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Palaeolithic Art in India

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Abstract

The evidence so far presented in India of art or art-like remains of the Palaeolithic period is critically reviewed. It is confirmed that most of this evidence provides no valid proof of Pleistocene art traditions, and alternative interpretations of several types of such evidence are presented. However, the validity of a few other claims is reinforced, and new data of extremely great antiquity are added. Thus the evidence of Indian Palaeolithic art, extremely sparse as it is, provides some disconnected but very tantalising information about extremely early cognitive development of humans. Such evidence hints at the existence of very long traditions of non-utilitarian human behaviour. It is also attempted in this paper to explain the perceived paucity of Pleistocene art in India.

Preamble

In Europe and Australia, the question of the existence of Pleistocene art traditions has been essentially resolved, and convincing direct dating has been secured from various sites in recent years. In Europe, an Upper Palaeolithic art is preceded by traces of earlier non-utilitarian activities (Bednarik 1992a, 1994a), while in Australia, a minimum antiquity of up to 45, 000 years has been proposed for certain petroglyphs (Nobbs and Dorn 1988; Dorn *et al.* 1992; Bednarik 1992b). Very early art traditions exist also in southern Africa (Beaumont 1992).

In Asia, the evidence is far less clear, although there are tantalising finds from various parts of the largest continent (Bednarik 1992c). In India, specifically, the question of a Palaeolithic, i.e. Pleistocene, art tradition has been addressed only in a cursory fashion, and none of the few publications attempting to deal with it can be described as providing conclusive findings. Most importantly, no writer has actually attempted to consider all the available relevant evidence in a single comparative and analytical study, as indeed no single researcher had actually considered the combined relevant evidence of Asia until 1990. More importantly, there had been no adequate attempt to place the Pleistocene evidence from India (or any other Asian country) within that of Asia as a whole, let alone within the global framework (Bednarik 1992a, 1992c, 1993a, 1994a, 1994b). Here I shall present the results of an attempt to provide a comprehensive review.

In the course of an extensive lecture tour of India, undertaken together with G. Kumar, I have travelled to numerous archaeological as well as rock art sites, have been granted access to many specimens in university or museum collections, and have had the benefit of countless discussions with the many experienced researchers working in this field (Bednarik 1990a). To the best of my knowledge I have examined all known Indian evidence of art production or similar non-utilitarian behaviour that has been attributed to the Pleistocene, as well as a good cross-section of Mesolithic and more recent evidence. The rather tentative and fragmentary nature of the evidence summarised here is thus not a reflection of inadequate coverage, but rather one of the paucity of relevant material evidence.

Introduction

Wakankar (1973, 1975, 1978, 1983, 1987) has proposed an Upper Palaeolithic antiquity for the earliest rock paintings in central India, as determined from consistent patterns of superimposition in rock paintings. His claim, which is not accepted by most Indian rock art researchers nowadays, is essentially based on two factors. Firstly, a number of ostrich eggshell fragments have been found at a series of over forty sites, and some of them have been claimed to bear engravings. A series of five radiocarbon dates obtained from these finds ranges from about 25,000 to 39,000 years B.P.

(Kumar *et al.* 1988). From this, Wakankar deduced the possibility that Upper Palaeolithic people also produced art on rock supports. Secondly, he has proposed that superimposition among rock paintings at numerous Indian sites demonstrates invariably that the earliest painting phase is one of animated human and animal figures which were often executed in greenish pigment. He has excavated what he calls *terra verta* ('green earth') in the Upper Palaeolithic level of Bhimbetka shelter III A-28 (Wakankar 1975: 18, 1978, 1983) and he links this to the green paintings. However, Tyagi (1988, 1992) has shown that, where the green dynamic figures occur together with what he calls the intricate patterns, they invariably postdate these purely geometric patterns. Indian rock art specialists today reject the Palaeolithic age of the paintings, partly because the geometric tradition is seen as Mesolithic, with the Chandravati core (Sonawane 1981) being a key exhibit.

