

Africa and India: Pre-historic Parallels

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Preamble

Recently in a review article in this journal, Veena Sharma¹ wrote about the African diaspora in the Indian Ocean, describing migration currents of recorded history. Very much earlier connections between, for instance, India and African regions, existed also, but are perhaps less readily accessible to us. Here I will consider some incredibly early parallels between the subcontinents of India and southern Africa.

Before doing so I should point out my dissatisfaction with the ubiquitous term “prehistoric”, meaning the times before the introduction of writing — which is why I use the hyphenated version of the word in the above title. In my view the concept needs to be qualified: who decides what is history, and what is “before history”? Can there be a history before history? Is the introduction of writing (historically among a very small elite monopolising it) really a good benchmark for the commencement of “history”? Bearing in mind that the overwhelming majority of people who ever lived, including those of the last few millennia, could not write, and that many societies rewrote their histories every time a new ruler came to power (some even executed their historians on such occasions, for that very purpose), how reliable, representative and relevant are written histories? The proposition that a written history is more reliable than an oral one is not falsifiable, hence it is not a testable or scientific proposition. It is simply an appeal to simplistic plausibility. The existence among the Aborigines of Australia of stories accurately describing geological events of the late Pleistocene (events that occurred more than 10,000 years ago) suggests that oral histories may be more long-lived and more reliable than written histories. They may also be

more permanent, because they are transferred by rhyme, rhythm and chanting that render texts comparatively immutable, whereas a written text just 2000 years old might be inscrutable to all but the most knowledgeable.

In short, the term "prehistoric" should not be so readily accepted as historically valid, and it has no scientific currency at all. Proper science has to regard it as a simplistic colloquialism of a politically defined history. However, there is a ready way to deal with this moot topic, which is to substitute the term "pre-Historic". This hyphenated and capitalised version refers to the historical period that occurred before the time *some* people, because of their own historical prejudices or preferences, happen to call "History". The names of arbitrary historical periods are capitalised (e.g. Palaeolithic, Renaissance), and there can then be no objection to it. It also has the advantage of reminding us how subjective our views and constructs of the world are. We can never be reminded often enough of this burden of human consciousness.

In reviewing the connections between the two subcontinents, it is obvious that one needs to begin with the advent of the Tertiary period, some 65 million years ago. Until then, India and southern Africa formed a single landmass, together with Australia, Antarctica and parts of Brazil. This was Gondwanaland, the super-continent of the time of the dinosaurs. After it broke up into several continental plates these drifted into various directions. One joined with that of South America, another moved north across what is now the Indian Ocean, ploughing into the Asian plate with such force that it raised the currently highest mountain chain in the world. That process is still continuing, and the Himalayas are still being lifted, though the process is much compensated for by erosional forces. Still another part, the Australian plate, moved about until it began its present northwards drift. A mere few million years ago it made contact with the Asian plate. Along a subduction zone running close to Nusa Tenggara (formerly the Lesser Antilles) this caused great tectonic upheaval and volcanism, which to this day shape the character of Indonesia, and will continue to do so for millions of years.

These points take on a more direct relevance when we consider how much of their principal characteristics the regions in question still share. It must be remembered that, because north-eastern Brazil, southern Africa, India and Australia were once a single landmass, their formerly contiguous zones remain geologically very similar. They have the same sequences of geological facies, and because of this they share quite specific landforms. Indeed, Alfred Wegener, the founder of the

continental drift theory used as one of his arguments these great similarities in the regional geologies. I have conducted extensive studies of pre-Historic rock art in all four regions: in the Brazilian Noreste, the South African veldt, the Indian plateaux and the massifs of northern Australia. All four areas share the extensive sequences of more or less metamorphosed, usually horizontal sandstone layers: from the quartzites of Madhya Pradesh to the sedimentary rocks of the Kimberley, Arnhem Land or Piauí, there is a clear connection. Moreover, because these regions share fairly similar, sub-tropical climates, there are some common themes in the vegetation regimes we find in them, reflecting similar soils and environments. But from my own perspective, the geomorphologies evolving in these regions have much more significant similarities. The weathering of the sandstone banks facilitates specific common features, such as horizontally developed rockshelters. These are principally the result of undercutting through rising capillary moisture in the less resistant sandstone layers. Such sheltered localities tend to preserve rock art, especially rock paintings, for much longer than more exposed places do. It therefore comes as no surprise that these four regions possess some of the world's largest and most spectacular rock painting corpora.

