
Correlation Between Rock Art and Archaeology of Sonbhadra Region

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Abstract: Sonbhadra region is replete with painted rock shelters. Rock art of the region consists of paintings, drawings, engravings etc. in rock shelters and caves help us to understand the attitude of the early dwellers of the region towards the nature and immediate surrounding including flora and fauna. A correlative study of the early rock paintings is essential for reconstructing the Paleoenvironment of the region. One can successfully correlate several cultural phenomena in these paintings with respect to cultural and technological development. Several paintings such as depiction of wild and domesticated animals, plants, tools such as arrow and bow, harpoon, javelins, swords, battle scenes, animals as means of transportation, boating, royal processions, inscriptions etc. shed beam of light to the cultural and technological development of the society of the region. In this paper, an attempt has been made to correlate the lifestyle of the people of diverse culture periods with the integrated study of these surviving works of art.

Keywords: Rock Art, Archaeology, Sonbhadra, Paleoenvironment, Food Producing Groups, Painted Pottery, Inscriptions

Introduction

The journey to becoming present Anatomically modern human started three million years ago. There are different stages of human development marked by Archaeologist and Anthropologist within them two steps are of utmost significance. The first step is known as the development of tool-making and tool-using and the second step is marked by the beginning of the artistic activity which is hitherto unknown. In the early era of the rock art research, it was generally believed that rock-art/art had begun when Homo sapiens migrated from Africa to Europe around 45,000 years before the present (B.P.). Based on the hypothesis that there was a quick evolutionary change in the human brain. This hypothesis is known as the "Upper Palaeolithic Revolution" or Transition (Bar-Yosef 2002: 363–393). The idea of a rapid revolution that considered the Middle to Upper Palaeolithic transition had been the first time challenged by Mc. Brearty and Brooks (Mc. Brearty and Brooks 2000: 453-563). Contemporary archaeological researches in South African caves provided new evidence related to the

beginning of art. These studies linked to human symbolic activity. Use of colour, engraving of patterns, and bead-making dating back up to 1,64,000 years ago (Henshilwood *et al.* 2001: 631-678, Jacobs *et al.* 2006: 255-273, d'Errico and Henshilwood 2007: 142-163). Based on these date reassessments of the archaeological evidence now it is considered that modern human behaviors start from Middle Stone Age Africa. The oldest known use of ochre is 1,64,000 BP from a South African coastal site, Pinnacle Point (Marean *et al.* 2007: 905-908). The other study also shows that the earliest known rock art is found in the form of cup marks. It is reported from Lower Paleolithic petroglyphs in two caves of quartzite in central India *i.e.* form Auditorium shelter at Bhimbetka and Daraki-Chattan both dated to the Lower Palaeolithic Period (Bednarik 2003: 89-135).

Rock art consists of paintings, drawings, engravings, stencils, prints, bas-relief carvings and figures in rock shelters, caves, boulders and platforms. A cursory glance at the panorama of rock art enough to reveal its diversity in the time and space. Rock art reflects a rich spiritual and cultural heritage of humankind. It has great significance to its creators and their descendants. Rock art is a projection of early humans feeling on the stone. These visual images are the expression of primary human sensibility. These paintings also help us to know the attitude of prehistoric rock dwellers towards the nature and immediate surrounding including flora and fauna. An attempt can therefore be made to rebuild the lifestyle of the people of diverse culture periods with the integrated study of these surviving works of art. It is also associated with their cultural values, particularly in countries like India, where this art is a part of the living cultural heritage of their native population.

The Study Area - Sonbhadra Region

Present study area located in south-eastern Uttar Pradesh, Sonbhadra was separated as a district from Mirzapur district on the 4th March 1989. It is located between Latitude 23° 51' 54" N to 24° 46' 18" N and 82° 40' 24" E to 83° 33' 15" E Longitude. District covered topographical sheet no 63 P, L and 64 I and M, on a scale of 1:2,50,000 in the Survey of India. It is the second-largest district of the Uttar Pradesh state covering an area of 6788 km². The geographical area extends from north to south to a length of 79.36 Km and 74.56 km in the East-West direction. For administrative purpose district divided into four Tehsils - Robertsganj, Ghorawal, Obra and Dudhi comprising 8 Blocks namely Robertsganj Ghorawal, Chatra, Nagwa, Chopan, Babhani, Myorpur, Dudhi, Karma, Kone, and 1441 villages. Most of the painted rock shelters of Sonbhadra are located in the Kaimur range (Figure 1).

