RAR DEBATE

Comment on
THE EMERGENCE OF THE REPRESENTATION OF ANIMALS IN PALAEOART
by Derek Hodgson and Patricia A. Helvenston, *RAR* 23: 3–40.

Comment on Derek Hodgson and Patricia A. Helvenston's 'The emergence of the representation of animals in palaeoart'

By PAUL S. C. TAÇON

Hodgson and Helvenston provide an informative overview of many of the evolutionary steps that led to modern human behaviour, especially in terms of depiction capacity and ability. A very extensive discussion of brain evolution is followed by a summary of Donald's (1991, 1993, 1998) ideas about cognitive evolution and then further steps that the author's consider led to the rise of representation. We are shown how brain development led to mind development and how various evolutionary pressures may have shaped early behaviour in order to better survive. For instance it is argued that by mimicking and deceiving animals (with animal skins and so forth) early humans were able to get closer to prey, which in turn added more protein to diets. The extra protein enhanced brain development, which in turn affected behaviour so that new positive feedback systems developed. They then argue that 'hunting disguises eventually came to serve as an interface onto which other aspects of behaviour came to be projected' (2006: 16). Replicating tracks in sand or earth was one of the resulting behavioural steps, and this eventually led to depictions of animals, especially in Upper Palaeolithic Europe. Various other influences are also mentioned but essentially the argument is an evolutionary one, with an emphasis on anatomy, biology and ecology. I think this is very valuable but that we need to take their argument a few steps further, fleshing out their structure with other chains of evidence. As well, their discussion would have benefited from inclusion of some of Thomas Wynn and Frederick Coolidge's work on cognitive development in relation to human evolution, especially concerning memory (e.g. Coolidge and Wynn 2001, 2005; Wynn 2002; Wynn and Coolidge 2003, 2004 and others by one or both with other people).

In terms of other things to consider, one of the most important is the human hand, intimately linked to human creativity and all manner of depiction. Human hand stencils and prints are the most common form of rock art found worldwide, figuring prominently in the oldest and most recent rock art. They are found throughout world rock art sequences, dating to most major periods, and human hands were also engraved into rock. Finger flutings, marks and designs made with hands and fingers in the soft cave walls are also found in various parts of the world and in most cases are extremely old (e.g. see Bednarik 1986). So besides an initial concern with animal tracks I argue there also was an early, almost obsessive, concern with the human hand and that this form of replication (as a stencil or print) was just as important as track replication in terms of a step toward depicting animals and other things. Indeed, the hand is so bound up with creativity that when Griffith University's School of Arts recently developed a new research program that focuses on creativity in the context of culture, community and communication, *The human question* (*http://www.griffith.edu.au/school/art/research/home.html*), the human hand, in various forms, was chosen as an iconic symbol. The logo of IFRAO is a human hand, and the hand has also been used by others in relation to creativity and the emergence of art over the past couple centuries, with a hand stencil motif today often used on maps around the world to flag the location of rock art sites.

In this regard it should also be noted that Hodgson and Helvenston are mistaken in their statement that in Australia 'innumerable drawings depict animal tracks, frequently those of the emu, often shown in stencil form along with stencilled human hand prints, animal limbs (butchered?) and hunting weapons' (2006: 13). This sentence actually confuses and conflates a few things. Hand stencils are pervasive across Australia but stencils of emu feet are not. Indeed, I know of only a few examples (one pair attached to legs in Kakadu National Park, a couple pairs in the Keep River region of the Northern Territory and one in the Blue Mountains of New South Wales). Secondly, hand stencils are distinct from hand prints and the expression 'stencilled human hand prints' confuses the two. Thirdly, depictions of animal limbs are rare; when they are found it is only in certain areas such as western Arnhem Land and their frequency is very low. Finally, depictions of weapons most often are associated with depictions of animals or humans, often in relation to some action but sometimes they are arranged next to figures. Hodgson and Helvenston are right to point out that there are innumerable examples of very ancient animal tracks but these are petroglyphs rather than drawings. Usually they are bird or macropod tracks and many species of each are represented in the Australia-wide track assemblage. As they point out, the 'emu track' is the most common bird represented in this way. In many parts

of the country both bird and macropod tracks were also painted or drawn but these mostly date to the Holocene, especially the mid- to late-Holocene.