The subject is, however, not so clear-cut. For instance, the Chandravati core is not actually dated, it is merely assumed to be Mesolithic, and it is acknowledged (Sonawane 1991: 54) that the engraving on the object predates its use as a core. On the other hand, the clearly authentic engravings on the Patne ostrich eggshell fragment are stylistically very similar to the engravings on two fragments of bird bones from Bhimbetka III A-28 (Wakankar 1975: 19 and Fig. 12), which Wakankar places in the Mesolithic. Yet the Patne object is radiocarbon dated to 25, 000 years B.P. (Sali 1980). Moreover, there is no stylistic similarity between Wakankar's Upper Palaeolithic paintings and the markings on the Upper Palaeolithic ostrich eggshell objects. I have argued that not only are these rock paintings unlikely to be of the Palaeolithic, but also that nearly all of the many markings on the eggshells are not anthropic (Bednarik 1992c, 1992d, 1993b). This reduces the available sample of Palaeolithic mobiliary art from India drastically.

Upper Palaeolithic Mobiliary Art

Of the forty-six Palaeolithic fragments of ostrich eggshell I have examined microscopically in India, spread over several collections, I consider only one, the Patne specimen, to have been engraved by human hand. The others bear natural or taphonomic markings, in nearly all cases caused by a mycorrhizal symbiosis between the fungi and bacteria at plant rootlets, which resulted in the respiratory carbon dioxide of the microbiota reacting with moisture, forming carbonic acid that dissolved the calcium carbonate of the eggshell selectively. The resulting grooves are quite typical and I have described them also from several other materials (Bednarik 1992d), especially other mineralised calcareous and similar substances of animal origins (e.g. mammoth ivory in Siberia, bone in China).

Elsewhere I have also described the engravings on the Patne specimen (Fig. 1) in detail, and explained how such engravings are easily distinguished from natural grooves by microscopic examination (Bednarik 1993b). In addition to the authentic Patne specimen, there are also four perforated beads and an uncompleted bead, from Patne and Bhimbetka shelter III A-28. They are all from Upper Palaeolithic contexts, and they are consistent with the evidence of the extensive manufacture of beads from other materials in western Europe and Russia during the early part of the Upper Palaeolithic. Beads made of ostrich eggshell are also known from the Upper Palaeolithic of the Gobi desert and from the Saharan Capsian, while in southern Africa, the use of ostrich eggshell, including its decoration by engraving, extends far into the Middle Stone Age (Beaumont 1992; Bednarik 1993c). The identification of the numerous finds of ostrich eggshell fragments in India is secure (Sahni *et al.* 1990), and such fragments have been collected at more than forty localities (Kumar *et al.* 1988). Some of these date from the Upper Palaeolithic while others may even be of the late Middle Palaeolithic (Bednarik 1993b).

The Upper Palaeolithic bone object from Lohanda Nala in the Belan valley (U.P.) has been described as a mother

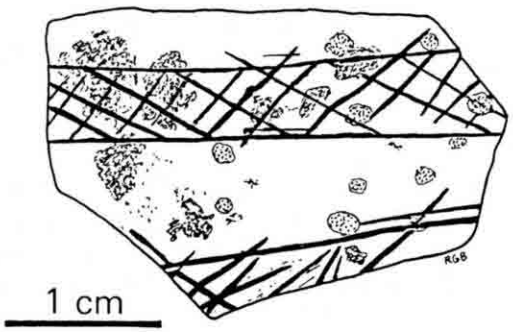

Fig. 1: The engraved ostrich eggshell fragment from Patne, early Upper Palaeolithic

goddess (V.D. Misra 1977: 49). It was excavated from Belan gravel III, a distinctive deposit that has been bracketed between two radiocarbon dates: 19, 715 ± 340 B.P. and 25, 790 ± 830 B.P. In fact it was found because its conspicuous point projected above the surface of the eroding deposit (V.D. Misra: personal communication). The distinctive Belan gravel III consists of coarse sand, angular quartzite clasts, and calcareous and iron oxide concretions, abounding with gastropod shells and cemented by calcite. It contains an early Upper Palaeolithic blade and burin industry (V.D. Misra 1977).