In other words, the reason for the large concentrations of rock paintings in both India and southern Africa (as well as in northern Australia and north-eastern Brazil) is not some preference on the part of pre-Historic peoples in these regions. It is the availability of suitable sites of absorbent rock types, but most particularly, the ancient art is so plentiful because there are so many sites where it was able to survive.

The Early Indian Petroglyph Tradition

The subject I wish to review here, however, is rather different, and it is of an altogether different magnitude of age. The rich and well-studied rock painting traditions of India, especially central India, and various parts of southern Africa is generally believed to be less than 10,000 years old. Most of it probably falls into the last 5000 years. The apparent lack of any older traditions is almost certainly illusory, or rather, it does not reflect the absence of such older traditions; it reflects selective survival. We believe that rock paintings of the Ice Age could have only survived if they were in deep limestone caves (where their potential to survive is vastly greater than at open sites), or if they were covered by mineral crusts that protected them (such as silica or oxalate skins). However, the second basic form of rock art, petroglyphs or rock carvings, can survive

very much longer. One of our most important discoveries in this field of research was to find the earliest currently known rock art in the world — and it is in India.²

To place the significance of this finding into a realistic context, let us recall that the generally held view by the world's archaeologists is that palaeoart (*purakala*), including rock art, began in south-western Europe, and most particularly in France and northern Spain. This refers to the well-known cave art of the Upper Palaeolithic period, generally between 33,000 and 10,000 years old. This corpus occurs exclusively inside deep limestone caves, and there are believed to be about 300 sites of it in Europe. Many see it, subconsciously at least, as the proof that fully developed human culture began in Europe, from where it then spread to the rest of the world. Within the neo-colonialist worldview that still dominated scholarly thought during the 20th century, even as the colonial structures were being dismantled around the world, this concept was eagerly welcomed. It remains underpinned by Eurocentric archaeology, when in fact it is a dual misapprehension. First, the restriction of this rock art to caves indicates not some preference for caves, but that this is merely where it survived.³ Consequently in regions where there are no caves, or where rock painting was only practised out of caves, none is likely to be found. Much older petroglyphs, however, may be found anywhere under favourable preservation conditions. We have an enormous number of Ice Age petroglyphs from various parts of the world. In Australia alone they are thought to number in the hundreds of thousands, and many of them are probably of ages greater than the European cave art. Moreover, we believe today that the first colonisers of Australia, who arrived there on bamboo rafts perhaps 60,000 years ago,⁴ already brought with them a tradition of making rock art.

It follows from this that such earlier art-making traditions would be expected to exist in the presumed catchment area of successive waves of seafarers arriving in Australia. The area in question is southern and south-eastern Asia. Fully expecting that such earlier rock art should exist somewhere within this broad region, I set out to look for it in India. This may sound like a hopeless quest, rather like looking for a very tiny needle in a very large haystack. But the search was not entirely blind. From the sequence of rock art traditions in Australia I had a fair idea of what to look for. Against the considerable odds, I located two very archaic petroglyphs in 1990, of precisely the type I was looking for. They occurred in an excavated trench in one of the most celebrated Ice Age occupation sites of India: in Auditorium Cave, the focus of the Bhimbetka complex south of Bhopal. They had been covered by the uppermost part of a

sediment layer that contains rich deposits of a stone tool culture called the Acheulian. This means that they must be either of that period, or be even older, because by the end of that tool tradition they had become covered by soil and gravel, as the deposition of more recent cultural remains began.