Returning to the human hand, it is important to note the ways in which finger dexterity, hand and finger muscle strength, eye-hand-coordination and other aspects of human hands changed over the past few million years. Obviously many changes correspond with those outlined for the brain, mind and body but also the hand was refined by way of material culture. Artefact production, from rudimentary stone tools 2.4 million years ago to stone, bone and wooden tool kits (including hafted objects) from about 300 000 years ago (e.g. see Barham 2001, 2002), to the sophisticated range of artefacts made by hunter-gatherers of the past 50 000 years must have helped prepare the hand for its primary role in controlled line and infill-making, so essential for the creation of representations of things. Indeed, human hand development must have been linked to hominin brain expansion and the production of stone tools 2.5 million – 1.8 million years ago. Human hands also were very involved with pigment use from about 300 000 years ago, especially in parts of Africa and Europe (Barham 2002; Bednarik 2003; Taçon 1999, in press). Body art, drawing on objects, painting on rock and other aspects of hand-pigment use may have become regular practice since then and this is a crucial turn on the road to depicting and representing animals. Thus I contend human hand development occurred 'hand-in-hand' (excuse the pun) with all of the other changes Hodgson and Helvenston detail.

The human hand is also a common symbol of human identity, individual identity certainly and obviously but sometimes group identity as well. It is a key communication device and some hand stencils may be signs. It is a part of the body frequently adorned with forms of body art or symbolic association — painting, mutilation and rings are the more common — but it also is the part of the body used to most intimately connect with other humans (touching, caressing etc.), landscapes (hand stencils and prints on rock walls; hands on trees, rocks when climbing, etc.) and other creatures (hands are used to kill animals either directly or with artefacts/weapons, invariably at some point hand held; hands bring food to the mouth, either directly or via artefacts; some animals humans like are petted/stroked with human hands). It may well be that the human hand was recognised as both a symbol and sign very early on, its replication more important than that of human tracks, i.e. footprints, which are no where near as common in engraved, painted, drawn, stencilled or printed rock art.

This leads into a discussion of identity and identification, as well as other aspects of culture, community and communication. Again, this is an area that can also be explored in relation to Hodgson and Helvenston's work. There is an extensive worldwide literature on the ways in which humans identify with or have identity shaped by landscape, animals and other humans. Identity may have emerged as a powerful force shaping human destiny as much as 250 000 – 300 000 years ago (Barham 2001; McBrearty and Brooks 2000). Animals figure very prominently in many cultures' symbolic systems and composite creatures, with supernatural anatomies that sometimes combine human and animal elements, are among the most potent. Although Hodgson and Helvenston discuss therianthropes in the context of mimicking, deceiving and hunting animals, composite creatures actually play many more roles. An exhaustive and useful study they may wish to consult identified six types of supernatural creature in world oral history, art and literature, as well as Australian rock art (Taçon and Chippindale 2001: 176–9). These are (a) animal-human combinations; (b) composite animals; (c) double-headed animals; (d) creatures with different animal body parts; (e) animals with artefacts; and (f) distorted-deformed human-like creatures. It was also found that humans, past and present the world over, have used such imagery in similar ways — to illustrate, tell stories about and represent other forms of reality, religious belief and what Westerners more generally call the supernatural:

> Animal-headed beings also denote another world, another dimension of time and space that humans can sometimes tap into, through trance, ritual, ingestion of certain drugs or in other special contexts. Composite creature can be guides, messengers, helpers, friends, ancestors, gods, fools, villains, enemies, beings of great evil, symbols of the greater good. In a clinical, scientific sense they are symbols and tools used for teaching history, laws, lessons, norms of conduct and the rules of society. But they are also creatures of the Dreamtime — not the Australian Aboriginal Dreamtime but the Dreamtime of humanity, that rich ancestral world of times long ago that every so often penetrates the present to provide insight and other-world experience (Taçon and Chippindale 2001: 176).