The Lohanda Nala 'female figurine', although well preserved by the sedimentary calcification, has suffered extensive mechanical damage in the coarse sediment. Microscopic examination permits the identification of seven areas of fracture, and if these are considered it is evident that the object was a harpoon fashioned from a large

compact bone, and that it was more than 99.6 mm long before damage occurred (Bednarik in preparation). The Upper Palaeolithic bone object from Pratapgarh which Wakankar (1975: 18) mentions is the same object (Wakankar 1988), but he seems to have changed his mind about its identification with time, calling it a harpoon-like figure of a goddess in 1983 and defining it as a harpoon by 1987.

The presence of an unusually well made bone harpoon in India, apparently long before that artefact was introduced in northern Asia and Europe, may come as a surprise to researchers accustomed to view technological as well as cognitive developments in a Eurocentric perspective. However, such early bone harpoons occur also in Africa, and there is even one specimen known from the Ngandong deposit on the Solo River, Java. So while the Belan valley object does not confirm an Indian extension of the contemporaneous Gravettian tradition of female figurines, it does provide cogent evidence of a highly sophisticated tradition of bone working in the early Upper Palaeolithic of India.

As in China, there are a few further forms of possibly relevant material from the Upper Palaeolithic. For instance, M.L.K. Murty (personal communication 1990) reports the occurrence of animal teeth (bovid) from one of the Kurnool Caves (Billa Surgam III; Murty and Reddy 1975), Andhra Pradesh, which bear a groove that facilitated attachment to a string. But even from the succeeding Mesolithic period, portable art is surprisingly rare. We have, in addition to the engraved Chadravati core, a few engraved bone objects, such as those from Bhimbetka III A-28, and the engraved human tooth held at Deccan College, Pune. It still remains in a jaw fragment, together with several other teeth, and bears faint geometric marks. However, in comparison to the spectacular number of Mesolithic rock paintings of India the paucity of mobiliary art from that time is conspicuous.

The Bhimbetka Petroglyphs

Evidence of a quite different magnitude of age has recently been found at India's most famous rock art site complex, Bhimbetka (Bednarik 1992a, 1992c). Located in the northern fringes of the Vindhyan mountains, some 40 km south of Bhopal, the sandstone formations of Bhimbetka comprise 754 numbered shelters, of which over 500 contain rock paintings that are largely attributed to the Mesolithic period. Archaeological investigation began in 1972, and within three years eleven shelters had been excavated. It was shown that some of these contained well-stratified sequences beginning with Lower Palaeolithic pebble tool industries and ending with Historical deposits.

The focal geological formation of the site complex are the quartzitic sandstone towers of Bhimbetka, dominated by a spectacular rock under which site III F-24 is located. It consists of a spacious horizontal tunnel of about 25 m length, ending in a cathedral-like hall which has three other openings, so that the plan view of the cave resembles a cross. In its centre lies an altar-like large rock, the Auditorium Rock, whose flat vertical wall faces the longer passage. On this panel is a group of seven extremely ancient cupules, which Wakankar had thought were markings resulting from the use of the rock as a rock gong (however, compare with Bednarik *et al.* 1991: 34). They are up to 16.8 mm deep and clearly precede the surface deterioration taking place on the rock face: a 14-20 mm thick cutaneous layer is in the process of exfoliating. Once fully detached it will obliterate all those cupules that are of a depth not exceeding its thickness. It is impossible that the cupules could have been made once the exfoliation process (probably caused by subcutaneous salt deposition from capillary moisture) had commenced. Moreover, microscopic examination failed to locate any crushed or impact-fractured grains in the cupules, while recent impact damage is clearly recognisable.

A few metres from the Auditorium Rock, at the base of an excavation pit, lies another huge boulder. It bears a single large cup mark with an adjacent meandering groove line. The cup mark is well shaped and circular, over 1.5 m below the surface, on the sloping surface of the partly excavated boulder. The line approaches the large cupule from above, then follows part of its circumference, running parallel to it but maintaining some millimetres distance from its periphery, and veers off to the right. It is not a natural marking of the rock, nor is the cupule. The surface of the sandstone is weathered, and it is again quite impossible to locate grains with impact damage. The sediment conditions in the cave are very dry today.