The Acheulian is a cultural period of the Lower Palaeolithic, named after a site in northern France, St. Acheul. Its stone tools consist largely of beautifully made handaxes, large cleavers and chunky stone flakes. Its age in India is probably similar to its antiquity in Europe, the Middle East and Africa. There, it begins well over a million years ago and usually ends some time between 150,000 and 200,000 years ago. In India it is widespread, occurring at many sites, being represented by millions of stone implements. But it remains essentially undated, because the very few datings we do have so far in India are isolated and tentative. Nevertheless, an age range similar to that applying elsewhere in the Old World probably applies. In other words, the Bhimbetka petroglyphs might be between five and ten times as old as the oldest rock art of France. Perhaps, then, we should reconsider the questions or the origins of culture in this light.

There are nine more petroglyphs in Auditorium Cave, which all occurred above the ground, so their age is not apparent from the age of sediments covering them.⁵ I began to check if they, too, might be very old, using a method called microerosion analysis. It provides only approximations of age and had never been applied to such ancient rock art. The result was inconclusive, the rock art seemed to be beyond the range of the method, which I think suggests an age of over a hundred millennia. Although I published the Bhimbetka find in several scientific journals, researchers around the world, especially in Europe, remained most sceptical: could it be that archaeology had been so dramatically wrong?

But then Dr. Giriraj Kumar, the President of the Rock Art Society of India, who had worked with me and had followed this development closely, heard of a site in the Chambal valley. He examined a cave called Daraki-Chattan and found it to contain no less than 498 of the same petroglyphs. It yielded extremely archaic-looking stone tools even on the floor of the cave, i.e. on the top of its sediment deposit. Among them seemed to be again Acheulian handaxes. This suggested to him that the cave might be a second candidate for extremely ancient rock art.⁶ While this idea was based on circumstantial evidence only, the first photographs of the site's petroglyphs suggested to me that Kumar might well be right.

In agreeing with him about its research potential, and the need to conduct a very careful and international project to investigate its status, I decided to form an international commission to investigate not only Daraki-Chattan, but also the entire issue of this very early rock art. Because of our inadequate knowledge of the time depth of the Acheulian in India, it was also essential to clarify just when that period ended. This required the involvement of further archaeometrists, specialists in dating sediments and rock art. Kumar and I planned excavating Daraki-Chattan and also the sampling of two previous digs at major Indian Acheulian sites, both opened in the 1970s at the Bhimbetka complex. There we hoped to nail a time label to the end of the Acheulian and the beginning of the subsequent Middle Palaeolithic period. We also hoped that the floor deposit in Daraki-Chattan would reveal datable occupation evidence.

But what happened next exceeded our wildest dreams.⁷ During the excavation of a trench in the entrance of the cave, pieces of exfoliated rock slabs came to light in 2002. They had fallen off the walls of the cave's entrance, as a result of insolation (diurnal temperature stresses from solar radiation). Some of them, to our amazement, bore petroglyphs. So we followed their trail down through the deposit, to determine when the exfoliation of the petroglyphs had commenced. Below the lowest excavated rock art we found a very prominent floor, consisting of a pavement of rock slabs. This seems to have been levelled by trampling, by the foot traffic of the people then living in the cave. Clearly, they were the people most likely to have produced the rock art. Numerous of their stone tools occurred on the occupation floor, and they were of the Acheulian. More importantly, there were several of the hammer-stones of the type used to make the rock art, bearing clear impact scars.

In this way it has already become evident that the Daraki-Chattan petroglyphs (Fig. 1) are of the same order of antiquity as those in Auditorium Cave, and the evidence was already more comprehensive than at that site. But we decided that we could do still better. The excavated layers offered the opportunity to subject them to precise dating. We used a method called optically stimulated luminescence analysis. This is one of the most sophisticated dating methods presently available. It utilises remnant radiation products trapped in the crystals of individual quartz grains. These can be released in the laboratory and their energy measured. If one knows the radiation dose in the sediment, one can easily calculate at what time a tiny sand grain was last exposed to daylight. For this purpose, the natural gamma radiation is measured in precisely the location of the sample one dates.

