due to the availability of more durable metal pots.

CONCLUSIONS

The making of pottery has continued from Neolithic times to the present in northeastern India. While the norms and values of present-day potters cannot be imposed on Neolithic communities, it can perhaps be presumed that women did not play any direct role in pottery making and that potting villages were located so that consumers might be served conveniently. Present-day potters are a caste group who have their own identity as a group of specialised craftsmen and who live in a symbiotic relationship with other caste groups.

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