As Hodgson and Helvenston point out, composite creatures are among the oldest dated painted images and sculptured forms surviving at some European sites but they appear alongside old rock art of other continents as well, suggesting they were first made in association with what appear to us to be the first animal and human representations from various parts of the world. This is an area that would be fruitful to further explore. Another question that arises is whether Neanderthal used animal skins to mimic, deceive and hunt large game given their heavy reliance on animal flesh in their diet. They also should have been skilled at identifying, 'reading' and following animal tracks in order to have survived so long in areas of harsh climate. Why did similar forces, anatomical, biological, ecological, behavioural, not lead them to represent and depict animals? In this regard, it also is curious the oldest surviving palaeoart of Asia and some other areas is geometric, and that depictions of animals and humans are relatively recent phenomena (e.g. see Bednarik 1994). Perhaps there is something else going on with animals and the development of animal representations in Upper Palaeolithic Europe, related to cultural pressures or the cultivation of social identity that ultimately became important for survival (e.g. see Gamble 1999).

Finally, the statement that 'the human relationship with animals is a deep-seated neuro-biopsychosocial contingency that often influences behaviour and culture in ways that are not always obvious' (2006: 16) is true but not profound as so is most everything else involving human relationships. Indeed, as in Australian Aboriginal culture, understanding the nature of relationships may be the more

rewarding way in which to best understand humans past and present. Among Australian Aboriginal peoples relationships between people and land/landscapes, people and other creatures (both animals and plants), people and other people, people and the past and people and Ancestral Beings (who created everything and commonly have composite or therianthropic form) guide most aspects of behaviour, including diet. These relationships define the world for traditional and many contemporary Australian Aboriginal people and they are expressed in ceremony, song, dance and visual art. Significantly, what appear to us to be straightforward depictions of animals are sometimes in fact depictions of Ancestral Beings, according to Aboriginal people. Furthermore, when actual animals were depicted at rock art sites in recent times it was more often after the catch rather than before (Taçon 1989 for western Arnhem Land but this pertains to some other areas as well). The images were subsequently used in story telling in many ways, from the secular related to actual experience (e.g. this is the huge barramundi I caught last year) to various levels of the sacred (it is taboo for young men of certain clans or moieties to eat these parts of the barramundi; the barramundi ancestor created that nearby river system; barramundi has restricted symbolic associations expressed in certain restricted ceremonies). Whether multiple levels of association, relationship and meaning pertains to Upper Palaeolithic representations of animals is important to consider, even without direct access to informed individuals of those ancient cultures. Certainly as Hodgson and Helvenston point out, broad explanatory theories such as 'shamanism' are unsatisfactory explanatory tools as there were likely many motivations behind the production of Upper Palaeolithic art, especially representations of animals.

In summary, although Hodgson and Helvenston have made a brilliant start in terms of explaining the rise of animal representation in early rock art, the next step would be to expand their theory to include two major areas of related human development: (a) the human hand and (b) the rise of social identity, culture and community in the context of relationships and creativity. Some exploration of the role of visual art in symbolic and other forms of communication would also be worthwhile. Of course, this is something much larger than can be presented in one journal article but the result would be a grand synthesis that would emphasise the interrelationships between anatomy/biology, ecology/diet, mind, behaviour, material culture, identity and representation, with an emphasis on creativity and creative thinking. Indeed, although all creatures can be creative it is the nature of human creativity that ultimately is the key feature that sets us apart from other animals and archaic ancestors.

Professor Paul S. C. Taçon
School of Arts
Gold Coast campus, Griffith University
PMB 50 Gold Coast Mail Centre
Queensland 9726
Australia
E-mail: *p.tacon@griffith.edu.au*
RAR 23-786

Further thoughts on comments by Chippindale and a reply to Taçon

By PATRICIA A. HELVENSTON and DEREK HODGSON

In a critical response to our paper 'The emergence of the representation of animals in palaeoart: insights from evolution and the cognitive, limbic and visual systems of the human brain', Chippindale (206: 17–18) pointed out that exceptions to the common pattern that plants have minimal representation in rock art are few. He referred to the 'yam' figures of Australia, stating '[I]n the singular "yam figures" in the rock art of western Arnhem Land, Australia — if their motifs *are* rightly identified as depicting yams, and therefore a vegetable domain — we seem to see hybrid figures, largely of human or quasi-human traits but with the human head replaced by a yam' (Chippindale 2006: 18). What he failed to note, as others have emphasised, is that the 'yam' figures include both human and animal-like 'yams' (Taçon and Brockwell 1995).