In view of the excellent stratigraphies at the Bhimbetka sites it is possible to consider the cultural provenance of these petroglyphs. An important stratigraphic marker of the Pleistocene at the Bhimbetka site complex is a pisolitic layer, 60 cm thick at site III A-29 (Wakankar 1975). At that site, its upper part is looser and finer than the more compact, coarser lower part, and while the upper half contains an Acheulian, the lower half provides a heavily weathered pebble tool industry of choppers and scrapers. The pisolitic stratum occurs also at III A-29, III A-30 and III F-24, and at trenches 1-7, Choti Jamun Jhiri Nala. The facies can be found widely throughout the Vindhyan hills. It is often exposed at lower elevations where it contains early Acheulian tools and Levallois cores.

In Bhimbetka III F-24, the Auditorium Cave, a red clay comprising lower Acheulian tools (bifaces dominant, with scrapers, cleavers) overlies the pisolitic layer, which here represents an occupational hiatus, but is underlain by a horizon with pebble tools (Fig. 2). The upper Acheulian layer (cleavers dominant, with bifaces and scrapers) is found at depths ranging from about 1.4 to 1.9 m. It, in turn, is overlain by a Middle Palaeolithic deposit, and a calcite-

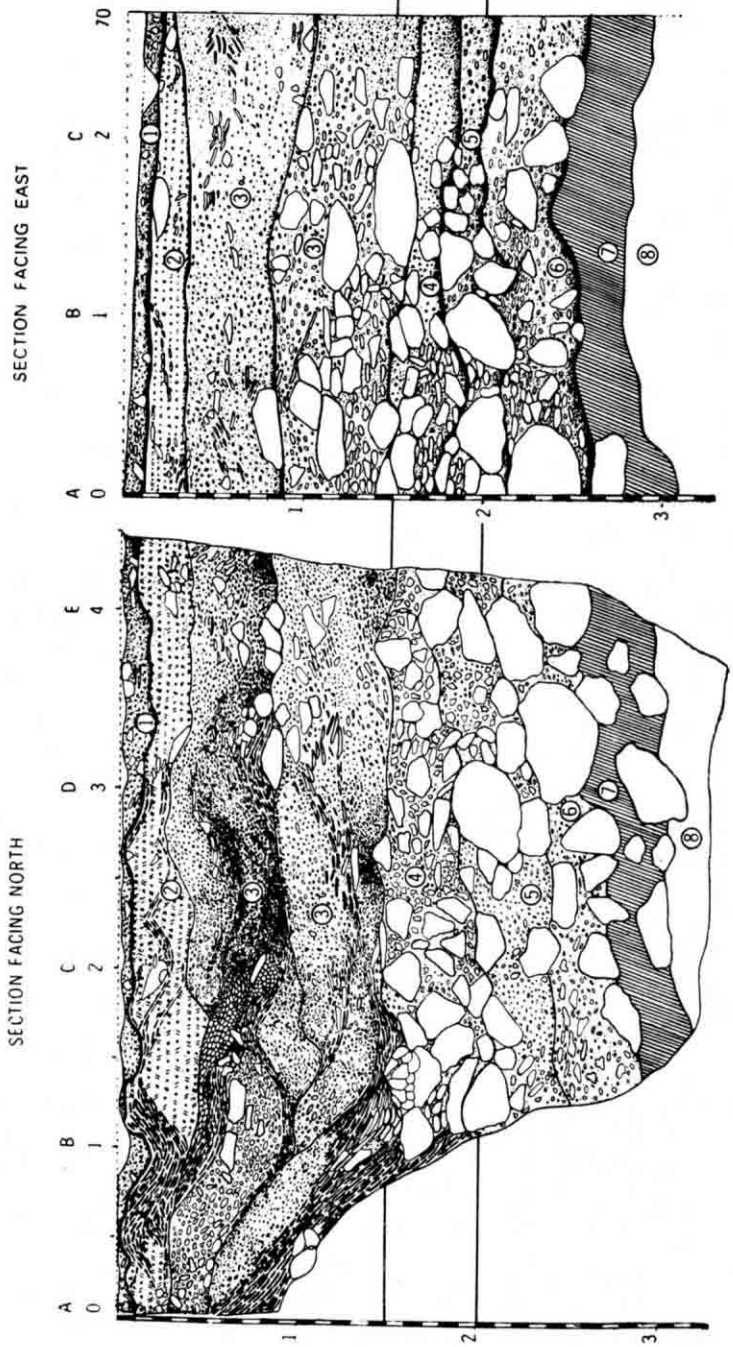

Fig. 2: The stratigraphy of the Auditorium Rock site at Bhimbetka, trench IIN, site III F-24, after V. S. Wakankar. The layers are:(1) Mauryan and recent; (2) Chalcolithic; (3a) Mesolithic; (3b) Middle Palaeolithic; (4) Acheulian II; (5) Acheulian I; (6) occupation hiatus; (7) pebble tools; (8) bedrock

encrusted breccia averaging about 60 cm thickness, comprising sandstone tools of an industry which Wakankar calls Bhimbetkian. He believes that this deposit is marked by wetter conditions. This Middle Palaeolithic deposit contained an artificial stone wall. There is no Upper Palaeolithic at this site, although occupation evidence of that period (including a human burial with ostrich eggshell beads) has been recovered from other shelters at Bhimbetka, including III F-23, which has an otherwise very similar stratigraphic sequence to that of III F-24 (V.N. Misra 1977). The uppermost 80-90 cm comprises a series of Mesolithic, Chalcolithic and Historic layers.