Geological Background

The geological formation of the Sonbhadra region developed such a unique way that present study area consists of flat tableland, moderate hilly ranges containing mostly sedimentary rock, perineal rivers and dense forest cover. Geomorphologically the whole Sonbhadra can be divided into three geographical settings: 1. Flat Tableland at the top of the Kaimur range, 2. Valleys of several perennial and seasonal river

channels, and 3. Agricultural and forest land partially undulated. Most of the painted rock shelters of Sonbhadra are located in the Kaimur range (table land). Kaimur range is the eastern part of the Vindhyan range, which is a very intra-cratonic sedimentary rock of Meso-Neo Proterozoic eras (Soni *et. al.* 1987: 87-138). In Sonbhadra district, Kaimur range can be divided into two parts - western and eastern. Western sub-ranges are about 400 to 300 m high from the M.S.L. while the height of the eastern range varies between 630 m to 130 m from the M.S.L. in the way that the western one appears to be submerging in the northern lower plateau below the higher eastern range, near Churk / Dhandharul area. There are thousands of natural rock shelters which are formed due to the erosion process in Kaimur region. A good number of the shelters, both painted and unpainted, have evidence of occupational deposits. A large number of stone chips, microliths and fluted core along with raw materials were found in the shelters or near the shelters as a large variety of raw materials were available for tool making and preparation of colours. We find a very large number of natural rock shelters suitable for habitation, availability of a perennial source of water in the form of a river, waterfalls, and tributaries of river Son (Figure 2). Forests provided means for food gathering, availability of the game in the forest and water bodies were plenty. All these components of the Kaimur region might have attracted the primitive man.

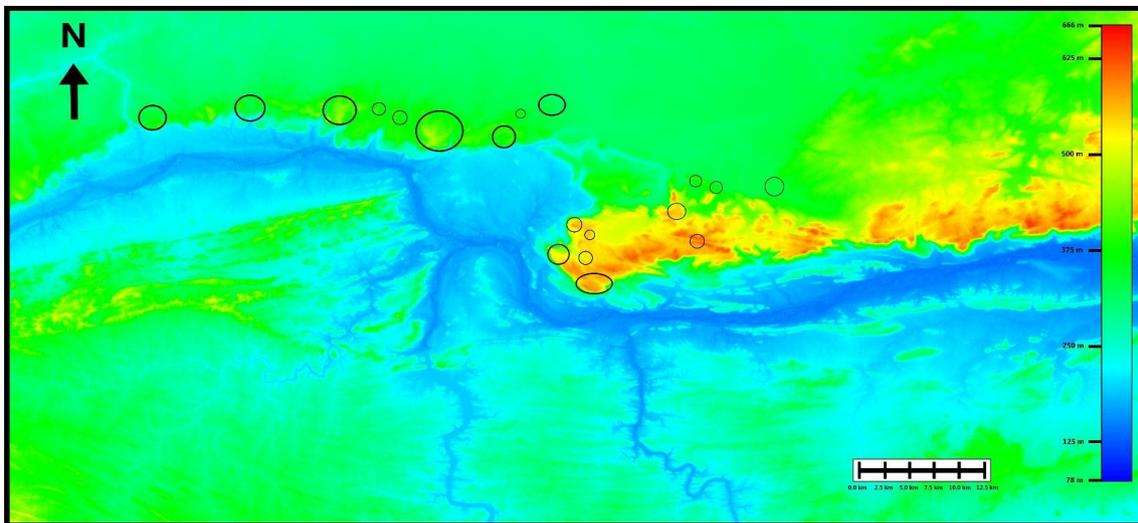


Figure 1: Distribution pattern rock art clusters in Kaimur range, Sonbhadra

Relationship Between Rock Art Motifs and Archaeology of Sonbhadra Region

Rock art sites are not an isolated phenomenon. It is a product of human activity and their imagination in the form of line drawing. In course of exploration analysis, we found a close relationship between rock art and other archaeological evidence of the area. Sonbhadra rock arts are abundant and having various narrative details. A thematic inspection can establish a wide-ranging representation of the technological and social conditions of a different cultural period. The association of such rock paintings with other archaeologically information will be bringing us closer to a

technically diverse periodization. For suitability, these motifs can broadly divide into two different periods of human development i.e., Pre-food production or hunter-gatherers' period and Food-producing groups.

