

INTERPRETING ROCK ART IN INDIA: A HOLISTIC AND COGNITIVE APPROACH

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ABSTRACT

In Indian context, at least in Central Indian plateau region, series of narratives in the rock art imagery imply several conspicuous stages of culture such as: - forest based hunting - gathering and foraging nomads in early level being succeeded by pastoralists. Later stage includes rural community with use of wheels and animal power for transportation. Finally, during early historic phase, the most common visual imagery contains elaborate elements depicting the conflict between two groups. In such confrontation of metal weapons, horses and elephants are more common. Such battle scenes were not prevalent in Deccan plateau or in southern peninsular India. In southern India, majority of rock art sites are related to megalithic burials. Recent explorations have traced visual materials on ethnic conflict in Nilgiri Hills, Tamil Nadu. In Jharkhand, rock art is intimately associated to the folklore and myth of 'Kohbar' or marriage booth of a legendary royal bridal couple. The archaeological background of rock art in the same plateau region is somehow related to the megalithic burial system which is still being practiced among major tribal communities in the same milieu.

The analytical study on naturalistic or realistic figurative detail in rock art discerns that the social organization, economy and culture represented in the majority of rock art sites are almost identical to the tribal and other pre-urban societies, that retained their oral tradition. Therefore a set of methodology is proposed to outline the indigenous tribal history, their traditional attitude, experiences and sentiments reflected in the rock art imagery.

RIASSUNTO

Nel contesto indiano, o almeno nella regione delle pianure dell'India Centrale, delle serie di narrazioni nell'immaginario dell'arte rupestre implicano numerosi stadi culturali importanti come: nomadi dediti alla caccia nelle foreste, alla ricerca e raccolta di cibo, nei primi livelli poi sostituiti da allevatori. Uno stadio successivo include una comunità rurale che utilizza ruote e trazione animale per i trasporti. In fine, durante la fase iniziale dell'epoca storica, il più comune immaginario visuale contiene degli elementi elaborati che rappresentano un conflitto tra due gruppi. In questo confronto tra armi metalliche, cavalli e elefanti sono più comuni. Tali scene di combattimento non erano frequenti nell'altopiano del Deccan o nell'India meridionale peninsulare. Nell'India del sud, la maggior parte dei siti d'arte rupestre è in relazione con sepolture megalitiche. Recenti esplorazioni hanno rintracciato materiali visuali su conflitti etnici sulle colline del Nilgiri, nel Tamil Nadu. Nel Jharkhaland, l'arte rupestre è strettamente associata al folklore e al mito del "Kohbar", un'alcova matrimoniale di una coppia reale leggendaria. Il background archeologico dell'arte rupestre nella stessa regione pianeggiante è in qualche modo relazionato al sistema di sepoltura megalitica ancora praticato tra le maggiori comunità tribali dello stesso contesto. Lo studio analitico dei dettagli figurativi naturalistici o realistici nell'arte rupestre permette di capire che l'organizzazione sociale, l'economia e la cultura rappresentate nella maggioranza dei siti sono quasi identiche a quelle tribali e di altre società pre-urbane, che hanno conservato la loro tradizione orale. Perciò, viene di seguito proposta una metodologia per tracciare la storia, gli atteggiamenti tradizionali, le esperienze e i sentimenti delle tribù indigene, riflesse nell'immaginario artistico rupestre.

RESUME

En Inde, au moins au centre de l'Inde dans la région des plateaux, des séries de récits dans l'imagerie de l'art rupestre impliquent l'existence de plusieurs stades culturels évidents tels que : - des forêts où l'on chassait - des nomades faisant la cueillette et cherchant de la nourriture et ce pendant une phase archaïque, auxquels succéderont des bergers. Une phase plus tardive comprend une communauté rurale utilisant des roues et la puissance des animaux pour les transports. Pour finir, durant la phase historique la plus récente, la plupart des imageries visuelles communes contient des éléments élaborés décrivant le conflit entre groupes. Dans une telle confrontation des armes en métal, chevaux et éléphants sont moins répandus. De telles scènes de combats n'étaient pas dominantes dans le plateau du Deccan ou dans l'Inde péninsulaire du sud. Au sud de l'Inde, la majorité des sites d'art rupestre sont rattachés aux cimetières mégalithiques. De récentes explorations ont retrouvé des matériaux visuels sur le conflit ethnique à Nilgiri Hills, Tamil Nadu. A Jharkhand, l'art rupestre est intimement lié au folklore et au mythe de « Kohbar », ou à l'alcôve conjugale d'un couple royal légendaire. Dans la même région de plateaux, l'archéologie en arrière-plan de l'art rupestre est rattachée d'une façon ou d'une autre aux inhumations mégalithiques qui sont encore pratiquées dans la majeure partie des communautés tribales locales.

L'étude analytique des détails figuratifs naturalistes ou réalistes en art rupestre perçoit le fait que l'organisation sociale, l'économie et la culture représentée dans la majorité des sites d'art rupestre sont presque identiques aux sociétés tribales et préurbaines, qui perpétuaient leurs traditions. Une série d'approches méthodologiques est proposée dans le sillon de l'histoire tribale indigène, leurs attitudes traditionnelles, leurs expériences et sentiments reflétés dans l'imagerie rupestre.

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Archeologist Mary Leakey had written in her autobiography, Disclosing the Past, about the striking stone age paintings made by hunter-gatherers in Tanzania: "No amounts of stone and bone could yield the kinds of information that the paintings gave so freely."

Contextually, rock art is a rare form of evidence which correspond to glimpses of the indigenous world view, aspirations and narratives on their own explained identities during the past. Such practices may be viewed as an evidence of self expression, mostly representing the social norms and values rather than the aptitude of the individual artist – practitioners or performers. The overall basic uniformity and repetition of forms and themes in a site or within a locality reveal that the individual idea and creativity was dominated by the selection and inspiration of the group, both regionally or in totality. The presence of regional commonness in theme of art also indicate the tradition of practicing it by a particular group or similar contemporary ethnic groups of a particular period having a common identity. Often, the realism in rock art is a potential source for explaining the prehistoric and early societies, their life opportunities and life – cycle through systematic interpretations of the rock art imagery. A combination of rock art imagery with other corresponding collected antiquities from excavating the site may be considered as a unique source for reconstructing the past. The successive chrono – cultural order in rock art imagery could be related to archaeological strata when a holistic view on the society and culture could be emerged.

Worldwide, the genuine or authentic history of indigenous people is extremely limited. Majority of the indigenous societies did not have their own script or text, which is essential for their recorded past. On the contrary, whatever textual record on them is available was mentioned by the urban observers and elites. Generally, all such evidential support are expressions of biased outlook considering them inferior, outcaste or 'barbers'. We do not find any balanced account on the life and activities of Pre-Columbian American Indians, Australian aboriginals, different ethnic entities of Africa before the invasion of Christianity there as also in Melanesia and in Polynesian islands. In India, Sanskrit texts are the major sources for understanding the indigenous tribal and other communities identified as 'Dasyu' or robbers, 'Asur' or monsters, 'Kirata' or alien, 'Banar' or monkeys and such other derogatory connotations. In textual references, their society and culture is also viewed as alien to the mainstream society.

