

## **Black and Red Ware: A Metrical Analysis of Two Different Cultures (Chalcolithic Culture and Megalithic Culture of India)**

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### **INTRODUCTION**

Efforts to reconstruct the structure of ancient societies with the help of ceramic analysis is not new in archaeology (Deetz, 1967). Most of these have aimed at delineating social or regional groupings with an extended aim at inferring occupational / cultural difference. One might argue at this point that archaeologically demonstrated differences may not always correspond to ethnic differences. (Miller, 1985). Consequently ceramic analysis might be taken to project certain indications about cultural change / contact rather than prove it.

In Indian archaeology the term Black and Red Ware has almost developed a generic meaning because of historical reasons. Consequently a common man tends to accept this term to mean a specific cultural tradition only. In reality, however this ceramic type occurs in different areas with entirely diverse cultural and chronological context. This paper aims to examine certain conventional material attributes of Black and Red Ware belonging to a specific Chalcolithic site with the same recovered from an Iron Age site. This is done to see if ceramic characters are really a reliable cultural determinant or not.

Black and Red Ware was first described in India by Sir Mortimer Wheeler about five decades ago. (Wheeler, 1947). Earlier it was categorized as representing the early historical period and was termed as sherds belonging to Satavahana period (Singh, 1982). Till the end of the sixties Black and Red Ware had been found predominantly from two contexts — one belonging to protohistoric period from Ahar in Rajasthan (Chalcolithic) and the other from South Indian Iron Age graves known as Megalithic sites. The common feature of both the periods and culture is the overwhelming content of Black and Red Ware in them.

The protohistoric Black and Red Ware was first discovered from Ahar situated on a tributary of Banas river in Rajasthan (Sankalia, 1969). Another important site of the same culture is

Gilund also in Rajasthan (IAR, 1959-60). Besides these two important sites, there are also other prehistoric sites which are spread all over northern and eastern parts of India where this ceramic type is predominant. (Rao, 1973; IAR, 1958-59, 1961-62; Sankalia et al., 1958). The Megalithic culture with their Black and Red Ware ceramics are also by no means concentrated in any localized manner. This pottery type is always associated with iron objects in burial sites with huge stones erected on or around the body in peninsular India. Thus, the term Megalithic culture has been used to describe these South Indian evidences. Whereas in northern India Iron is associated with entirely different kind of cultural features and there is no evidence of a Black and Red Ware known in them.

The Black and Red Ware is a special kind of pottery. The two colour effect on the same pot attracts many archaeologists to study this ware thoroughly. Besides India, this Black and Red Ware is reported from ancient Egypt where it has been termed as Black topped Ware as well as Red and Black pottery (Lucas, 1929). In the Indian context, archaeologists have generally believed in what has been described as the 'inverted firing technique'. The lower portion of the pot as also inside of it is in contact with the reducing flame present in the combustible material and this turns the clay in these areas black while the top portion of the pot exposed to the air turns red as a result of oxidization (Wheeler, 1947). There are other archaeologists namely - Sharma (1960), Singh (1969), Misra (1967), Subbarao (1961) and Srivastava (1980) who had in different ways contributed to the identical view of inverted firing as the main technological speciality of this ceramic group.

Black and Red Ware is found in association with different and diverse cultural materials which are vastly differentiated in their location. For instance this ceramic type is found to occur in mature Harappan sites in Western India and Gujarat during the broad time bracket of 2500-1600 B.C. This is also found in association with

a late neolithic variety of Bihar, Orissa and West Bengal in eastern India during 1800-200 B.C. The Chalcolithic sites of southern Rajasthan and northern Maharashtra belonging to approximately 2000-1000 B.C. show another rich concentration of this ceramic type with entirely a different cultural context. And finally the Megalithic sites of peninsular India belonging to as late as Iron Age (Circa 1000-400 B.C.) shows a complete resurrection of the same ceramic type again.

The present study proposes to go into the material heterogeneity of forms and decoration while the technique of manufacture remains common in the chosen ceramic type of two different chrono-cultural stages. This is done with an aim to investigate whether Black and Red Ware can at all be taken as a cultural attribute.