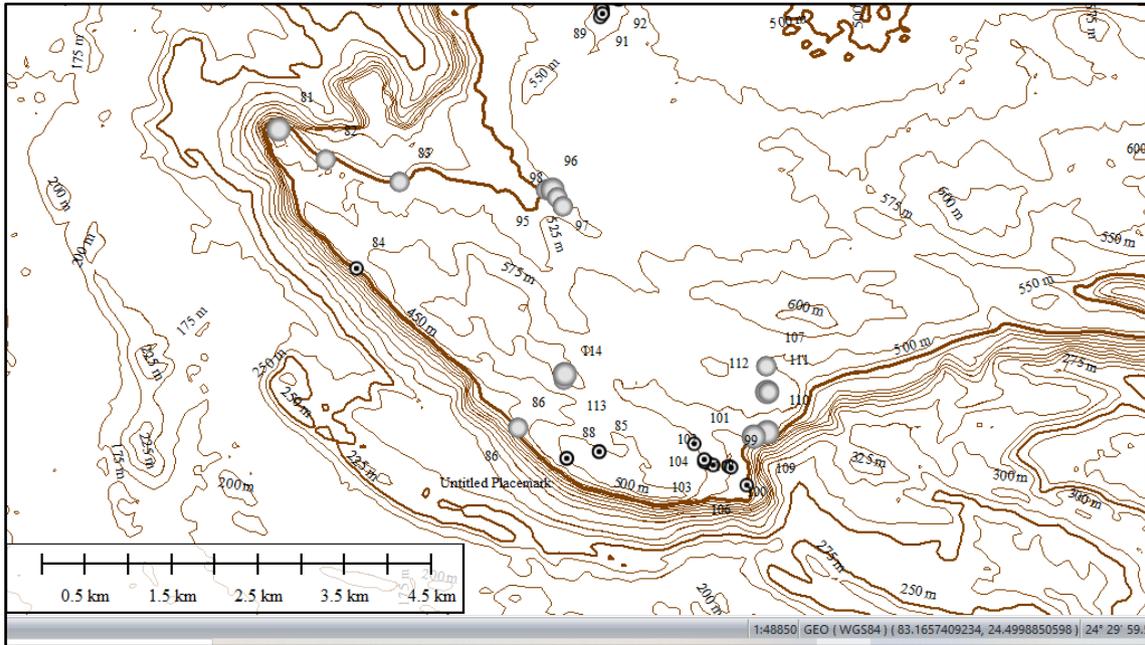


Figure 2: Location of rock art sites on Khodwa Pahar (Contour map showing the elevation of the area)

Pre-food Production and Hunting-gathering Period of Economy

The earliest pictures in Indian rock art represent thematic contents only show hunting and probably scavenging. These Picture showing neither domesticated animals nor any use of metal weapons. Such early pictures show that the hunting-gathering groups mostly used fashioned microlith-barbed weapons like **spears and arrows**. And account for the developed microlithic technology current of India forms the Upper Palaeolithic to the Mesolithic period.

Relationship Between Rock Art and Paleoenvironment of the Study Area

A multidisciplinary team under the supervision of Prof. G. R. Sharma and Clark studied the Middle Son Valley for the rebuild the paleoenvironmental conditions of Son valley. Alluvial deposition of Middle Son Valley earlier divided into four formations Sihawal, Patpara, Baghor and Khetaunhi (Williams and Royce 1982: 139-162), further fifth stratigraphic marked as Khunteli formation dated pre-dates of Patpara Formation and contains the ~74 ka Toba tephra (Jones and Pal 2009: 323-341). Williams and Royce analyses Son river sediments formations. After their study, they concluded paleoenvironment of middle Son river based on the sediment formation and fossil remains, indicates a climatic shift from a dry, cold phase during the terminal Pleistocene to a wet, warm phase in early Holocene times. The latter condition further

changed to comparatively dry, warm phase around Late Holocene (Williams and Royce 1982: 139-162; Sharma and Clark 1983: 9- 21). The climate change can also be seen in animal taxonomical composition. Regarding the general paleoenvironment description of the region, further support the possible existence of a similar environment as in the Belan, Mahanadi, and Narmada valleys. The large mammal's Fossil remains of *Hippopotamus sp.* and *Rhinoceros sp.* from Baghor belonging to the Upper Pleistocene period also indicate past climate of this region. Representations of one-horned rhino are relatively frequent in the rock art of the Sonbhadra region. These painted motifs are restricted to a particular area especially in the shelters of Kanda Kot, Kauva Khow, Panchmukhi, Gochara, Kerwa Ghat, Soraho Ghat, Ghora-Manger, Dhomukhi, Baghamanwa, Morhwar etc. (Figures 3 and 4).



Figure 3: Rhino Hunting scene at Kauva Khow shelter 1

These all-painted rock shelters are located near the river Son. Among them some painted motifs are depicted in Panchmukhi painted shelter one, a hunter has shown attacking a rhino with bow and arrow. In painted rock shelter of Ghora-Mangar a group hunting of rhino shows. Rhino enclosed by several hunters with their microlithic spears, seems to have instigated one of the earliest writings on Indian rock art by John Cockburn in 1883 (Cockburn 1883: 56-64, Tewari 1987: 25-29). In 1883 Cockburn first-time notice rhino motif depicted in Panchmukhi group of shelters near Ronp village. Later on, he found the similar depictions of Rhino from Harna-Hari and Ghora-Mangar rock shelters near Bijaygarh/Vijaygarh fort. Most of the rhino-related representation are belong to a characteristic of early rock art in this region. In Kerwa Ghat rock shelter there are numbers of rhino hunting scene depicted in diverse ways. One of the

exceptional illustrations of the butchering of a rhino's carcass by people they also have brought their vessels and containers possible to carry the meat from the slaughtering area (Figure 5) (Neumayer 2013: 134). Archaeological remains of Rhino bone are also reported only from other Mesolithic sites such as Langhnaj, Mahadaha, Damdama etc. (Joglekar 2015: 145-148). None of representation of the rhino motifs found in late phase paintings. Rhinos motifs are depicted only in the early phase of Sonbhadra rock art might provide a piece of evidence that rhino becomes extinct in the area in the later period.