Therefore, throughout the world, the early records of indigenous people, whatever is stored and left in the rock art imagery should immediately be recorded properly for its indigenous cognitive interpretation. The cognitive approach means decoding of rock art imagery by using the local indigenous knowledge, value and tradition and not by imposition of any external concept on the indigenous views of that tradition.

In Indian context, at least in Central Indian plateau region, series of narratives in the rock art imagery imply several conspicuous stages of culture such as: - forest based hunting - gathering and foraging nomads in earliest level being succeeded by pastoralists. Later stage includes rural community with use of wheels and animal power for transportation. In the final era during early historic phase, the most common visual imagery contains elaborate elements depicting the conflict between two groups. In such confrontation and battle, use of metal weapons, horse and elephants are more common. Such battle scenes were not prevalent in Deccan plateau or in southern peninsular India. In southern India, majority of rock art sites are related to megalithic burial practices and its descriptive account is found recently. Now, recent explorations have traced visual materials on ethnic conflict in Nilgiri Hills, Tamil Nadu. In Jharkhand, rock art is intimately associated to the folklore and myth of 'Kohbar' or marriage booth of a legendry royal bridal couple. The archaeological background of rock art in the same plateau region is somehow related to the megalithic burial system. Similar burial system is still being practiced among major tribal communities in the same milieu.

Ultimately, the analytical study on naturalistic or realistic figurative detail in rock art discern that the social organization, economy and culture represented in the majority of rock art sites are almost identical to the tribal and other pre-urban societies, that retained their oral tradition. Therefore a set of methodology is proposed to outline the indigenous tribal history, their traditional attitude, experiences and sentiments reflected in the rock art imagery.

Tool making is the unique capability of man which initially emerged as an adaptive mechanism for success in sustenance. Material culture include all objects including tools and weapons, other artifacts, dress and ornaments, shelter and all household objects, vehicles etc. manufactured artificially with definite shape and purpose for its use. The common arena for research in the field of prehistory, palaeo-anthropology and also in the field of rock art is the reconstruction of prehistoric era.



Early human activities and their respective life opportunities during that unrecorded past is viewed in spatio – temporal dimension and it is the central theme for inquiry. In prehistory, generally the indirect evidences such as tools and artifacts, burials etc. are the basic source materials for analyses and analogy. The techno-typological study ultimately converges towards understanding and assessment of their level of skill and probable use and other significances are estimated through logical interpretations and correlations. Such estimations may be 'imposed realities', 'conjectural' and/or may not be bias-free as the observer's view is a predictable entity from a different level of both time and space.

Compared to such indirect and objective archaeological evidences, rock art imagery is relatively more direct, dependable evidence of the past which may reveal the life-opportunities, world view, belief pattern, norms and aspirations of the society. The visual narrative may explain both of overt and covert aspects, natural and supernatural means for their livelihood. Such interpretations revealing their society and culture are relatively uncomplicated, decipherable when the rock art imagery is realistic or naturalistic. Such sites portray arrangement of panels containing visual narratives and episodes containing arrangement and combination of various figures being based on a common theme. But Non – Figurative motifs, abstraction of forms, signs and symbols are also coexisting in rock art. Interpretation of such symbolic forms and icon is another stump blockade or challenging hurdle for deciphering of rock art. A general pan-human methodology is to be worked out with a site-wise consideration.

A thorough study on the rock art depictions to identify each of the form of the material culture there, its detail documentation and cataloguing is essential to trace the overall technological level of the society represented in the imagery. The prepared data repository is then compared cross culturally. The comparison with other similar sites as well as contemporary ethnographic data is a meaningful effort to trace the affiliation and identical forms, if any. Apparently and hypothetically, majority of the rock art imagery, particularly in India have close ethnographic parallels and this study being based on visual imagery ultimately reveal its validity.

Rock art may be defined on the basis of its inherent and essential features. Some basic & common features of pan- human rock art are as follows :

The representations are carvings, paintings, sculpture, bas relief, paint/s applied on carvings, bruising, and such other visual metaphors and symbolic imagery on any rock surface either in open air boulders, within caves, crevices, tunnels or rock shelters.

Technically each identifiable imagery form is composed of minimum possible lines and / strokes, dots, curvatures and this technique attained gradual improvement and became more intricate.

Details of the face of the individuals, particularly mentioning eye, nose, lip, and such other detail indicating details for personification could not be traced and / or such features are deliberately avoided by the artists.

No sign for preparation of rock canvas as base or space before any art activities.

The same rock canvas is utilized in successive generations / periods as evident in superimpositions. But always without erasing the earlier layer.

In imagery, different parts of body are mostly proportionate in overall representation.

Individual Anthropomorphs and zoomorphs are mostly shown in lateral views.

Basic colours and crude pigments are directly used without its further admixtures or combinations by making various shades with the principal colours.

Minimum application of colour or pigments particularly in contour lines or as solid block of colour filled in within the marked borders.

In later period more elaborate use of colour is evident primarily for ornamentation purpose.

In the genesis of rock art simple stick like figures gradually tend to develop figures in detail and descriptive accompaniments with the successive development of more competence, working experiences and skill. Non – figurative signs and symbols gradually become more abstract or simplified in form in course of passage of time.

Application of shades to the figures for realistic detail aiming more perfection is rare and mostly such an enhanced technique was adopted much later if at all achieved by that tradition.

Initially individual figures thematically mostly unrelated to each other are more common and in later period several figures are thematically and visually articulated to represent a metaphor or episode as a visual narrative.

In later development of rock art imagery the metaphors are more common where arrangement

of several figures had emerged and a composition seems to be a chronicle primarily functional in an oral tradition as substitutes of scripts. Possibly its purpose was an expression to share or communicate with other viewers of the contemporary period and / or of their future descendants.

15. In initial or formative level rock art display selective few types of repetitive figures or images. The range of variation increases with ongoing maturity of art tradition in subsequent stages.