The two sites selected for the present study in order to look into the variability of material indices are Ahar (Chalcolithic) from Rajasthan and Brahmagiri (Iron Age) from Karnataka. This would be done with a view to understand whether Black and Red Ware indicates single cultural product or can occur with essentially different cultures. Furthermore, the study will also see if the younger findings can be taken as representing a continuation process of the older Black and Red Ware cultures. The reason of selecting this ceramic type as stated earlier is because this is found to occur in association with Neo-Chalcolithic and Megalithic as well as in early historic culture.

#### **Ahar in South Rajasthan (Sankalia: 1969)**

The village of Ahar is located at a distance of less than a Kilometer from Udaipur Railway Station. The excavated mound measures 305x244 mtrs. Ahar had yielded two cultural periods (Sankalia, 1969), period I belongs to Copper age while period II was attributed to the early historic period and is marked by the introduction of iron. Period I is again divisible on the basis of ceramic characters into 3 phases designated as a, b and c. The Black and Red Ware occurs intact, denominates throughout all the phases of the copper age period. In addition to these there were other types of wares like the redware and the grey ware with varied type of morphologies also known.

The Black and Red Ware at Ahar is described as having the following varieties (Sankalia, 1969):

1. The plain Black and Red Ware with one or both surfaces burnished.
2. Similar to above but with painting in dull white on the outer or both the surfaces.
3. Black and Red Ware with matt surface.
4. Black and Red Ware with some portions having prefiring brick red slip mostly on the black portion.
5. The Black and Red Ware with gritty core surface.

The paintings over the black surface are definitely prefiring. The decorative methods and patterns on the Ahar pottery show a unique type of ornamentation. The decorations comprise applique cut, incised, punctured and painted patterns (IAR, 1955-56). The painting in Black and Red Ware is executed in white or dull white in all the three phases of protohistoric Ahar (IAR, 1961-62).

The firing of this ware has been very uneven so that most of the sherds though red on the outer bottom and black elsewhere show uneven blotchy surfaces which are definitely accidental. The degree of oxidization is also not uniform. The main shape form in the Ahar potteries are bowls, globular vessels and elongated vessels. But bowls have got different varieties - carinated bowl, convex bowl, deep bowl, bowl with straight sides etc. The present analysis of sherds on its metrical point of view is concentrated only on available materials which maintain the rim portion thus concentrates only on the measurements of rim and neck part of the pottery. The radio-carbon dating of Ahar pottery is done on three sub-periods.

|            |                     |
|------------|---------------------|
| Period I a | 1040 to 1765 B.C.   |
| Period I b | 1725 $\pm$ 110 B.C. |
| Period I c | 1550 to 1270 B.C.   |

Period II is marked by N.B.P. Ware and iron and thus does not fall under the purview of the present study.

#### **Brahmagiri**

Brahmagiri is a granite outcrop rising some 600 ft. above the plain and is situated in Chitradurg district, in the northern part of Karnataka State. The northern slopes of Brahmagiri, largely covered by a tumbled mass of granite boulders, bear extensive signs of ancient occupation. The main area of occupation according to Wheeler (1947) must have lain along

the gentle slope which forms the transition from hill to the plain. In 1947 the most informative three trial pits were dug and, three main cultures- 'Brahmagiri Stone axe', 'Megalith' and 'Andhra' were found in clear succession.

Brahmagiri Stone Axe culture extending to a height of maximum 9 ft. from the natural surface. This culture is characterised by the presence of polished pointed butt, axes of trap rock. All the potteries of the 'Brahmagiri Stone Axe culture' is handmade and the predominant ware is one of the coarse grey fabric.