Figure 4: Rhino Hunting scene at Kerwa Ghat

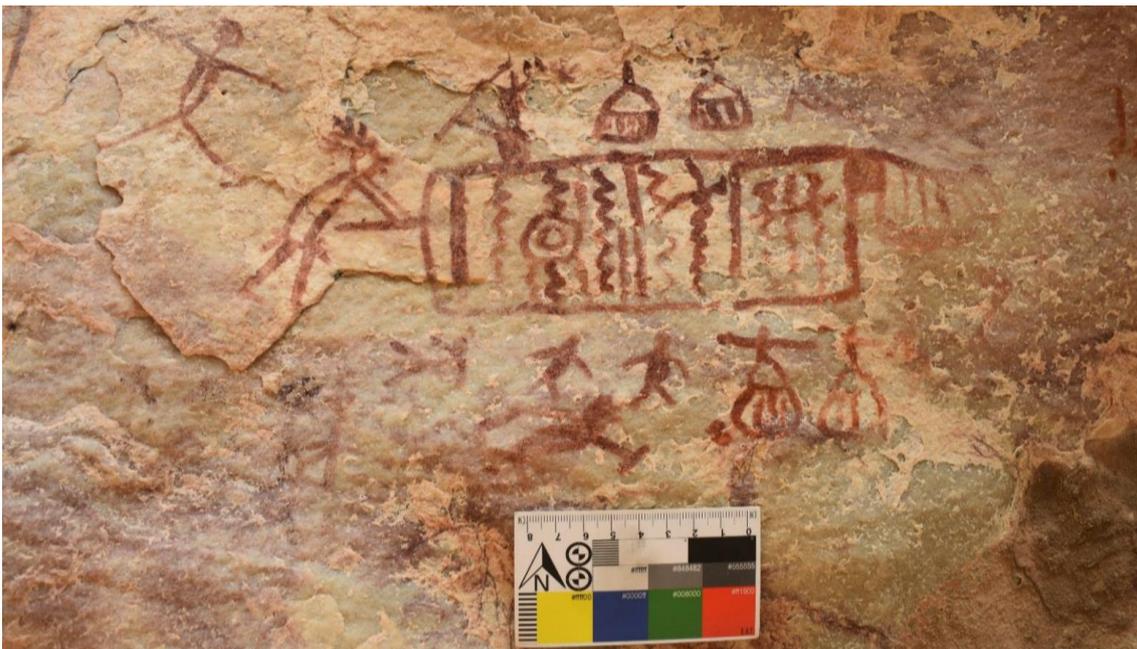


Figure 5: A group of hunters butchering a rhino



Fig. 6: A group of hunters holding malt barbed harpoon in both hand

Anthropomorphic bone artefact from cemented gravel layer III of Lohanda Nala in the Belan valley provides clear evidence of bone working activity in India. The gravel III contains evidence of an Upper Palaeolithic blade and burin industry. The specimen is about 8 cm long, 1.6 to 2.5 cm broad and about 1 cm thick. It had created two different views among scholars, viz., whether to call it to figure of mother-goddess or an object similar to that of a harpoon (Gupta 1979: 116, Tewari 1987: 77-96, Neumayer 2013:48; Misra 1977:49). However, it is now regarded as a well-made bone harpoon. In rock art of Sonbhadra region, there are several Simpler harpoons depicted in rock shelters such as Ghora-Mangar, Kauvakhaw, Kerwa Ghat, Panchmukhi, Chanain Maan, Jharia, Sooga Pankh, Raja Ka Baithaka (Likhaniya), Hathbanwa (Hathwani) etc. A close investigation of these harpoon motifs helps us to understand the development of harpoon in this region (Figures 6 and 7). In the early stage, these harpoons depicted in small in size and maxim time used as hunting tools. Toothed harpoon-like spearheads are common depiction in the rock art of Sonbhadra region (Tewari 1987: 25-29).

Relationship Between Rock Art and Material Remains from the Archaeological Sites

The study area is well known for rock art sites as well as for archaeological research. Within a distance of five to ten km., several Palaeolithic sites reported. Majority of Palaeolithic sites located near the foothills or near water sources. The concentration of the Palaeolithic sites is higher in the south part of River Son, especially in the Kone block. A prehistoric alteration in raw material consumption observed in the valley:

Middle Palaeolithic sites are dominated by chert artefacts, while chalcedony is dominant at Upper Palaeolithic sites and a shift towards quartz observed at the microlithic sites (Mehra 2018: 148-168). In the late phase, the number of microlithic sites increases in the left side of the Son river along with the hilly ranges or near the shelter. Possible due to the growth of the human population number of sites increased. Mesolithic culture occurs almost in maxim suitable accommodation shelters. It can find in the form of human habitation/tools or paintings or both. The microliths are made on quartz, chert, chalcedony and agate. Microlithic assemblages of this region are mostly composed of micro-blades, fluted cores, triangular, trapeze and points.