It follows from this that the large cup mark and meandering line are located roughly at the interface of the Acheulian with the Middle Palaeolithic levels. They were covered by the lowest part of the Middle Palaeolithic deposit, if not in fact by the uppermost Acheulian sediments. It therefore seems more likely that they were made during the Acheulian rather than the Middle Palaeolithic, and quite impossible that they postdate the latter period. One of the seven cupules on the Auditorium Rock (which were not covered by sediment) is concealed by a thin calcite layer which could relate to the same climatic phase as the calcite formation which compacted the Middle Palaeolithic layer, because the sediments above lack calcite cementing and suggest drier conditions (Wakankar 1975: 22-23).

Other Early Evidence

Wakankar reports two other relevant features from the Acheulian of Bhimbetka. A circular disc made of chalcedony was found in III F-24, and an artificial stone wall erected parallel to the wall of the rockshelter, was excavated in III A-30. Some eighty Acheulian stone tools were found in the space so formed. The stone wall, if correctly identified, would be among the oldest such structures known. Of broadly similar age might be the early Mousterian stone wall in Grotte de Rigabe (France), which is of the Riss glacial, while more recent Mousterian stone walls are known from the French sites Grotte du Prince (de Villeneuve 1906), Pêch de l'Azé (Bordes 1954) and Baume des Peyrards (de Lumley 1969). The circular disc from Bhimbetka brings to mind another Indian find, the Acheulian disc from Maihar (southwest of Allahabad), made of soft sandstone with centripetal flaking around its periphery (J.N. Pal: personal communication 1990). The Maihar industry (27.5% bifaces) is considered to represent an evolved Acheulian (V.D. Misra 1977: 7). Both the Maihar and the Bhimbetka discs do not seem to be suitable for use as tools, and are reminiscent of circular, non-utilitarian objects in other countries (Bednarik 1992a).