The Megalithic culture is an Iron Age culture identical with that of local megalithic tombs and pit circles. The Megalithic sherds from the town site show a wide range of types some of which are represented in the cists and pit circles. The pottery at Brahmagiri reveals the cultural unity of two classes of monuments. The Black and Red Ware from the Megalithic culture is generally fine, well baked and brightly polished. Very few decoration were present. The common finds are simple bowl of Black and Red Ware with an externally grooved and slightly everted rim and round base. Carinated bowl with low girth are rarely found. The date of Megalithic culture in Brahmagiri according to Wheeler (1947), is C.200 B.C. to the middle of the 1st century A.D.

A total of ten megalithic structures are excavated at Brahmagiri in 1947 and these fall into two categories:

- Cist circles i.e. cists normally surrounded by a built or monolithic circle.
- Pit circles i.e. built or monolithic circle enclosing unlined pits.

Wheeler discussed the pottery from the cists and pit circles in detail. The pottery from the cists and pit circles at Brahmagiri reveals the cultural unity of two classes of monuments. Both the characteristics of the Black and Red technique and also polished surface are common in Megalithic pottery. The Megalithic pottery as a whole is usually plain and utilitarian in character Decoration when present in simple and primitive.

The ceramic collection for the present study from Brahmagiri which are housed in the Archaeological Survey of India, Purana Qila, New Delhi and from Ahar in Rajasthan which are housed in Deccan College, Pune are scanned for rimmed sherds. The specimen are divided into 3 categories on the basis of the range of proportion of height to diameter h/d. The height is measured after the reconstruction of the

complete pot. Three convenient forms called as  $B_1$  (h/d - .01 - .39)  $B_2$  (h/d .4 - .79) and  $B_3$  (h/d .8  $\alpha$ ) are isolated.

The biggest source of error that comes in the way of demonstrative conclusion is the fact that the sample that could be considered is always a proportion of the total which escaped damage in the rim region.

### Metrical Analysis

The basic ceramic trait of the Ahar Chalcolithic and Brahmagiri Megalithic has been summarized before. But it is more of descriptive nature and can afford only a very subjective comparison with other ceramic types. The present author studied 168 sherds from Ahar with rim region and 162 similar sherds from Brahmagiri (Table 1).

$B_3$  includes shallower bowls which will be seen from the range of h/d.  $B_2$  obviously provides the transitional form which may be called medium and  $B_1$  is deep. Thus three categories have been enunciated - flat, medium and deep. The tables are comparing Ahar and Brahmagiri region.

**Table 1: Sample for the present study 1, 2**

| Name of the Site | Total number of sherds from Ahar and Brahmagiri |       |       |       |
|------------------|-------------------------------------------------|-------|-------|-------|
|                  | $B_1$                                           | $B_2$ | $B_3$ | Total |
| Ahar             | 16                                              | 141   | 11    | 168   |
| Brahmagiri       | 38                                              | 118   | 6     | 162   |

Chi-square 12.73 0.01 > P > 0.001 for 2 D.F. Highly significant

**Table 2: Comparison of body shapes in Ahar and Brahmagiri**

| Name of site | Convex | Carinated | Total |
|--------------|--------|-----------|-------|
| Ahar         | 132    | 36        | 168   |
| Brahmagiri   | 108    | 54        | 162   |

Chi-square 5.79 0.02 > P > 0.001 for 1 D.F. Significant

Comparison does not end merely at identifying the area of similarity or dissimilarity but it involves a theoretical explanation for these differences and similarities. Throughout the present work it has been assumed that the mere similarity of Black and Red Ware technique of manufacture has been wrongly understood in assessing culture processes in understanding

the prehistory in India. It was therefore, important that more attributes are chosen in order to understand this specific ceramic ware as a part and product of culture.