Figure 7: S - shaped human motifs holding harpoon in their hand



Figure 8: Hunting deer with the help of bow and arrow



Figure 9: A group of hunters with barbed arrowhead harpoons

The Mesolithic period is largely based on microliths. These are tiny tools made from microblade of one to five cm length, by blunting one or more sides with steep retouch. The main tool types are backed blades, obliquely truncated blades, points, crescents, triangles and trapezes. These microliths were used as components of spearheads, arrowheads, knives, sickles, harpoons and daggers (Figures 8-9). They were fitted into grooves in bone, wood and reed shafts and joined together by natural adhesives like gum and resin. Evidence for such hafting comes from later sites in India and Mesolithic and Neolithic sites in the Near East, Africa and Europe (Misra 1974: 3-12, Misra 2001: 491-531). The use of bow and arrow for hunting became common in this period, which is evident from many rock paintings in central India (Wakankar and Brooks 1976: 28 Neumayer 1983: 117; Mathpal 1984: 207). Similar to central India rock art hunting scenes with bow and arrow illustrated in the rock paintings of Sonbhadra. They include the hunting of elephant, rhino, deer, wild boar, nilgai, crocodile, porcupine, bison etc. in a large number of shelters. For understanding in general, varication of raw material and tools types of Kauva Khow shelter 3 (main shelter) divided into 6 cluster then tools and row material were studied (Figures 10-11).

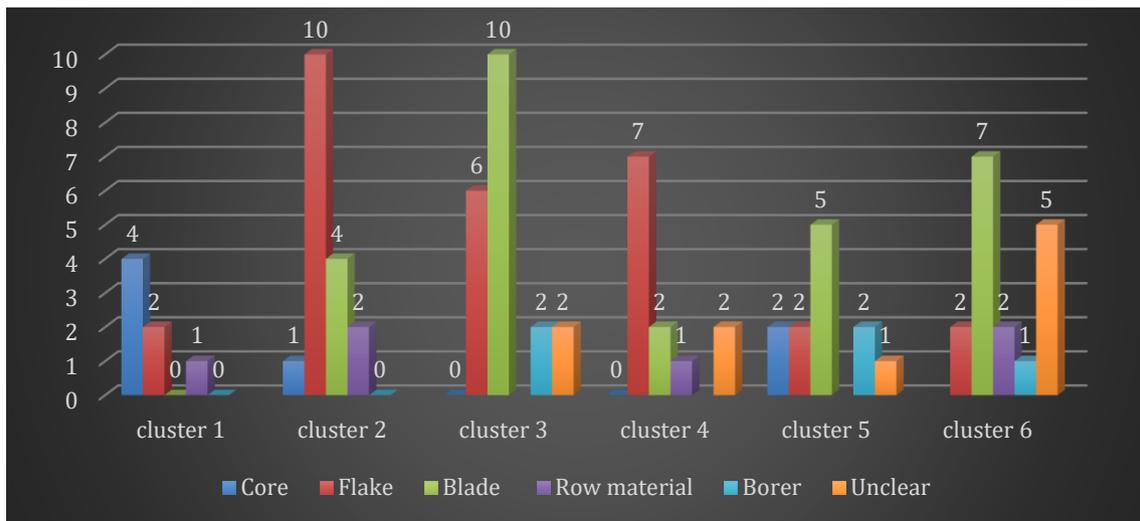


Figure 10: Graph showing the general calcification of tools in different clusters

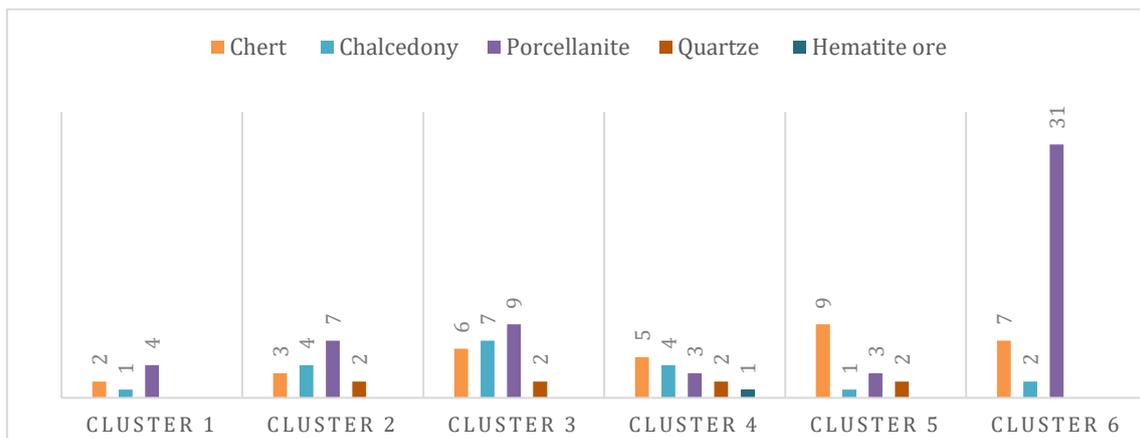


Figure 11: Graph showing the general calcification of row material in different clusters