Chippindale *appears* to be implying that animal depictions were not common in the earliest art of Arnhem Land, thus raising a challenge to our hypotheses, which stimulated us to look into the subject in more detail. Interestingly, the 'yam' figures are found in the third chronological style of art from this region. The first style is dated to the late Pleistocene and the earliest art appears to be petroglyphs, followed by the earliest paintings according to Chaloupka (1977, 1984a, 1993a, 1993b). Indeed, Taçon and Chippindale (1994) argue that the earliest surviving art forms in Arnhem Land are petroglyphs of bird, macropod and human tracks, cup-like depressions, grooves and, occasionally, circles. These possible Pleistocene sites are rare, but when found in association with rock paintings they consistently underlie them (Sullivan 1988). Chaloupka argued that the earliest paintings consist of hand and object prints, followed by large naturalistic depictions of animals and humans. Taçon and Chippindale (1994) have argued that depictions of humans are extremely rare in this early painted style and that animals predominate. This evidence of the earliest petroglyphs and paintings depicting a large predominance of animal figures certainly supports our hypotheses regarding the European Palaeolithic.

In his comments in this issue of *RAR*, Taçon stresses the importance of the human hand, as evidenced in stencils and prints common in rock art from Australia and worldwide. Hodgson (2006: 27–37) pointed out that hand prints or stencils seem to predate the depictions of animals because they are relatively easy to produce. We certainly agree that the evolution of the human hand and hand/eye co-ordination are crucial adaptations necessary for executing visual depictions of human and animal tracks, hands, animals and humans. In our original paper we stressed the importance of the parietal lobes with their increasing connections to the frontal lobes, thus comprising a sensorimotor system. We indicated that the evolution of this system was critical to the ability to construct tools,

hunting implements and visual signs, symbols and drawings so we obviously agree with Taçon's emphasis on the importance of the hand for understanding the evolutionary development of artistic depictions on rock surfaces. Indeed, the importance of hand stencils and drawings may have become significant through the activity of handling ochre for which there is evidence as early as 300 000 years ago (Barham 2002). It is likely that the hands of individuals involved in this activity would have become smeared in this substance inevitably leading to accidentally made prints on various surfaces that would have been noticed as such (we mentioned the significance of ochre in our paper in relation to changing the appearance of the body for various reasons). Hunting disguises and the ability to change the appearance of the body through the use of ochre and various kinds of animal skins probably constituted the decisive factor that may well have predated the intentional making of hand prints. It is also possible that in the process of defleshing and butchering freshly killed animals the hunters' hands came to be smeared in blood that may have served as the original stimulus for the realisation of hand prints (this could be related to the fact that ochre, being a red tinge, is thought to be associated with the colour of blood).

Although hand prints and animal tracks are probably extremely ancient, there is a major change in magnitude of complexity from simply printing or drawing round the hand or depicting animal tracks to the actual portrayal of animals. Depicting hand prints and animal tracks on a two-dimensional surface is relatively straightforward but portraying animals is much more demanding and the remarkable fact is that although the ability to portray such objects in two-dimensions is technically sophisticated, the earliest examples of this kind of representation are nearly always of animals, not more sophisticated drawings of human hands from various angles. This fixation with animals is 'hard-wired' into the primate brain as we emphasised in our paper because specific areas of the cortex are encoded for assorted animal forms in modern humans although the need for this innate knowledge no longer exists in most cultures today (Caramazza and Mahon 2003; Caramazza and Mahon 2006; Caramazza and Shelton 1998).

Taçon stresses the complexity of the relationship between depictions of humans, animals and therianthropes, each of which may represent a human, an animal, an ancestor or a mythical figure or some combination thereof from the 'Dreamtime' and we certainly see this complexity as evidenced by some of the South African examples we cited in our paper. Clearly, a universalising attribution of the depiction of these images to 'shamanism' is completely inadequate and instead requires the sort of analysis provided by Taçon and Chippindale 2001, and more recently by us.