In south Asia, particularly in India, cultural evidences suggest the successive presence of hominids from mid – Pleistocene onwards. Although, the direct fossil evidences are rare in this subcontinent, but gradual techno – typological advancements in successive chrono – cultural phases indirectly explain presence of hominids in different corresponding levels with biological adaptability and changes. In Indian context determination of absolute chronology for rock art is a challenging area for which a number of workers are already engaged. In recent times, Rock Art Society of India in collaboration with a group of international experts from International Federation of Rock Art Organizations, Australia with support from Archaeological Survey of India, Government of India had initiated a long term project titled as – EIP

(Early Indian Petroglyph) project. The objective of EIP project is to explore some potential sites with petroglyph as an evidence of origin and development of art in humankind. The basic hypothesis and scheme for this search was that even earlier periods such as middle palaeolithic and lower palaeolithic, nascent form of art, i.e. 'pre – art' or 'art – like' cupule marks were deliberately attempted by some of our predecessors such as archaic Homo sapiens, Neanderthals, Homo erectus or similar other hominids in Asia. Between the year 2001 and 2005 a total number of three sites were extensively explored and excavation continued in phases yielding no such outstanding results excepting confirmation of cupule marks in association with 'Lower and Middle Palaeolithic' assemblages(diagram :2). The major corpus of rock art in Australia is considered as middle palaeolithic in origin and the incidence of lower palaeolithic art in Australia is "very rare" (Kumar, Robert G Bednarik et al. 2005). It is also considered that the groups of middle palaeolithic sea farers from South Asia had reached Australia about 60,000 years ago and they were instrumental for diffusion of rock art from South Asia to Australia (Bednarik 1993) . Therefore, the objective of the EIP project was to explore for evidences and towards a more dependable chronology for the origin of art in humankind and particularly in south Asian context.

In EIP project a reassessment on several cupule marks and an irregularly arranged meandering line located in the auditorium cave of Bhimbetka, Madhya Pradesh (Page: 4). Members of the international team had studied micro-erosional aspects for ascertaining chronology of the cupule marks and one meandering line that they believed to be of early anthropic origin and was possibly preserved in the Acheulian strata (diagram: 2). The other site is Daraki Chattan in Mandsaur district of Madhya Pradesh where several cupule marks are distributed on the rock wall and in other surfaces within a narrow fissure in the rock. Excavations in the location have justified the site as habitation for early as well as late palaeolithic tool users. But by using optical dating method the cupules in Daraki Chattan in general have indicated "that the dated portion of this deposit is probably early to mid Holocene in age"

(Kumar, G., Robert G. Bednarik, Alan Watchman and Richard G. Roberts, 2005:63). The same team had also estimated dates of five different samples of paint including four white and one red by the using C14 Accelerator Mass Spectometry (Diagram: 1). Two samples containing white pigments of gypsum-bassanite paint applied to the imagery of a white quadruped zoomorph in Bhimbetka (Rock shelter AS – 144) had been dated as respectively - $1100+_{_}60$ years BP and $5190+_{_}310$ BP. In another site, Jamori

(site: J-52) two dates from white paint collected from the inner part of the imagery of another zoomorph resulted 1720+_310 years BP and 4810+_370 years BP. Whereas the red paint applied on the body contour of the same zoomorph was analyzed and have been dated as: 2780 +_40 years BP (Diagram: 1)(Kumar, Giriraj, Robert G. Bednarik, Alan Watchman and Richard G. Roberts, 2005). Therefore, the hypothesis (Bodnarik, 1993, 2001) for indicating the series of non-isonic evidences.

). Therefore, the hypothesis (Bednarik, 1993, 2001) for indicating the series of non-iconic evidences, mostly the cup marks as the earliest form of human cognitive expression for 'pre-art' level, need to be verified further. When the art in its representational, iconic or figurative form supposedly had evolved from cupules, the intermediate forms showing the stages of transformation from simple cup marks to gradually modified figurative expressions of visual imagery must have been developed. But from hundreds of rock art sites available in all parts of Indian subcontinent, any single evidence of intermediate assortment is not reported so far.



ROCK ART IMAGERY IN INDIA:

Indian rock art scholars like Gordon (1939-40); Wakankar (1976); Pandey (1990, 1993) etc; had suggested chrono-cultural evolution of rock art on the basis of certain morphic criteria such as style, use of colour and superimposition. But the stylistic development can hardly be traced uniformly in actual situation within the entire region. So, for the present purpose priority is given on the quantitative classification of the motifs prevalent in the region. This approach is to trace the thematic priority areas and its range of variables. Depending on the frequency analysis and classification of thematic content, colour-scheme, technique and style of art, the priority area of the artist, and identification of the possible source for thematic inspiration is attempted (diagram :5 & table :1 & 2). Sometimes the repetition of the thematic content reflects the mental obsession of the artist attached to a particular aspect (diagram :5 & table :1 & 2). The empirical studies reveal that in preliterate egalitarian societies, artist's perception is generally less hindividualistic and mostly represents the interpretation of the society (Chakraverty, 2004, 2009; Firth, 1992; Haddon, 1895; Layton, 1991).

In the rock art sites of Central India, such as Bhimbetka, Adamgarh as well as in Pachmarhi, the earliest layer of paintings mostly represent larger figures of wild animals either depicted in red ocher, white or grey in colour (Fig : 2 & 3). In Bhimbetka, within estimated total number of 6214 motifs, a maximum number of 1983 figures or 27.08% of the total number of figures

(diagram: 5) represent different animal species (Mathpal 1984). Numerically, the human figures rather in association with animal figures, with artifacts or single comprise the majority in the sites. Thus thematically, in central Indian plateau region, the artists were more anthropocentric.

It is also significant that within the total enumerated zoomorphs, a maximum number of 561 figures (33.33%) are of horses. On the contrary, the figures of horse-riders are 510(89.95%) within the category of anthropomorph in association with zoomorph. No doubt that in the final phase within a particular time frame or for certain generations, the horse and horse-riders had influenced much on mental imagery of the artists (Fig : 5,6 &11) . Figures of the archers and armed men are 377 in number, i.e. 54.40% of the anthropomorphic figures are with artifacts. In the battle scenes, individual warriors and other compositions represent group-conflict, violence and inter-ethnic or intra-ethnic struggle. Such idealized figures are thematically predominant in the Central India region.

Similar battle-scenes are rarely present in the rock art of northern region, eastern region or in the south. From a recently discovered site in Nilgiri hills, Tamilnadu of South India, portrayal of warriors and similar battle scenes are common. The maximum presence of a particular cultural element within a specific eco-cultural area suggests that the context, significance and functional use of the rock art vary from one region to the other. It follows the concept and principles of cultural-area. Either the artists had direct historical experiences about the battle or they indirectly learned about the episode through folklore and other modes of oral tradition.

The figures of horse or horse-riders are prevalent in tribal and folk art of central and western parts of India. Various votive figurines representing horse or horse-riders are integral part of rituals, belief and practices among the tribal societies like Gond, Muria, Bison-horn Maria, Korku and Baigas living in the almost similar eco-cultural areas within the state. Among those tribal societies, horse is considered as the most suitable seat for an honourable person and so it is the symbol of might, authority, power and prestige.