Perhaps more important in assessing the cognitive faculties of the Acheulian people are two other finds from India. At Singi Talav (Rajasthan), from the base of the Lower Acheulian deposit, six small quartz crystals have been recovered (d'Errico *et al.* 1989). They are translucent and monopyramidal, measuring from 7 to 25 mm in length. Apart from some micro-flaking at the edge of one specimen, the crystals show no use-wear and most are too small for tool manufacture. They cannot have been deposited by a natural agency, and an examination of their shape has shown that no fracture surfaces fit together. This confirms the observation that their mineralogical purity varies, suggesting that they do not come from the same crystal flower. They were carried to the site independently, apparently collected for their visual qualities. Clear rock crystals have been found at other sites of Lower Palaeolithic people, in China (Pei 1931: 120), Israel (Goren-Inbar *et al.* 1991), Austria and South Africa (Bednarik 1992a: 34, 1994b). These and other unusual stones found at other Acheulian sites (e.g. in South Africa and Israel) suggest that these people discriminated between common and exotic objects, and collected the latter for non-utilitarian purposes. While there is no dating available for the playa sediments of Singi Talav, the Acheulian at the nearby site Didwana (16R) is in excess of 390,000 years old (Raghavan *et al.* 1989).

There is also extensive evidence from various countries (Bednarik 1992a, 1994a, 1994b) that Acheulian people collected and used haematite and other iron oxides or hydroxides, either because of their appearance, or to use them as colouring material. Indeed, these 'ochres' are the most commonly used colouring pigment in all prehistory. In those cases where an ochre pebble bears wear facets with striation marks, it is clear that it was rubbed against a rock surface, in all probability in the form of a crayon. We have a few such specimens from the Lower Palaeolithic, including one from India. Found by K. Paddayya at Hunsgi (Karnataka) and identified by Bednarik (1990b), it comes from an Acheulian layer. The occurrence of ochre nodules from this locality was first reported by Sankalia (1976: 3-4).

Acheulian tools are found in most parts of peninsular India (Sankalia 1974), in both surface and alluvial contexts. It has been sometimes suggested that the Indian Acheulian is comparatively recent, but most of the latest attempts of absolute dating suggest that it is largely beyond the limit of the thorium-uranium method (350,000 years). Exceptions are one of the molars from Teggihalli (of *Bos*, 287,731 + 27,169/ – 18,180 $^{230}Th/^{234}U$ years B.P.) and one from Sadab (of *Elaphus*, 290,405 + 20,999/ – 18, 186 B.P.) (Szabo *et al.* 1990). However, an *Elaphus* molar from the same deposit of the former site is over 350,000 years old. Other dates beyond the limit of $^{230}Th/^{234}U$ dating have been reported from Didwana, Yedurwadi and Nevasa (Raghavan *et al.* 1989; Mishra 1992).

On present indications, the Middle Palaeolithic seems to have begun in India prior to 170,000 years ago, and

continued to about 30,000 or 35,000 years B.P. At Didwana (Misra *et al.* 1982; Misra *et al.* 1988; Gaillard *et al.* 1986), thorium-uranium dates for calcrete associated with Middle Palaeolithic industries (Misra 1989) range from 144,000 years upwards, and their validity is reinforced by a thermoluminescence date of 163,000 ± 21,000 from just below the level dated by $^{230}Th/^{234}U$ to 144,000 ± 12,000. At the upper end, radiocarbon dates as young as 31,980 + 5715/ – 3340 (Mula Dam, Maharashtra) and 33,700 + 1820/ – 1625 (Ratikarar, Madhya Pradesh) have been reported for Middle Palaeolithic horizons in Uttar Pradesh (V.D. Misra 1977: 62).