**Table 3a: Comparison of different body shapes of the different groups of ceramics in Ahar and Brahmagiri**

| $B_1$      | Convex | Carinated |
|------------|--------|-----------|
| Ahar       | 8      | 8         |
| Brahmagiri | 20     | 18        |

Chi-square .03  $0.9 > P > 0.8$  for 1 D.F. Non-significant

**Table 3b**

| $B_2$      | Convex | Carinated |
|------------|--------|-----------|
| Ahar       | 114    | 27        |
| Brahmagiri | 85     | 33        |

Chi-square 2.81  $0.10 > P > 0.05$  for ID.F. Non-significant

**Table 3c:**

| $B_3$      | Convex | Carinated |
|------------|--------|-----------|
| Ahar       | 10     | 1         |
| Brahmagiri | 3      | 3         |

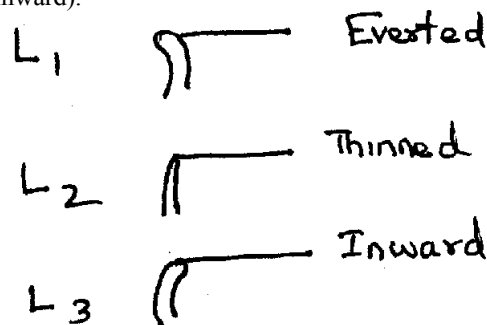
Chi-square 3.61  $0.01 > P > 0.05$  for IDF Non-significant

The trend of occurrence of the above tables shows a nearly normal Gaussian Distribution individually for these two areas. It is quite significant that Brahmagiri shows bigger and shallower bowls in a much larger proportion than Ahar and at the same time deeper bowls show larger proportion in Ahar as compared to Brahmagiri. This difference would not have been apparent on a subjective method of morphological description and analysis of the Black and Red Ware in these two sites.

Table IIIa, IIIb and IIIc shows the presence of carination separately for  $B_1$ ,  $B_2$  and  $B_3$ . The occurrence separately does not show any significant difference. It is quite likely that most of the carinated vessels were lost to the present investigator primarily because they have a tendency of breaking off from the region of carination. We still maintain that Brahmagiri Ceramics has more carination than Ahar Black and Red Ware. This may be primarily because Brahmagiri also maintains larger number of shallower vessels in which carination is more suitable as a form of style.

The termination of sherd rim is called lip. This

lip region shows some variations in alignment. To observe the variations once again three conventional shapes have been enunciated. These are  $L_1$  (everted),  $L_2$  (thinned) and  $L_3$  (Inward).



**Table 4: Comparison of different lip shapes in Ahar and Brahmagiri**

| Name of the Site | $L_1$ | $L_2$ | $L_3$ |
|------------------|-------|-------|-------|
| Ahar             | 140   | 13    | 15    |
| Brahmagiri       | 50    | 32    | 80    |

Chi-square 95.05  $0.001 > P$  for 2 D.F. Significant

**Table 5a: Comparison of different lip forms in different ceramic shapes of Ahar and Brahmagiri  $B_1$**

| Name of the Site | $L_1$ | $L_2$ | $L_3$ | Total |
|------------------|-------|-------|-------|-------|
| Ahar             | 12    | 2     | 2     | 16    |
| Brahmagiri       | 7     | 5     | 26    | 38    |

Chi-square 17.04  $0.001 > P$  for 2 D.F. Significant

**Table 5b**

| $B_2$            |       |       |       |       |
|------------------|-------|-------|-------|-------|
| Name of the Site | $L_1$ | $L_2$ | $L_3$ | Total |
| Ahar             | 118   | 11    | 12    | 141   |
| Brahmagiri       | 40    | 26    | 52    | 118   |

Chi-square 68.08  $.001 > P$  for 2 D.F. Significant

**Table 5c**

| $B_3$            |       |       |       |       |
|------------------|-------|-------|-------|-------|
| Name of the Site | $L_1$ | $L_2$ | $L_3$ | Total |
| Ahar             | 10    | -     | 1     | 11    |
| Brahmagiri       | 3     | 1     | 2     | 6     |

Chi-square 3.98  $0. > P 0.1$  for 2 D.F. Non-Significant

After comparing the two sites, it is interesting to note that individually speaking, the distribution of the lip form in these two sites are almost reversed (Fig. 1). While in Ahar the preponderance is  $L_1 > L_3 > L_2$  in Brahmagiri it is  $L_3 > L_1 > L_2$ . Test of significance, naturally as computed in these tables shows a highly significant difference between the two ceramic groups in relation to the attribute. Probably the inward variety of lip is in consistency with the function and style which goes with the preference of larger and shallower bowls for the Brahmagiri complex. It may be noted that Brahmagiri ceramics are more often a part of funerary materials connected with the disposal of the dead and this kind of situation is not identical to Ahar. Studies conducted on a living population from India has shown marked difference of the ceramic type used in death from those used in other functions. (Miller, 1985). Thus, the difference of purpose and hence of culture is more apparent when a closer look is taken of this specific ceramics occurring in these two different cultural groups.