Korku tribe, living in Chhindwara and Hoshangabad districts of Madhya Pradesh is practicing a custom of erecting funerary pillar or 'gatha' under a sacred tree. The tribal craftsmen prepare the commemorative wooden tablet by carving in its both sides. The carvings usually depict the occupation or other identifying characters of the deceased person. The figure of an archer is essential for the 'gatha' of someone who was a successful hunter during his lifetime. Man or woman holding agricultural tools in hand are quite commonly represented on the memorial plaque. The 'gatha' of any village leader is usually decorated with a figure of a horse-riding hero (Fig: 15). The memorial tablets dedicated for woman are usually embellished with dancing motifs, figure with sickle or pots in hand. Both stylistically and in content, the motifs depicted on the memorial tablets are analogous to rock art. But the essential feature of any of the Korku memorial tablets is the symbolic presence of the figures of both sun and moon on the top. Sun and moon both are considered as supreme deities to the Korku tribe. But such celestial figures are entirely absent in the rock art sites of the region.

The pre-urban economy as represented in the rock art of the region has two overlapping stages. The greater number of depictions is of hunter-gatherers (Fig. 3). The facets of life-opportunities among the food gatherers were elaborately represented but the glimpses on the warriors do not contain any further

details. There are two possibilities, either the warriors were alien, invaders, mythical characters or the semi-nomadic group and due to historical factor joined in any battle as hired force. But nowhere in the rock art within the entire region one can find the technologically superior type of weapons, particularly use of any fire arms or presence of warriors in association to any household scenes. But in several cases, the depiction of umbrellas is associated to dance-scenes, rituals (Fig: 10) and it sometimes cover the head of the horse-riding warriors. The economy of the society was possibly in transition. Besides food gathering, they reared selected types of domesticates such as cow, water-buffalo, goat or sheep etc (Fig: 4). In majority of the rock art sites, no direct pictorial evidence for settled agriculture or use of plough exists. Fowling, collection of honey and seasonal fishing were their other sources for subsistence as evident in the rock paintings. In Chambal river valley and also in selected few sites of Betwa source region, the representation of bullock cart and use of animal power for ploughing is manifested in rock art.

Individual and group-hunting both were practiced simultaneously. Snares and nets were frequently used for hunting. In Bhimbetka and its adjoining sites of Betwa source region several painted motifs represent use of harpoon heads most possibly equipped with multi-barbed microlithic blades. Digging sticks are also depicted in the same level enclosed by hunting scenes (Fig:1). Presence of animal foot marks and figure of large mammals were attempted for planned group hunting (Fig:2). A clear division of labour is represented where the womenfolk were principally engaged in household activities. Responsibilities allocated to womenfolk included-grinding of fruit and cereals, cooking, nourishment of children, keeping of household utensils and other personal belonging (Fig: 4) etc. Figurines are rarely represented as carrying pots or with heavy head load of goods. Women are often shown as dressed in a short skirt but with projected breasts with a view to identify them discretely. Breast-feeding scenes are also frequent (Fig: 4).

In hair style, both male and female figurines are more or less identical. Men had long hair and they arranged their hair either in a bun or a knot of hair at a nape of one's neck. Mostly all warriors had similar hair style(Fig: 6).

The rock art is a unique source for studying the material culture of the society in its ecological background. The bow and arrows were indispensable for every household. The baskets were of different types. Clay pots, club, four kinds of axes, including hunting axes and water containers. Rock shelters were their usual dwellings. Sometimes they also constructed lean-to type semi-permanent huts(Fig:4). Variety of musical instruments including horns, pipes, different types of drums and other percussion instruments were popular to them. Horns and pipes are frequently associated to battle scenes.

The horse and elephant-riding figures point out political hierarchy existed in the society. But above all, hunter-gatherers and animal-rearing groups were possibly more egalitarian in type in their socio-political structure. Their group-solidarity is evident in the religious practices of the community. Scenes represent group dances during rituals, magic and other supernatural performances. It is interesting to note that their dance-style was more or less similar to the Gond-speaking tribal groups inhabiting the region. In Mahadeo area of Pachmarhi, descriptive account of certain rituals in rock paintings has identical phases similar to the performances of local tribal communities

(Fig: 10). Their annual autumn festival is related to the belief in fertility cult rendering more benefit from successful breeding and trouble-free maintenance of domesticates. During such festivities and ritual hand impressions in red ocher and other colours is essentially imprinted on the body of cattle and other domesticates.

Similar belief in fertility cult is not rare in the rock art, where x-ray paintings of cubs are delineated within the womb of quadrupeds. In rock art, palm prints, thumb impressions, hand stencils and finger markings are plenty. Such symbolic representations are also common to the local tribal households that are believed to protect themselves form evil eye, sorcery, witchcraft and similar other malevolent supernatural forces (Fig: 8).

The other features present in the rock art point out the presence of animistic type of religion. Head hunting was practiced in the society (Fig: 6). Head-hunting scenes are depicted in the Rajat Parbat rock shelters of Pachmarhi (Neumayer 1985). The personal adornment and hair style of victims as well as the assailant are similar. Possibly it portrays in-group feud or rivalry. Representation of two vultures on the tree depicts their presence as birds of prey who would exploit the carcass. They were waiting for the carcass as source of food within the battlefield (Fig: 6). The composition signifies the artist's level of perception and a definite motive for transmitting the inevitable consequence of a battle.

Sometimes, the attitude of the artist towards a particular motif is reflected in their nature of execution. Sometimes, in the compositions of the rock painting, the dimensions of certain motifs are



consciously exaggerated. The disproportionate motif, mostly larger than its other associated parts point out the purposeful attempt for attracting its viewers.

In Jharkhand state the rock art sites are related to a local legend of 'Kohbar' or marriage booth of a tribal king and the newly wed couple spent the night of their marriage in the rock shelter already decorated with paintings. Some of the sites, located near the Kiul river and in the bordering areas between Bihar and Jharkhand are also known to the local villagers as - Kohbar and local rivulet is identified as - Rani Gadar or after the unknown queen. The figurative motifs, often stylized horse riders, single or in groups, two persons carrying another within a palanquin or marriage - litter, symbolic designs and other unidentified motifs are common. In Jharnawa Rani Gadar site two persons armed with sword - like object hanging from their belts are shown encircled by two or three different rows of rounded objects, possibly be a row of stone boulders and the scene most possibly represent the visual account of a megalithic burial commemorating two warriors (Fig: 7). Similar composition of painted motifs representing burial practice has recently been reported from Chik Rampur, Karnataka (Sundara, 2006). In the same site, in a different panel painting signify a schematic map-like drawing showing households of a village-like settlement with its distinct boundary. There several horse riders and other villagers in defense against other horse riding invaders are engaged in protecting their territory. The village territory with arrangement pattern of conical thatched huts, cultivated land and the well-planned entrance of the village almost resemble existing village settlements in that locality (Fig: 9). In the entire area a significant proportion of non - figurative sign and symbols coexist with figurative rock art imagery. The motifs are mainly monochrome and represented in red ochre.