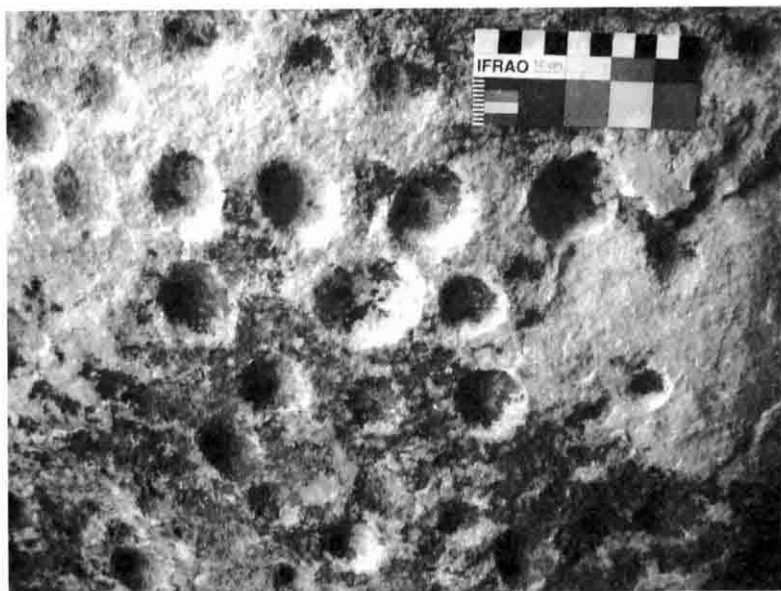


Figure 1. Some of the more than 500 cupules on the cave walls of Daraki-Chattan, central India, among the oldest rock art in the world.

A series of sediment samples is currently being removed and the background radiation measured for each. It may take a year or so to process the samples, but when we have the results, we will know the age of the oldest known rock art in the world. Moreover, by sampling other excavated sections at earlier digs at Bhimbetka we will determine the timeframe of these oldest stone tool traditions of India. We will hopefully, at long last, provide the Palaeolithic period of the subcontinent with a proper chronology.

The Early African Petroglyph Tradition

It had long been evident to me, from work in Australia and even in Europe, that the very earliest petroglyph traditions were limited to a small range of motifs: circles, parallel lines, dots, spirals and groups of bundled lines. These were preceded by even simpler ones, consisting of cupules and meandering lines. Cupules, or cup marks, are hemispherical, cup-shaped circular depressions, mostly on vertical walls, usually around 50 mm in diameter and 10-15 mm deep. They were hammered with elongate percussion stones, 150-200 g in weight and faintly pointed at one end. Cupules occur in all continents except Antarctica (which lacks

rock art altogether), they were made in most periods of human history, and they are found in astronomical numbers. They may occur in geometrical or other arrangements, and in Australia they were still made in the 20th century. The very old ones occurring in Auditorium Cave and Daraki-Chattan, however, are quite distinctive. They occur on unusually hard quartzite. Those on softer sandstone can be made in two to three minutes, but those on quartzite take, as we determined by experiment, about six hours to produce. They occur never in any arrangement or alignment, but as random groupings. And, of course, they are unusually much corroded because of their extreme age.

Before we draw from the data now available from India the conclusion that the earliest rock art is in India we need to consider some other evidence. In late 2001, one of the foremost South African archaeologists concerned with Ice Age evidence made another remarkable discovery. Dr. Peter Beaumont from the McGregor Museum in Kimberley found a series of cupule sites in the Korannaberg region of the southern Kalahari. Like the very early Indian cupules, they occur on a particularly hard quartzite, so hard that most of the stone implements found at the sites were made from it. The same applies at the Bhimbetka and Daraki-Chattan Acheulian sites. The artefacts of the South African sites belong generally to the Middle Stone Age (c. 120,000 years old), the Fauresmith (a local variant of the Late Acheulian, c. 400,000 years old) and the Middle Acheulian (older still). Beaumont is convinced that the cupules are extremely old, and I intend to attempt estimating their age in due course. There is a perfectly realistic possibility that they are of an age similar to their earliest Indian counterparts, or even older than these are. Whatever the case, Beaumont's Kalahari cupules may confirm that, Africa, too, was home to the early traditions we have detected in India.