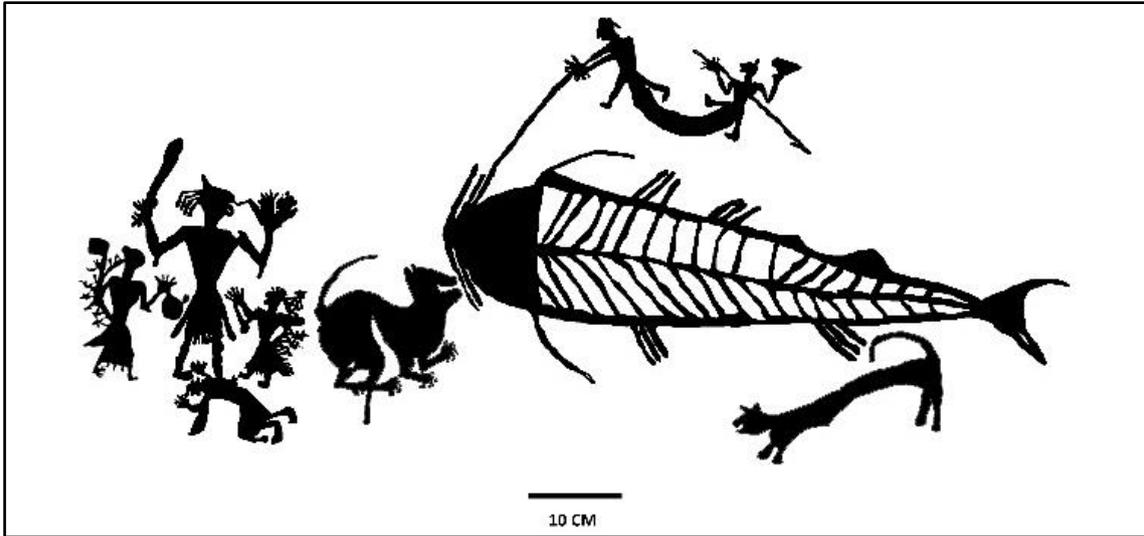


Figure 12: A group hunting a giant fish



Figure 13: Tortoise hunting scene possibly by a family (?), group included children

Food Producing Groups (Faunal Remains)

Painted rock shelters of Sonbhadra region symbolize a wide range of faunal depiction in the early stage. Some of them do not exist present time in this region. Based on Faunal material from the excavated site of this region, Raja Nal-Ka-Tila and Raipura indicate that in the latter stage, the domestic animals become a more valuable resource for the animal-based subsistence thorough the occupational period (Joglekar *et al.* 2013: 227-277, Joglekar *et al.* 2015, Joglekar *et al.* 2016: 105-120, Joglekar *et al.* 2017: 403-418,

Joglekar *et al.* 2018: 419-437). The wild animals and domesticated species formed a marginal part of the animals used for food. Identification of tortoise, crocodile, a variety of fish, wild pig, antelopes (blackbuck, gazelle and four-horned antelope), deer (Sambar, and spotted), gaur, wild buffalo and nilgai from both rock art and archaeological excavation shows their food habits. The numerous tortoises, crocodile, rhino and fishing painted scene in rock shelters represent early stage and the other hand domestic cow and other animals shown in the late phase (Figures 12-15).