ROCK ART AND TRIBAL ART: A COMPARATIVE ASSESSMENT:

In rock art of Pachmarhi, the majority of the figurative representations are solid-bodied (79.67%), stick figure or line drawing (14.49%) and outline or contour (3.79%). The figurative motifs are mostly naturalistic (90.63%) with the exception of few (0.67%) figures of zoomorph and anthropomorph which have been identified as more stylized. Within naturalistic figures an anthropomorph is rarely shown with traces of projected nose, distinct eyes and in general all human and animal figures are devoid of such recognizable facial details. On the contrary, several human figures, mostly depicted within battle-scenes are provided with distinct dress, other forms of personal adornment including ornaments and hairstyle. In both sectors it is observed that the initial drawings of anthropomorph and zoomorphic figures, constitute arrangements of triangles to form the required figure (Table : 3).

In Korku society, horse-riding figures signify possession of wealth, power, prestige, higher status and overall dominance of the man in the society

(Fig: 15). Such figures as well as armed man in battle-scenes are frequent in Central Indian rock art sites. Such representations are quite common in Bhimbetka and other neighbouring rock art sites of Betwa source region and in Adamgarh hillock located in the southern bank of Narmada river.

In both sectors of art, technique of figural representations are mostly standardized and idealized, and repetitive forms are frequent. In both categories of art, the artist's creative impulses have seldom been expressed. The activity and experience of the ethnic group have largely been represented rather then the expression of individual perception.

A total number of 31 common elements (Table: 3) of morphic types were found in both rock art and tribal art of Pachmarhi. It comprises 4 types of zoomorphs including depictions of unidentified quadruped mammals, deer, horse and cow. Within anthropomorphs, two morphic types are respectively group dance and man guiding horse-rider. In the category of anthropomorph with zoomorph and material trait, a total number of three types of pictorial elements are common which are – horse rider holding artifact, hunting with bow and arrow and scene of animal husbandry. In the category of anthropomorph with material trait, a maximum number of 11 motif-types in both sectors are identical. Such type of figures include man holding knife and dagger, holding umbrella, drummer, holding stick or club, musicians playing flute or horn, holding bow and arrow, holding only arrow, holding only bow, and figurative drawing of man and woman shown under a shelter. In material trait, identical items are respectively; - umbrella, sword, knife or dagger, pot or basket, rock shelter or trait for habitation, drum, bow and arrow, club or stick and flute or horn. One generalized figure of a plant in the category of phytomorph and one solitary motif of floral-like design under the category of non-figurative motif is identical in nature.

As the comparative study reveals, in both sectors, the pictorial glimpses on the pattern of life,

activities and material culture are mostly indistinguishable. 31.96% of the total motif-elements identified in the rock art are thematically identical to those of tribal art. Therefore it is not unlikely that the Korku art tradition had been influenced by the rock art persisting in the same eco-culture region

In the present issue there are other observations pertaining to hypothesis, specially of Fischer (I96I). It is based on the data of world ethnographic samples. Fisher's first hypothesis entails that in the art of egalitarian tribal societies visual repetitions predominate. In hierarchical societies, varied design elements are more conspicuous. The data on rock art localities and tribal societies (Table no:) under this study have been examined (Diagram :7) and found that in all rock art sites as well as those of tribal societies repetition of art form is a common feature.

Fischer's second hypothesis relates egalitarian societies with presence of maximum empty space. On the contrary in hierarchical societies minimum empty space is left in art compositions. Considering the rock art localities in Pachmarhi maximum empty space exist within the painted area of the rock canvas. Such feature is also common in the art of the three tribal societies under study. Exception is met with in the rock art of Ulap, in Qrissa and Isco in Jharkhand. Therein the art motifs are more congested and inter-spaces are minimum pointing to a relatively advanced form of society with hierarchal phenomenon (Diagram :7).

Testing the third hypothesis, it has been found that in all rock art sites and tribal depictions the figurative and non-figurative) motifs are largely symmetrical which confirms the egalitarian society as their origin. Fischer (1961) had also related enclosed figures with the egalitarian societies, and in opposition, enclosed figures are predominant within hierarchical societies. In rock art, of Pachmarhi, in Juang society and partly in Ulap, art motifs are non-enclosed. On the other hand, Isco rock art and in art forms of the Korku and Saora tribal society enclosed figures is preponderant. Considering the above noted hypotheses, it may be inferred that rock art of Pachmarhi is a product of egalitarian society, whereas in Ulap and Isco sites, some elements of developed form are found to exist. Among the Korku and Lanjia Saora societies their art illustrates some features which are placed in transition between egalitarian and full-fledged hierarchical societies. These inferences are to be checked with the utilization of other forms of data for the purpose of confirmation (Diagram :7).

In the present endeavour, a number of hypotheses have been tested and the discussion of the same has been made earlier in appropriate context. It has also been observed that a great number of the hypotheses have been formulated but in most of the cases confirmation has not been made with appropriate data. It is to be borne in mind in the facet of art, both of rock art and tribal art, a number of factors are involved and in view of the same, a hypothesis may be correct from one perspective but it turns futile from other aspect. With the consideration one has to be cautious prior to formulation of any hypothesis which is provided with rationality. In central India, the early rock art represent a community which was closely similar to contemporary tribal societies, especially the marginal cultivators. Both similarities and differences are important for reconstruction of the early society and understanding their art as an integral cultural element. The basic similarity between the arts of two different chronological periods may be explained in terms of common economic pursuits, social organization and material culture. The cultural continuity of certain elements is prevalent in the cultural-area under consideration.

In India, the early artist did not paint all available rock shelters within a locale. They had intentionally selected very few but suitable rock shelters which were more accessible for communication and display to the viewers. The visual language of the early society had gradually transformed into pictorial narratives for self identification.

On the basis of superimposition and techno-stylistic consideration, it is confirmed that the rock art of the region had developed through successive chrono-cultural periods. On the contrary, in the same region, the tribal art tradition is significantly present (Elwin 1951). The analogy between the two sets point to either relationship or a connection between the two art forms. It may be mentioned that the similarities are often observed between the rock art and tribal art with regard to theme, forms, styles and motifs. In addition to the same, there is a significant overlapping on the distribution pattern between the two sets. Based on the above argument, it may be hypothesized that the tribal art is a continuity of the total tradition of rock art.

It is indeed essential to make attempt for establishing the continuity between the two sets on the basis of various forms of data information with the methodological standardization and application of rigorous analysis.

Among preliterate tribal Communities, the oral tradition including myths and legends is the



major source for reconstruction of ethno-history. In order to understand the culture continuum, the comparison between rock art and ethnographic account of relevant tribal societies from the same region may be attempted for a more rational approach in deciphering rock art. In addition to the study of tribal art, different aspects of material culture, social organization and the cultural expressions as reflected in rock art could be a useful source to trace the ethnic milieu of rock art.

References:

ANATI, EMMANUEL. 1994. World Rock Art - The Primordial Language. Studi Camuni. 12. Italy

Anand, Mulkraj, V.S. Wakankar and S.K. Pandey. 1974. Marg: Bhimbetka number. Bombay: Tata Press.