The next period of art in Arnhem Land has been referred to as the 'dynamic figures' style (because the figures appear to be highly animated) and focuses more on human figures than on large naturalistic animals. The figures in this period have been dated to at least 10 000 BP (Watchman 1987; 1990; Taçon and Chippindale 1994). The paintings reflect a predominance of human figures, often depicted with ceremonial head-dresses and ornamentation, and the material culture is characterised by boomerangs and single-pronged spears, as well as hafted stone axes. It should be noted that there are numerous depictions of what Chippindale and Taçon assume to be male figures, with only a very few clearly gendered with a penis. There were a number of female figures as evidenced by breasts (Chippindale et al. 2000). Occasionally, animal-headed (therianthropic) beings are shown 'chasing' the 'dynamic figures' (Chippindale and Taçon 1993: 52).

As mentioned, these 'dynamic figures' are seen in a variety of different action poses, sometimes in association with animals or therianthropic figures. One has to wonder if some of these animated hunting figures represent an early version of the corroborees in which Melville Island Aborigines imitated the actions of various animals, accompanied by song and music (the didgeridoo was the most common instrument) as reported by Baldwin Spencer (1914: 33), who observed them in 1911. He also noted what talented mimics the Aborigines were, not just of animals but of colonial authorities as well (p. 4). Other 'dynamic figure' scenes appear to depict hunting events, such as the spearing of an emu. Taçon indicates that we may wish to consult his study (Taçon and Chippindale 2001) to learn about how therianthropes might be identified with the mystical sphere. Indeed that paper is excellent but we independently arrived at a similar conclusion based upon the creation myths of the South African San and therianthropic figures in that rock art. For example, in our paper we discussed evidence that the first 'therianthropic' figures were probably depicting pure hunting disguises, but pointed out that camouflage and rituals associated with hunting may have led to the creation of mythical human/animal beings with valued powers which became represented in religious rituals and creation stories over the course of time and these therianthropic mythological creatures subsequently were re-created on permanent media such as cave walls. We suggested that portrayals of therianthropic figures became exapted from pure hunting-related activities to religious and mystical practices. In our original paper we discussed numerous examples of such activities from around the world that suggest just such exaptation but space restrictions necessitated a limit on this material. This will appear, however, in a forthcoming book. Thus we are in agreement with Taçon regarding the mystical meanings that therianthropic figures may signify in various cultures.

Layton (1991: 165) has suggested that the figures of hunters reflect the emergence of collective hunting strategies, but since chimpanzees demonstrate collective hunting strategies such skills date far back into hominin history, so we think it more likely that such strategies had acquired importance in religious or mystical rituals that were represented by palaeo-artists in the process of exaptation. Taçon and Brockwell refer to an illustration (#8, p. 687) that depicts a female 'dynamic figure' holding a 'hafted stone axe' that is one of the oldest paintings in Australia showing presumed stone tool use. Is this a huntress? After the European contact, ethnographic sources suggest male Aborigines typically hunted larger game, but that females

'gathered' or 'foraged' smaller animals, including lizards, snakes, small mammals, small to medium wallabies and birds. Why females, acquiring smaller game, are said to gather or forage rather than hunt is a mystery to us. They were also active in fishing expeditions and gathered yams and roots, berries, grasses, nuts etc. (Fallon and Enig 1999). Human firing of smaller burns has apparently altered Australia's biotic web over millennia. Most of these burns are set by females who hunt burrowing animals as they exit their den. It had been assumed that this firing would cause a renewal of vegetation upon which larger game depend, but recent studies of the Martu, Aborigines of the Western Desert, have shown that this is not so, as the burns primarily lead to increases in the animals that the females hunt (Bird et al. 2003). In more recent times the females are said to kill smaller prey with digging sticks, but a hafted stone axe would have certainly been an efficient method to stun or kill an animal as suggested by the 'dynamic figure' female mentioned above.

The next style that follows the 'dynamic figures' is Chaloupka's (1977; 1984a; 1984b) 'yam figure' style that Taçon et al. (1995) view as a mythological creature, often associated with flying foxes, birds and animals with unnatural attributes, who may have been a significant unifying symbol between diverse groups of people affected by the disruptions associated with the end of the Pleistocene (when sea levels rose, there was massive flooding, and a warming climate). These figures have been 'securely' dated to 6000 – 4000 BP by Chippindale and Taçon (1993). Thus, 'Yams, water lilies, and a variety of other plant motifs become commonplace in the art, suggesting a shift in interest towards certain plant foods' (Taçon and Brockwell 1995: 686). It is important to note, however, that the 'flying foxes' are very large fruit bats with a wing span of up to two metres. Although they figure in Aboriginal creation myths, these bats are also a highly favoured food animal that Australian natives hunted with consummate skill, based upon keen observation of the animals' behaviour (Fallon and Enig 1999).