After analysing all these tables one can decidedly indicate that a distinct difference exists between the Brahmagiri Black and Red Ware and the same of Ahar. This leaves us with the question why the basic technique of manufacturing this particular ceramic type is same. The works of Anthropologists like those

of Saraswati (1979), Nagar (1969) and Doshi (1986) have amply demonstrated how artisans and their technique continue their basic skills from Prehistoric societies to contemporary peasants in India. It is, therefore, easy to explain how a neolithic hand beaten pottery is still being made by twentieth century peasants in Indian Villages without any basic change in technique of fabrication. If such a process is conceded then one can almost link the Black and Red Ware of Egypt to Pre-Harappan, Harappan, Late Harappan and then to Ahar where it consolidates for a period before again dispersing to the south through the Malwa and the northern Maharashtra region. By the time, it reaches the Megalithic builders iron had also been developed at that end.

In other words the ceramic type within a society play a much symbolic role tied within the frame of social structure and may not have to invent its own technique of firing and finishing everytime (Miller, 1985).

It may not be totally undeserving to point out that the Harappan culture in Gujarat, the copper mining culture of Ahar, the Chalcolithic cultures of Central India, Eastern India and Deccan barely yield any archaeological evidence of comparability in either society or chronology. In fact, the only similarity of all these archaeological assemblages seem to be the consistent occurrence of the ceramic type under discussion. This will again prove that Black and

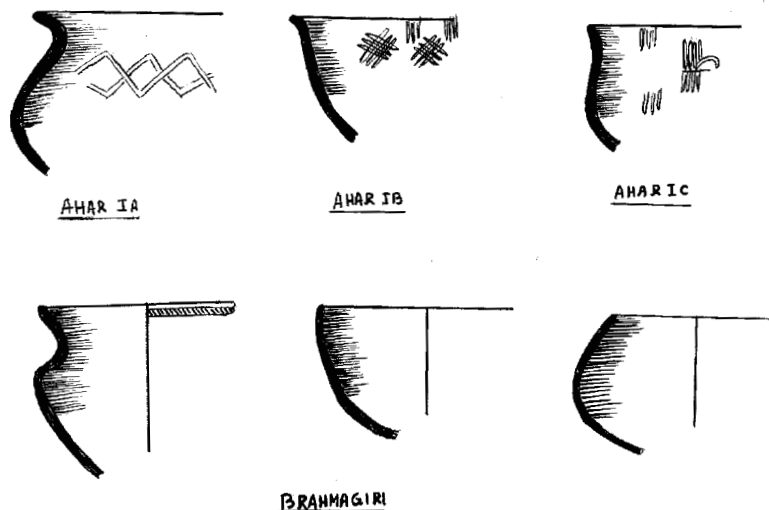


Fig. 1. Some of the characteristic shapes of Ahar and Brahmagiri ceramic types

Red Ware cannot be tenable as a cultural type. Present study, although limited to only two sites merely substantiates the same view on the basis of morphometrics.

Anthropologically one is to accept this ware as demonstrating one of the unique case of dispersion of a technique and hence idea.

**KEY WORDS** Black and Red Ware. Chaleolithic Negalithic. Prehistoric Archacology.

**ABSTRACT** Black and Red Ware is a special kind of pottery which shows two colour effect on the same pot. The present study discusses the material heterogeneity of shapes and decoration of Black and Red Ware in two different chrono-cultural stages, one from Chaleolithic Period and the other from Negalithic Period from South India.

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