Anderson, C.W. 1918. The Rock Paintings of Singanpur. Journal of The Bihar and Orissa research Society. 4 (3): 298 - 306.

ANDERSON, RICHARD. 1979. Art in Primitive Societies. Englewood Cliffs: Prentice – Hall.Edited by Coote, J. and A. Shelton, pp. 15 – 39. Oxford: Clarendon Press.

ARCHER, W.G.. 1947. The Vertical Man: a Study in Primitive Indian Sculpture. London: George Allen and Unwin Ltd.

Bajpai, K.D. 1984. 'Rock-Shetters, Literary and Epigraphical Evidence. In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold Heinemann: 72 - 78.

BEDNARIK , R.G. 1990. 'An Acheulian Haematite Pebble with Seriations.' Rock Art Research. 7:75.

Bednarik, Robert G. 1991. Asian Palaeoart and Eurocentric Science. Purakala. 2 (2): 71 - 76.

Bednarik, R.G. 1992. Developments in Rock Art Dating. Acta Archaeologica. 63:141-155.

Bednarik, R.G. 1993. Palaeolithic Art in India. Man and Environment. 18 (2): 33 - 38.

Bednarik, Robert. G. 1996. The Cupules on Chief's Rock, Auditorium Cave, Bhimbetka. The Artefact.19:63-72.

Bednarik, Robert. G. 2001. Cupules: the oldest surviving rock art. International Newsletter on Rock Art 30: 18 – 23. Bednarik, Robert. G., G.KUMAR, A.WATCHMAN and R.G.ROBERTS.2005. Preliminary Results of the EIP Project. Rock Art Research 22(2): 147-197.

Bednarik, Robert. G., G.KUMAR, A.WATCHMAN and R.G.ROBERTS.2005. The EIP Project in 2005: a Progress Peport. Purakala 14 – 15: 13-68.

BOAS, F.1955. Primitive Art. New York: Dover Publication.

Brooks, R.R.R. 1973. India's rock shelter paintings. Asia. 31: 44.

Brown, P. 1923. "Notes on the prehistoric cave paintings at Raigarh." in Prehistoric India. Edited by P. Mitra, PP: 245-255. Calcutta: Calcutta University.

BRUIL, H. 1952. Four Hundred Centuries of Cave Art. Montignac.

ChandraMouli, N. 1994. Rock art of Andhra Pradesh, South India. Purakala. 5 (1-2): 41-51.

Chandramouli, N. 1995. Petroglyphs from Naidupalli, Andhra Pradesh. Purakala. 6 (1-2): 29 - 34.

Carllyle A.C.I. 1883. 'Notes on lately discovered Sepulchral Mounds, Cairns, Caves, Cave Paintings and Stone Implements'. Proceeding of the Asiatic Society of Bengal. 19:49. Carllyle, A.C. 1885. Report on tours in Gorakhpur and Ghazipur. Report of the Archaeological Survey of India.

Chakraverty, Somnath. 1995. "Isco: rock art site in Hazaribag", in Recent perspectives on prehistoric art in India and

allied subjects. Edited by R.K. Sharma and K. K. Tripathi, PP. 74 - 99. New Delhi : Aryan Books International.

Chakraverty, Somnath. 1998. 'Rock Art in Central India: its role and functional significance'. In History and Archaeology of Eastern India. Edited by Asok Datta: 134-147. Books and Books, New Delhi.

Chakraverty, Somnath. 1999. Primeval Rock Art and Ethnographic Analogy in India. Bollettino del Centro Camuno di Studi Preistorici. (31-32): 213 - 222.

Chakraverty, Somnath. 2003. Rock Art Studies in India. The Asiatic Society. Kolkata.

Chakraverty, Somnath 2004. Mystical Icons of Lanjhia Saoras: a Primordial Tribal Art Tradition of India. In New Discoveries, New Interpretations, New Research Methods. PP. 155 – 163. Brescia: Centro Camuno di Studi Preistorici. Chakraverty, Somnath 2009. Indigenous Tribal Art: Strategy for Conservation and Promotion. Journal of Social Anthropology. 6 (1-2): 87-102.

Chakraverty, Somnath and Asok K. Ghosh. 1996. 'Standar-dization of Rock Art: an approach for unification. Purakala. 7 (1-2): 23 - 28.

CLOTTES, J. 1996. Thematic Changes in Upper Palaeolithic Art: a View from the Grotte Chauvat. Antiquity. 70: 276 – 288.

CLOTTES, J. & D. LEWIS – WILLIAMS. 1998. The Shamans of Prehistory. Trance and Magic in the Painted Caves. New York, Harry N. Abrams.

Cockburn, J. 1883. On the recent existence of rhinoceros indicus in the north western provinces and a description of a tracing of an archaic rock painting from Mirzapur representing the hunting of this animal. Journal of the Asiatic Society of Bengal. 52(2): 56-64.

Cockburn, John. 1884. On the Durability of Haematite Drawings on Sandstone Rocks. Journal of the Asiatic Society of Bengal. Proceedings (?). 20 (?): 141 - 145.

Cockburn, John. 1898. 'Cave Drawings in the Kaimur range, North-West Provinces'. Royal Asiatic Society of Great Britain. 30:89-97.

Corvinus, G. 1968. An Acheution occupation floor at Chirki-on-Pravara, India. Current Anthropology. 9: 216-218.

DUBEY, MEENAKSHI. 1992. 'Rock Paintings of Pachmarhi Hills'. In Rock Art in the Old World. Edited by Michel Lorblanchet, PP: 131 - 145. New Delhi. Indira Gandhi National Centre for the Arts.

ELWIN, VARRIER. 1955. Religion of an Indian Tribe. Bombay: Oxford University Press.

ELWIN, VARRIER..1959. The Art of North – East Frontier of India. Shillong: North – East Frontier Agency.

ELWIN, VARRIER 1951. The Tribal Art of Middle India: a Personal Record.Bombay; Oxford University Press.

Fabri, C.L. 1936. The Vikramkhol Rock Inscription. Editorial remark. Annual Report, Archaeological Survey of India, 1930-34. 1:230.

FIRTH, RAYMOND.1951. The Social Framework of Primitive Art . In Elements of Social Organization. Edited by R. Firth., pp. 155 – 182. London : Watts.

FIRTH, RAYMOND. 1992. Art and Anthropology, in An-

thropology, Art and Aesthetics.

FISCHER, J.L. 1961. Art Styles as Cultural Cognitive Maps. American Anthropologist. 63: 79-93.

Francke, (REV) A.H. 1902. Notes on Rock Carvings from Lower Ladakh. The Indian Antiquary. 31: 398-401.

Franche, A.H. 1903. Some more rock carvings from Lower Ladakh. The Indian Antiquary. 32: 361-363.