In the case of southern Africa we have no good reason to be particularly sceptical about the reported rock art evidence, and its possible Acheulian age. A discovery of apparent palaeoart of such age was made by P. W. Laidler in South Africa as far back as 1933.⁸ He excavated at the Blind River mouth in East London a decorated grindstone of the Fauresmith industry on which was a clear pecked grid pattern. The deposit is thought to be in the order of 400,000 years old. This find, too, vies for the title of "earliest known rock art", but unfortunately the rock itself has disappeared. It may therefore well be the case that further research places southern Africa ahead of India in this "contest".

Another point that needs to be made here concerns a phonolite cobble from Olduvai Gorge, Tanzania, found by Dr. Mary Leakey many years

ago.⁹ The 10.5 cm cobble is generally accepted to be artificially grooved and pecked, and it bears what appears to be one cupule on each side (Fig. 2). Because of the relatively small size of the artefact and its Plio-Pleistocene age (c. 1.8 million years), it is possible that this is not a palaeoart object, but a utilitarian one. However, we cannot *a priori* exclude the possibility that it is indeed the earliest known occurrence of cupules.

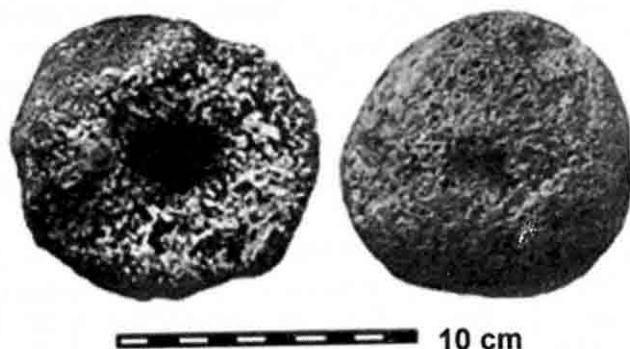


Figure 2. Mary Leakey's cobble from the Olduvai Gorge, Tanzania, which appears to bear a cupule on each side.

Be that as it may, the emerging picture is that, a few hundred thousand years ago, there existed in southern Africa and in India very distinctive traditions of making identical forms of very archaic rock art. These petroglyphs consist of simple grooves and cupules, and they have only survived in relatively sheltered locations, on particularly weathering-resistant rock types. It seems fairly unlikely that such highly specific behaviour of making symbolic artefacts should have evolved twice about the same time, in two different parts of the world. Rather, we should favour the explanation that the people of Africa and Asia were culturally connected, and that it was only in a few geologically suited places that limited evidence of this tradition has managed to survive. This notion gains very considerable support from the fact that the oldest known rock art of Europe, too, consists of — yes, cupules. The eighteen cupules found on the underside of a large rock placed over the grave of a Neanderthal infant in the French cave of La Ferrassie are, however, much younger than the African and Indian evidence.¹⁰ On an archaeological basis they are thought to be in the order of 50,000 years old, i.e. only a fraction of the identical rock art described above.

The emerging scenario, then, is that there was a very enduring culture that lasted hundreds of millennia and stretched from southern

Africa to southern Asia, eventually including both Europe and — after it was reached by seafarers — Australia. It is so ancient that its age is almost beyond our comprehension. What we know about it is extremely limited: we have some skeletal remains of these people, we have masses of stone tools, but very few artefacts of other materials. About their culture, and the forms of symbolisms they used, we know very little indeed. They used coloured pigments, though we do not know what they did with them. Some of these people were certainly seafarers, and all of them must have had language (this was denied by most Anglo-American archaeologists even in the last few years, as was their seafaring capacity). Conceptually, they may have lived in a reality very different from ours today, but in most other ways that really matter they were probably not so very dissimilar from us.

Thus the parallels and connections between the peoples of Africa and India are not just recent phenomena, they extend back well beyond the historical periods. They include the periods we choose to call pre-History, and ultimately they continue back all the way to the earliest periods of humanity. They extend to our very origins, and they are being demonstrated now in the most unexpected and most spectacular ways. Perhaps a hundred times as long ago as the golden age of Pharaonic Egypt, the peoples of Africa and India had a definable culture, which remained totally unknown until a few years ago. This is a fair indication of how little we really do know about our past, and how wrong the models emanating from Europe have been.

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