Yams, also, became a highly favoured food item toward the end of the Pleistocene/early Holocene, as indeed they remain throughout South East Asia. Native New Guinea artists depict 'yam' people to this day — examples of which are available on the Internet. Spencer (1914: 93–110) observed an initiation ceremony among the Aborigines of Melville Island in which a particular yam, with many coarse roots resembling a beard, figured prominently (this yam appears to be associated with stimulating beard growth of an adolescent male as its rough surface is scratched across his chin). The purpose of the ceremony was to ensure that all yams multiplied over the next season and this was somehow linked to fertility being conferred by the yam in the ritual to the young male initiate (as evidenced by the growth of facial hair, a secondary sexual characteristic). Spencer also documented the Aboriginal use of many different yams, each associated with special cooking and preparation methods, among the Kakadu (p. 393-394).

This entire sequence of rock art summarised above actually supports our interlinking hypotheses. For example, we first discussed the importance of the close association between early hominids, Homo and various animals, as may be exemplified by the engraved tracks of birds, macropods and human footprints, the oldest 'art' in Arnhem land. This suggests the abstract representation of human hunters (footprints) tracking their prey (the footprints of birds and macropods). In our paper we suggested that scratches in the sand of animal tracks might have been one of the earliest representations and re-creations of the hunt and Aboriginal people were known to create complex 'sand paintings' much as do the Native Americans of the American Southwest.

The next style predating the 'Dynamic Figures' includes the earliest paintings which are dominated by naturalistic depictions of mostly animals with some human figures – again hunters, prey and now perhaps predators (snakes and crocodiles are among some of the naturalistic figures and although humans preyed upon them, undoubtedly the largest crocodiles preyed upon humans, just as they still do today in Kakadu park as a number of unsuspecting tourists have learned to their horror). The 'Dynamic Figures' style depicts organised human hunters (mostly male but there are depictions of females who may be hunters), with ceremonial gear and the first appearance of therianthropic figures. All of these elements suggest that rituals and ceremonies surrounding the hunt, along with possible hunting disguises and/or mythological figures as exemplified by the therianthropic figures have become culturally significant beyond the hunt itself. For example, we are indebted to Tilman Lenssen-Erz for bringing our attention to a depiction of human hunters disguised as ostriches in a rock art panel from the upper Brandberg, South Africa (Pager 2000) thought to be up to 4000 years old. The camouflages which two of the human hunters are wearing are sophisticated costumes mimicking the ostrich, right down to red lines on the shins of the human/ostrich figures. These lines are evidence of the keen observational abilities of the hunters because such red lines are typical of male ostrich legs during the breeding season. It seems safe to assume that these therianthropic figures not only represent hunting disguises but that they may also represent scenes from creation myths. Moreover there is certainly suggestive evidence, at the very least, that females were also hunters as shown by some of the 'Dynamic Figures', as well as the ethnographic sources from the past 150 years or so in Australia. Clearly, after the European contact females were known to hunt small animals, which speaks to a point we made in our paper that hunting and gathering were probably not as gendered in prehistory, or indeed in historical times, as many contemporary archaeologists would have us believe.

Following the 'Dynamic Figures' style, when many fauna became extinct, the 'Yam Figure' style appears to reflect an enhanced interest in plants (were Yams being newly domesticated and/or a more prominent feature of the diet?). These figures appear to have been endowed with certain supernatural or mythical characteristics, again suggesting their enhanced status in the culture. Yet there continued to be an interest in fauna as some of these figures continued to be animal-like in appearance. In conclusion,

according to papers which Chippindale co-authored with others, his work on the rock art styles in Arnhem Land supports, albeit on a much later time scale (perhaps as early as 50 000 years BP, but more securely dated to between 20 000 – 4000 BP) our linked hypotheses concerning hunting, disguises, re-creation of the hunt, religious ritual, and representation in cave art as we suggested for Europe from about 600 000 – 20 000 BP.