Francfort, Henri-Paul, Daniel Klodzinski and Georges Mascle. 1992. Archaic Petroglyphs of Ladakh and Zanskar. in Rock Art in the old World. Edited by Michel Lorblanchet, PP. 147 - 192. New Delhi: India Gandhi National Centre for the Arts.

Ghosh, Asok K. 1984. 'Significance of Rock Art in the Light of Ethnographic Parallels'. In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold Heinemann: 106-111

Ghosh, A.K. and Somnath Chakraverty. 1995. "Rock arts of eastern India and their bearing with local Tribal arts: a cross-sectional study on continuity in India at the down of history. In India At the Down of History Edited by Asok Datta, Asok K. Ghosh and C. Margabandhu. Delhi: Agam Kala Prakashan.

Gordon, D.H. 1939 b. Indian rock paintings - II; the rock paintings of Kabra Pahar, Raigarh State. Science and Culture. 5(5): 269-275.

Gordon, D.H. 1940 b. Animals and demons in Indian Cave art. Science and Culture. 5(11): 662-667.

Gordon, D.H. 1940 a. Warfare in Indian Cave art. Science and culture. 5(10): 662-667.

Gordon, D.H. 1958. Prehistoric background of Indian Culture. Bombay: N.M. Tripathi Publication.

Gordon, D.H. amd F.R. Allchin. 1955. Rock paintings and engravings in Raichur, Hyderabad. Man. 5(55): 97-99.

Gordon, D.H. and Gordon. M.E. 1939-40. The artistic sequence of the rock paintings of the Mahadeo hills. Science and Culture. 5(6-7): 387-392.

Gupta, S.S. and K.D. Banerjee. 1984. 'A Note on Dating of the Rock-Shelter Paintings at Jhinjhari'. In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold-Heinemann: 79-81.

Gupta S.P. 1979-80. 'The alleged upper Palaeolithic bone mother Goddess from

HADDON, ALFRED C.. 1895. Evolution in Art. London., Walter Scott Ltd.

Hunter, G.R. 1935. Interim report, Dorothy Deep excavation. Nagpur University Journal. 1(1): 28-51.

Hunter, G.R. 1936. Final report on the excavation in the Mahadeo hills. Nagpur University Journal. 2: 127-144.

Joshi, R.V. 1975. Stone Age Cultures of Central India: Report of The Excavations of the Rock Shelter at Adamgarh, M.P. Deccan College, Pune.

Kenoyer J.M., J.D. Clark, J.M Pal. & G.B. Sharma 1983. An upper Palaeolithic Shrine in India. Antiquity .57.: 88-94. Khare, M.D. 1980. Painted Rock Shelters. Bhopal: Archae-

ology and Museums. Khare, M.D. 1984. 'Excavated Remains from the Rock-Shelters in Madhya Pradesh'. In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold-Heinemann: 129-

Khatri, A.P. 1961. Rock Shelters, Pachmarhi hills, District Hoshangabad, Indian Archaeology - A review : 960-961.

Khatri, A.P. 1964. Rock paintings of Adamgarh (Central India) and their age. Anthropos. 59: 758-769.

Kumar, Giriraj. 1996. 'Recording Standards and their Ratings: a Model for Conducting Study and Research in Purakala Vigyan'. In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Delhi: Aryan Books International: 100-104. KUMAR, GIRIRAJ. 1998. Morajhari: a Uniquw Cupule Site

in Ajmer District, Rajasthan. Purakala. 9 (1-2): 61 - 64.

LAYTON, ROBERT. 1991. The Anthropology of Art. Cambridge: Cambridge University Press.

LEROI GOURHAN, A. 1982 . The Dawn of European Art. Cambridge.

Mathpal, yashodhar. 1992. "Rock Art Studies in India", in Rock Art in the Old World. Edited by Michel Lorblanchet, PP: 207-214. New Delhi: Indira Gandhi National Centre for the Arts.

Mathpal, y. 1975. "Prehistoric Art of Bhimbetka : A preliminary study". Journal of the Puna University. 95-108.

Mathpal, Y.N. 1976. Rock art of India. Journal of Indian History. 54(1): 27-51.

Mathpal, Y. 1979. "Rock Art of Bhimbetka Region, Central India". Man and Environment. 3 : 27-33.

Mathpal, Y. N. 1981. Prehistoric art of India. The Eastern Anthropologist. 34(1): 1-26.

Mathpal, Y.N. 1984. Prehistoric rock paintings of Bhimbetka, Central India. New Delhi: Abhinav Publications.

Mathpal, Yashodhar, 1995. Rock Art in Kumaon Himalaya. New Delhi : Indira Gandhi National Centre for the Arts.

Mathpal, Yashodhar, 1996. 'Painted Motifs of the Bhonrawali Hill (Central India). In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Belhi; Aryan Books International: 36-40.

MATHPAL, YASHODHAR 1997. Rock Art of India: its Past, Present and Future. Purakala. 8(1-2): 37-44.

MATHPAL, YASHODHAR 1998. Rock Paintings of Bhonrawali Hill in Central India: Documentation and Study. Purakala. 9 (1-2): 5 - 52.

Mehta R.N., R.C. Agrawal, V.H. Sonawane, Parekh V.S. 1980. Chandravati. Boroda.

Mehta R.N. and V.H. Sonawane. 1981. A Prehistoric Engraving. Man and Environment. 5:91.

Mills, J.P. and J.H. Hutton. 1929. Ancient Monoliths of North Cachar. Journal of the Asiatic Society of Bengal. (N.S.) 25: 285-300.

Misra, V.N. 1977. Some aspects of Indian Archaeology. Allahabad: Prabhat Prakashan.

Misra, V.N. 1977. "Prehistoric Culture sequence of Bhimbetka", in Bhimbetka: Prehistoric man and his art in Central India. Edited by V.N. Misra, Y. Mathpal and M. Nagar, Pune: Department of Archaeology, Poona University and Decean College: 10 - 22.

Misra, V.N. 1977. 'Bhimbetka: reflexion of life in cave art'. Science Age. 4(6): 17-26.

Misra, V.N. and Y. Mathpal. 1976. Bhimbetka excavations. Pune: Deccan College.

Misra, V.N. and y. mathpal. 1979. Rock art of Bhimbetka region, Central India. Man and Environment. 3: 27-33.

Mitra, Panchanan, 1927. Prehistoric India. Calcutta: University of Calcutta.

MORRIS, D. 1962. The Biology of Art. London.

Nagar, Malti. 1977. "Living prehistory around Bhimbetka", in Bhimbetka - Prehistoric man and his art in Central India. Edited by V.N.Misra, Y.Mathpal and M.Nagar, PP. 23-26. Pune: Department of Archaeology, Poona University and Deccan College.

Neumayer, E. 1983. Prehistoric Indian rock paintings. New Delhi : Oxford University Press.

Neumayer, E. 1985. The rock paintings of the Mahadeo Hills, India. Bulletino del Centro Camuno di Studi Pretstorici. 22: 67-82.