Figure 14: Illustration of cow in latter phase

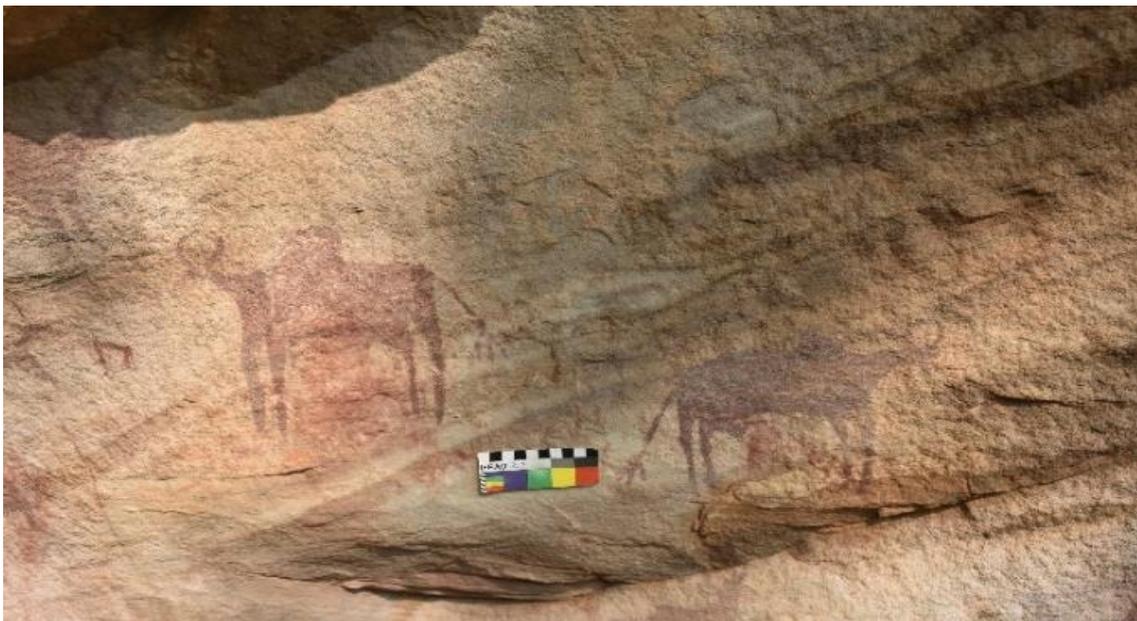


Figure 15: Illustration of humped bull with long horn in latter phase

Painted Pottery

A scholar like prof. V.S. Wakankar and Erwin Neumayer closely encounter the rock paintings of Malwa region and painted motifs on Chalcolithic pottery. In Neumayer view "The artistic and formal similarities between the rock pictures of the agriculturists and cattle keepers, on one hand, and the designs on the pottery of the Neolithic/Chalcolithic culture, on the other, are obvious enough to provide a fairly well demarcated time frame between 2,500 B.C. and 200 B.C. for these rock pictures". Wakankar also traces the similarity between paintings from Modi, Katiriya Kunda, Kkanwala and Aria have a close affinity with the drawing on the Malwa chalcolithic pottery found at Manoti, Avra, Nagada, Kayatha, Maheshwar and Nayadatoli (Wakankar 1973: 357-362).

Painted potsherds are less number reported from the excavation site of Raja Nala-Ka-Tila is also known as Nala-Raja-Ka-Tila. To reach this site one has to travel to Nagwan development Block by a motorable metaled road, leading towards Khaliyari via Pannuganj from Robertsganj. The site has a four-period occupational deposit. Period I pre-iron age (1700/1600 BC -1400/1300 BC), period II early Iron age (1400/1300 BC - 800/700), period III NBPW and period IV Gupta and post-Gupta period. Few painted sherds reported from the beginning of the period I. The paintings generally executed on the outer surface. Ocher red is most common coolers others are black and creamish white pigments, twisted rope, vertical wavy lines common painted design. Other important feature to understand the relationship between painted potsherds and rock art.

A small broken piece's vase of black and red ware treated with fine red slip-on upper portion and rustication over the lower part of the exterior is divided by an applied clay band in a rope pattern. It is further decorated between the neck and rope pattern design with a row of yellowish circular design most probably marked with fingertips (Figure 16A). This tradition is still prevalent in Hindus in the form of Kala Sthapana ritual performed during several socio-religious ceremonies (Tewari, R., 2013: 50). Criss-cross, wavy lines are commonly used also in early phase paintings and potsherds (Figures 3, 4, 11, 16C). Some similar circular motifs are also depicted in rock shelters and still practices in different temples or native villager's house. Another important illustration of a human figure on the outer surface of the pottery, depicted by broad lines crossing each other. This motif is closely comparable with an example found at rock paintings of Sonbhadra and potsherds of Malwa region (Figure 16B). The comparisons of human figures are equally important and so it will be worthwhile to find out the few parallels in rock shelters drawing and chalcolithic pottery designs. The depiction of the human figure of Raja Nala-Ka-Tila is similar to paintings of the human figure from different shelters. One of the rare representations in Kanda Kot shelter 5, which shows several persons and animals placed inside a vignette-like frame. The stylization, particularly of the animals, corresponds well with animal designs exhibited in Chalcolithic pottery, as also with the stylized pictures of animals depicted in Chalcolithic rock paintings in central India.

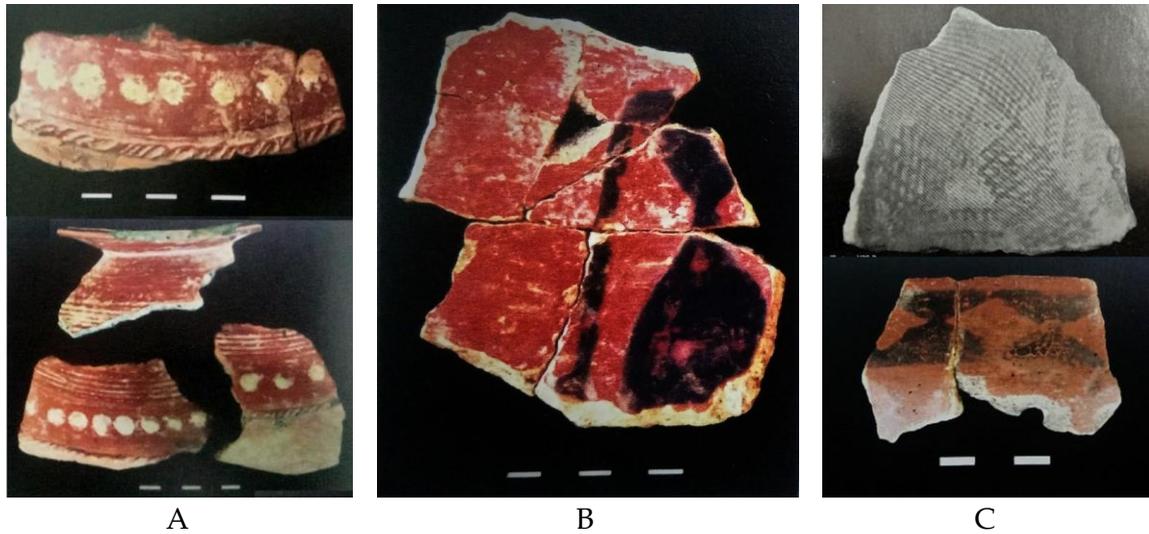


Figure16 - A, B, and C: Painted potsherds from Raja Nala-Ka-Tila (Courtesy: R. Tewari)