Summary

Besides there being no viable proof that any of the known rock paintings of India are of Palaeolithic age, that possibility enjoys little support among contemporary Indian researchers. In addition to their archaeological and stylistic considerations, it should be noted that the paintings are often rather well preserved despite possessing no silica skin, while exfoliation of the sandstone shelters is continuing. The prospects of finding Pleistocene art among the percussion petroglyphs of India are significantly better, which applies almost universally in all countries with rock art, the notable exception being the few regions with rock art in deep limestone caves. All other things being equal, petroglyphs have a greater longevity than rock paintings, particularly those that are deeply carved. Taphonomic selection processes (Bednarik 1993d) have two significant effects: firstly, they select in favour of deep petroglyphs on erosion-resistant rocks, and secondly, they lead to misinterpretation of the evidence. The two oldest sites of rock art currently known in the world are La Ferrassie in France (eighteen cupules on the underside of a limestone slab placed over a Neanderthal grave; Peyrony 1934) and Bhimbetka III F-24 (cupule and meandering line). The latter, being most likely in the order of 150,000 to 300,000 years old, are probably considerably older than the Mousterian petroglyphs of La Ferrassie (Bednarik 1993e). This does *not* prove, however, that the oldest rock art tradition consisted of pounded cup and line marks, it should not even suggest such a scenario. What it does mean is that the surviving component of the oldest known art consists of such marks. Since cup and line marks are the simplest and often deepest carved petroglyphs anywhere in the world, in any rock art tradition, they would have the best prospects of surviving for the longest time. Consequently it is entirely possible, indeed likely, that more complex motifs were also produced by those early traditions. Taphonomic logic (Bednarik 1992e, 1993d) would render this highly probable and it is relevant to note that in the oldest dated petroglyph tradition in which the petroglyphs were preserved by rock varnish irrespective of their depth, such very simple marks occur alongside much more intricate, cognitively very sophisticated motifs and mazes. This tradition, in Australia, is well in excess of 40, 000 years old (minimum-dated by radiocarbon content of concealing rock varnish), and thus contemporaneous with the Middle Palaeolithic of Eurasia and the Middle Stone Age of Africa. It has been argued that the earliest Australian rock art tradition suggests that there should have been preceding Asian traditions of art production (Bednarik and You 1991).

Another factor that has selected against the discovery and study of early Indian petroglyphs is the preoccupation of researchers with figurative paintings, and it has been reported that many Indian rock art researchers were unable to recognise archaic petroglyphs. When Bednarik *et al.* (1991) reported the first discovery of percussion petroglyphs in the Bhopal region (at Raisen), specialists who had examined these sites for decades at first refused to believe the report. Similarly, no note had been taken of the petroglyphs at Bhimbetka, in fact they were damaged in attempts to operate the claimed 'rock gong'. As soon as these finds were reported, more cupules and pounded grooves, deeply patinated and coated with mineral deposits, were found at other central Indian sites (Bednarik *et al.* 1991), and while none are dated at this stage, there is a possibility that some may also be of the Pleistocene.

In summary, the evidence of Pleistocene art in India is extremely sparse, almost as sparse as that of China (Bednarik 1992f), and considerably less numerous than such evidence is in Israel or Siberia. Nevertheless, it provides a very few tantalising examples of extremely early cognitive evidence, some being the earliest of their respective kind in the world. Such evidence hints at the existence of very long traditions of non-utilitarian human behaviour, and the perceived paucity of Pleistocene art in India remains to be explained. Essentially there are two likely explanations, both taphonomic in nature, but very different in their practical effects. A combination of cultural and preservation selection processes may have prevented the survival of art in nearly all cases, or alternatively, the cognitive predisposition of researchers may have selected against the consideration of relevant evidence. I must admit that I favour the second possibility somewhat at this stage, while conceding that the first-mentioned has no doubt also contributed: for most researchers the term 'Pleistocene art' conjures up images of figurative cave paintings, and there is considerable evidence that this model has affected the thinking and the predisposition of researchers throughout the world. I have argued that the Upper Palaeolithic 'cave art' of Europe is in fact an anomaly (Bednarik 1993a), and that most surviving Pleistocene art of the world is non-figurative and consists of petroglyphs or engravings. The western European model of art origins has resulted in a distorted view of cognitive human development: there is no shred of evidence that art, language, symbolism, ritual, self-consciousness or any other characteristic defining 'modern human-ness' first appeared in western Europe. On the contrary, western

Europe is not a likely region for such developments. On the present global evidence, southern Africa and India would be the most likely candidates for the earliest appearance of art or art-like products of human cognition (Bednarik 1992c, 1994a, 1994b). Naturally, this may change with the appearance of new evidence, but it is a valid assessment of present knowledge. I appeal to Indian researchers to ignore intellectually neo-colonialist models of early art development in favour of a much more critical approach, and to see the question of Pleistocene art in India in a global rather than a Eurocentric perspective.

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