Neumayer, E. 1991-92. Rock pictures in Orissa. Puratattva. 22: 13-24.

Neumayer, Erwin. 1992. "Rock Art in India", In Rock Art in the old world. Edited by Michel Lorblanchet, New Delhi: Indira Gandhi National Centre for the Arts. PP: 215 - 247.



Neumayer, E. 1993. Lines on stone - the prehistoric rock art of India. New Delhi : Manohar.

Pande, B. M. 1971. Neolithic hunting seene on a stone slab from Burzahom, Kashmir. Asian Perspective. 14: 194-198. Pande B.M. 1972. 'A Neolithic Tectiform from Burzahom, Dist: Srinagar'. Journal of Indian Anthropological Society. 7: 175-177.

Pandey, S.K. 1993. Indian rock art. New Delhi: Aryan Books International.

Pandey, Nirmala. 1996. 'Rock Art of Naryaoli (Dist. Sagar)'. In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K. K. Tripathi. New Delhi : Aryan Books International : 123-138.

Pradhan, S. 1995. Rock art of Orissa: A study of regional style. Purakala. 6(1-2): 5-15.

Ramabrahmam, V. 1996. Megalithic art in Southern Andhra Pradesh: recent discoveries. Purakala. 7(1-2): 47-50. Reddy, K.T. and S.K. Rao. 1996. 'Beliefs and Art – an Ethnoarchaeological View'. In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Delhi; Aryan Books International.: 46-50.

Rivett-Carnac, H. 1877. 'Rough Notes on Some Ancient Sculpturings on Rocks in Kumaon, Similar to those found on Monoliths and Rocks in Europe.' Journal of the Asiatic Society of Bengal. 46(1): 1-15.

Rivett-Carnac, H. 1879. Prehistoric Remains in Central India (Abstract). Journal of the Asiatic Society of Bengal; Proceeding.: 9-11.

Rivett-Carnac, J.H. 1879. Prehistoric Remains in Central India. Journal of the Asiatic Society of Bengal.48(1): 1-16. SANDARS, N.K. 1968. Prehistoric Art in Europe. Yale University Press. New Haven & London.

Sen,D. 1949. Pachmarhi and its painted caves and rock shelters. Calcutta geographical Review: 35-43.

SIEVEKING, P. 1979. The Cave Artists. London.

Singh Deo, J.P. 1976. Prehistoric Cave Painting of Jogimath Danger. Orissa Historical Research Journal. 22(2): 21-22. SHARMA, A.K. 1996. Excavation of the Painted Rock Shelters at Jhiri: a Preliminary Report. Purakala.7 (1-2): 39-46 sharma, madhuri, 1996. 'Rock Paintings of Sehore District (M.P.)', In Recent Perspectives on Prehistorie Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Delhi; Aryan Books International: 160-162.

shukla, pradeep kumar. 1996. 'Rock Engravings from North Raisen Region (M.P.).' In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Delhi; Aryan Books International: 163–174.

Singh deo, j.p. 1976. Prehistoric Cave Painting of Joginath Donger. Orissa Historical Research Journal. 22 (2): 22. smith, vincent a. 1906. Pygmy Flints. The Indian Antiqua-

smith, vincent a. 1906. Pygmy Flints. The Indian Antiquary. 35: 185–195.

sonawane, v.h. 1984. 'An Important Evidence to Date Rock-Paintings of Mesolithic Period.' In Rock Art of India. Edited by K.K. Chakavarty, New Delhi; Arnold Heinemam : 61-63.

snawane vishwarao. 1992. 'Significance of the Chandravati Engraved Core in the light of Prehistoric Art in India'. In Rock Art in the Old World. Edited by Michel Lorblanchet, PP: 273–283. New Delhi: Indira Gandhi National Centre for the Arts.

sonawane, v.h. 1997. Upper Palaeolithic Art of India : a Fresh Look. Purokala. 8 (1–2) : 5–16.

soundara rajan, k.v.1997. Rock Art Legacy in India. Purakala : 8 (1–2) : 49–52.

sundara, a. 1968. Rock Shelter, Hire Benakal Hills, Raichur. Indian Archaeology 1967–68–A Review, P. 67.

sundara. a. 1974. Further Notice of Rock Paintings in Hire Benkal. Journal of Indian History 52 (1): 21–32.

sundara, a. 1984. 'Some Select Rock-Paintings from North Karnataka.' In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold-Heinemann: 137–148.

sundara, a. 1987. 'Some Noteworthy Rock-Paintings in Chick-Ramapura.' Journal of Karnataka University (Social Science) 23:

sundara, a. 1996. 'An Engraved Geometrical Design from Gudnapura: from Harappa to Sonda (16th–17th Cent.) Period.' In Recent Perspectives on Prehistoric Art in India and Allied Subjects. Edited by R.K. Sharma and K.K. Tripathi. New Delhi; Aryan Books International: 41–45.

SUNDARA, A. 2006. Karnataka Rock Art : Some Distinctive Aspects. Purakala. 16 : 35 – 49.

tiwari, shankar. 1984. 'Excavation at Bhimbetka: A Reassessment.' In Rock Art in India. Edited by K.K. Charavarty, New Delhi: Arnold-Heinemann.: 149–153.

tiwari, shankar. 1984. 'Twenty Five Years of Rock Paintings Exploration in the Betwa Source Region: A Reappraisal.' in Rock Art in India. Edited by K.K. Chakravarty. Arnold-Heinemann: New Delhi.: 228–238.

verma, r.k. 1984. 'The Rock Art of Southern Uttar Pradesh with Special Reference to Mirzapur.' In Rock Art in India. Edited by K.K. Chakravarty, New Delhi : Arnold-Heinemann. : 206–213.

wakankar, v.s. 1962. Painted Rock Shelters of India. Rivista de Science Prehistoriche. 17 (1-4): 237–253.

wakankar, v.s. 1973. Bhimbetka Excavation. Journal of Indian History: 25–32.

wakankar, v.s. 1975. Prehistoric Cave Paintings. Marg. 28 (4): 17–34.

wakankar, v.s. 1975. 'Bhimbetka the Prehistoric Paradise'. Prachya Pratibha 3 (2): 7–29

wakankar, v.s. 1978. The Dawn of Indian Art. Ujjain : Bharati Kala Bhawan.

wakankar, v.s. 1984. 'Bhimbetka and Dating of Indian Rock-Paintings.' In Rock Art of India. Edited by K.K. Chakravarty. New Delhi; Arnold-Heinimann.: 44–56.

wakankar vishnu s. 1992. 'Rock Painting in India', in Rock Art in the old world. Edited by Michel Lorblanchet. New Delhi: Indira Gandhi National Centre for the Arts.: 319-336

wakankar, v.s. and r.r.r. brooks. 1976. Stone Age Paintings in India. Bombay: D.P. Taraporevala Sons & Co.



Fig: 1 Map showing the concentration pattern of rock art sites in different states of India.