Figure 17: Rubbed hematite ores form Latif Shah, Chandauli, Uttar Pradesh

Painting Material

The colours used by prehistoric rock painters had derived from different minerals. The most common colour was hematite red. Its use is known as early as the Acheulian

period in Africa, Europe and India. Based on finding from Upper Palaeolithic deposit excavated rock shelters (III A-28) at Bhimbetka of faceted green earth (terra verta), Wakankar believes, that some of the early depictions in green colour belong to the Upper Palaeolithic phase (Neumayer 2013: 94). Most of the illustrations are in a different shade of ochre possibly prepared by utilizing. The hematite abundantly found on the surface of shelters and in the nearby area (Figure 17). Rubbed hematite pieces also found from the excavation of the rock-shelters of Sohagi Ghat, Lekhahiya, Lahariya Dih, and Bhimbetka (Smith 1906: 187; Mathpal 1984: 187-190).



Figure 18: Painted Brahmi alphabets from Panchmukhi Shelter 6



Figure 19: Painted NBPW sherds from Latif Shah, Chandauli, Uttar Pradesh

Rock Art and Inscriptions

Rock art of Sonbhadra region also reflects the use of shelters in the early historic period suggestive group of painted inscriptions. These indicate the chronological horizon in the early historic period. The subject of other paintings in the same shelters supported this chronology. Several painted inscriptions from a different period found from painted rock shelters. Among them, earliest can trace from painted motifs at Panchmukhi group of painted shelters number 6 (Figure 18). This shelter contained several symbols panels that appearance like early Brahmi script-like symbols. Some of the letters seem to have resemblance with from the Ashokan Brahmi letters. Painted Brahmi alphabet on NBPW potsherds from Latif Shah show also the continuity of this tradition (Figure 19). Gupta and post-Gupta period is marked by the painted inscriptions of Man-Moon, near Vijaygarh fort. Painted inscriptions located on its roof and side. More than 34 inscriptions painted in red ocher and dating from 5th to 8th century A.D. (Ghosh 1932: 19). These painted inscriptions reveal the names of two kings *Sri Nagendra Varmma* probable ruler of this area. Another inscription references the name of the *kottapala* (of Vijaygarh fort) *Damodara Bhatta* and *Sadvan Pathaka* might have been governed from this fort. Some other important inscription mentions the name of *Indradattah*, *Guhidattah*, *Ranavarma Chandra*, *Girih Prakasha*, *Savatavid* etc. The latter of these inscriptions resemble the letters of the Kahaum pillar inscription of Skand Gupta of 459 AD (Ghosh 1932: 19). One of the Inscriptions mentions the visit of an astrologer to this place in the 14th century AD (Tewari 1995: 66).



Figure 20: Painted Shankha script from Panchmukhi Shelter 13

Conch shell or Shankha script inscriptions evolved out of Gupta Brahmi in later half of the 4th century AD and continued up to 8th century AD. The early decorative forms resembled Guptan Brahmi. Later on, stylizations make it difficult to decipher (Wakankar 1973: 366). This script has not been deciphered. Panchmukhi shelter number 9, 11,12 and 13 have Shankha inscriptions on its roof and wall (Figure 20). Some of the painted Negeri inscriptions reported from the Mau Kala village.

Conclusion

From the ongoing discussion, it is evident that rock art is not an isolated phenomenon of human culture but it is deeply associated with the other aspects of contemporary cultures. In fact, a careful study of the rock paintings may reveal many aspects of human culture which are hitherto unknown even after a very long-time of archaeological investigation in Vindhya-Kaimur region. It may help us reconstructing the Paleoenvironment of the region. Depiction of several animals such as rhino or ostrich (?) are only suggestive in this direction. Finding of bones of Rhino only from Mesolithic sites of Vindhya-Ganga region such as Mahadaha and Damdama suggest the palaeoenvironment of the region was quite different in late Pleistocene period which gradually changed. In the early phase, we find the depiction of the hunting scene while in later phase aspects of food-producing elements got prominence.

One can easily correlate several cultural phenomena in these depictions regarding cultural and technological development. Depiction of wild and domesticated animals, plants, tools such as arrow and bow, harpoon, javelins, swords, battle scenes, animals as means of transportation, boating, royal processions, inscriptions etc. shed beam of light to the cultural and technological development of the society. The preparation of colour was from locally available ochre or hematite nodules. Remains of such nodules have been found from excavations. The painting tradition of potsherds may also be connected with it. Needless to emphasize that the rock art tradition continued from very stage say at least from the Upper Palaeolithic period to historical period in hilly areas and further continued in the folk tradition. Kohabar is an excellent example of this cultural continuity. Same can be said with regards to the tattoo.

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