Taçon's comment that the oldest surviving palaeoart from various parts of the world consists of geometrics has been addressed by Hodgson (2000) who has demonstrated that these marks may have such ancient origins because they reflect, and are promoted by, how the early visual cortex functions and is structured. In fact, 'Panaramitee-like' geometric petroglyphs of Arnhem land predate the above sequence by a considerable period (Chippindale et al. 2000) which is consistent with the evolutionary scenario presented by Hodgson and the sequential progression suggested by Taçon.

We appreciate Taçon's kind comments with respect to our hypotheses and are gratified that our paper has generated such interest. We have already developed our argument along some of the lines to which he refers, as well as areas he omitted to mention, that will appear in the aforementioned book. Obviously we could not include all of our evidence in one paper. We responded at length to Wynn and Coolidge's comments to our linked hypotheses but while agreeing with them regarding the importance of augmented memory we indicated that 'working' memory is much more complex than their model would suggest (there is also much controversy regarding the role of an 'executive controller' in relation to memory vi-à-vis the prefrontal cortex). We therefore don't find their discussion of the evolution of cognition wholly convincing as evidenced by our reply to their comments These are, indeed, extensive areas for future syntheses that would 'emphasise the interrelationships between anatomy/biology, ecology/diet, mind, behaviour, material culture, identity and representation, with an emphasis on creativity and creative thinking' and we hope that Taçon and others will join with us in exploring these topics from the perspective of the specific hypotheses contained in our target paper.

Professor Patricia Helvenston
1407 N. Aztec Street
Flagstaff, Arizona 86001
U.S.A.
E-mail: *Patscholar@aol.com*

Derek Hodgson
2 Belle Vue Street
York
North Yorks YO10 5AY
England, U.K.
E-mail: *derek_hodgson@beeb.net*
RAR 23-787

REFERENCES

BARHAM, L. S. 2001. The emergence of regional identity in the Middle Pleistocene of central Africa. In L. Barham and K. Robson-Brown (eds), *Human roots: Africa and Asia in the Middle Pleistocene*, pp. 65–80. Western Academic and Specialist Press, Bristol. [PT] [PH-DH]

BARHAM, L. S. 2002. Systematic pigment use in the Middle Pleistocene of south-central Africa. *Current Anthropology* 43: 181–90. [PT]

BEDNARIK, R. G. 1986. Parietal finger markings in Europe and Australia. *Rock Art Research* 3: 30–61, 159–70. [PT]

BEDNARIK, R. G. 1994. The Pleistocene art of Asia. *Journal of World Prehistory* 8(4): 351–75. [PT]

BEDNARIK, R. G. 2003. The earliest evidence of palaeoart. *Rock Art Research* 20(2): 89–135. [PT]

BIRD, D. W., R. BLIEGE BIRD and C. H. PARKER 2003. Australian biodiversity and Aboriginal burning — hunting with fire: women, foraging and the ecosystem. *Human Ecology* 33(4): 443–64. [PH-DH]

CARAMAZZA, A. and B. Z. MAHON 2003. The organization of conceptual knowledge: the evidence from category-specific semantic deficits. *Trends in Cognitive Science* 7(8): 354–61. [PH-DH]

CARAMAZZA, A. and B. Z. Mahon 2006. The organization of conceptual knowledge in the brain: the future's past and some future directions. *Cognitive Neuropsychology*. 23(1): 13–38. [PH-DH]

CARAMAZZA A. and J. R. SHELTON 1998. Domain-specific knowledge systems in the brain: the animate-inanimate distinction. *Journal of Cognitive Neuroscience*. 10: 1–34. [PH-DH]

CHALOUPKA, G. 1977. Aspects of the chronology and schematisation of two prehistoric sites on the Arnhem Land Plateau. In P. J. Ucko (ed.), *Form in indigenous art: schematisation in the art of Aboriginal Australia and prehistoric Europe*, pp. 243–59. Australian Institute of Aboriginal Studies, Canberra. [PH-DH]

CHALOUPKA, G. 1984a. *From palaeoart to casual paintings: the chronological sequence of Arnhem Land plateau rock art.* Northern Territory Museum of Arts and Sciences Monograph Series 1, Darwin. [PH-DH]

CHALOUPKA, G. 1984b. *Rock art of the Arnhem Land plateau: paintings of the Dynamic Figure style.* Northern Territory Museum of Arts and Sciences, Darwin. [PH-DH]

CHALOUPKA, G. 1993a. *Journey in time*. Reed Books, Sydney. [PH-DH]

CHALOUPKA, G. 1993b. You gotta have style. In M. Lorblanchet and P. G. Bahn (eds), *Rock art studies: the post-stylistic era or where do we go from here?* pp. 77–98. Oxbow Books, Oxford. [PH-DH]

CHIPPINDALE, C. 2006. Working forward from distant times; working backwards from recent times. *Rock Art Research* 23: 17–18. [PH-DH]

CHIPPINDALE, C., B. SMITH and P. S. C. TAÇON 2000. Visions of dynamic power: archaic rock-paintings, altered states of consciousness and 'Clever Men' in western Arnhem Land (NT), Australia. *Cambridge Archaeological Journal* 10(1): 63–101. [PH-DH]

CHIPPINDALE, C. and P. TAÇON 1993. Two old painted panels from Kakadu: variation and sequence in Arnhem Land rock art. In J. Steinbring et al. (eds), *Time and space: dating and spatial considerations in rock art research*, pp. 32–56. Australian Rock Art Research Association, Melbourne. [PH-DH]

CHIPPINDALE, C. and P. S. C. TAÇON 1998b. The many ways of dating Arnhem Land rock-art, north Australia. In C. Chippindale and P. S. C. Taçon (eds), *The archaeology of rock-art*, pp. 90–111. Cambridge University Press, Cambridge. [PH-DH]

COOLIDGE, F. and T. WYNN 2001. Executive functions of the frontal

lobes and the evolutionary ascendancy of *Homo sapiens*. *Cambridge Archaeological Journal* 11: 255–60. [PT]

Coolidge, F. and T. Wynn 2005. Working memory, its executive functions, and the emergence of modern thinking. *Cambridge Archaeological Journal* 15: 5–26. [PT]

Donald, M. 1991. *Origins of the modern mind: three stages in the evolution of culture and cognition*. Harvard University Press, Cambridge (MA). [PT]

Donald, M. 1993. Précis of the origins of the modern mind. Three stages in the evolution of culture and cognition. *Behavioural and Brain Sciences* 16: 737–91. [PT]

Donald, M. 1998. Hominid enculturation and cognitive evolution. In C. Renfrew and C. Scarre (eds), *Cognition and material culture: the archaeology of symbolic storage*, pp. 7–17. Cambridge University Press, Cambridge (UK). [PT]

Fallon, S. and M. G. Enig 1999. Australian Aborigines Living off the fat of the land. *Price-Pottenger Nutrition Foundation Health Journal* 22(2): 574–763. [PH-DH]

Gamble, C. 1999. *The Palaeolithic societies of Europe*. Cambridge University Press, Cambridge (UK). [PT]

Hodgson, D. 2000. Art, perception and information processing: an evolutionary perspective. *Rock Art Research* 17: 3–34. [PH-DH]

Hodgson, D. 2006. Altered states of consciousness and palaeoart: an alternative neurovisual explanation. *Cambridge Archaeological Journal* 16: 27–37. [PH-DH]

Layton, R. 1991. Trends in the hunter-gatherer rock art of western Europe and Australia. *Proceedings of the Prehistoric Society* 57: 163–74. [PH-DH]

McBrearty, S. and A. S. Brooks 2000. The revolution that wasn't: a new interpretation of the origin of modern human behavior. *Journal of Human Evolution* 39(5): 453–563. [PT]

Pager, H. 2000. *The rock paintings of the Upper Brandberg, part V – Naib Gorge (A) and the northwest*. Heinrich-Barth-Institut, Köln. [PH-DH]

Spencer, B. 1914. *Native tribes of the Northern Territory of Australia.* Macmillan and Co., London. [PH-DH]

Sullivan, H. 1988. Rock engravings in Kakadu National Park. Unpubl. paper presented at the First AURA Congress, Darwin, 19 August. [PH-DH]

Taçon, P. S. C. 1989. Art and the essence of being: symbolic and economic aspects of fish among the peoples of western Arnhem Land, Australia. In H. Morphy (ed.), *Animals into art*, pp. 236–250. Unwin Hyman, London. [PT]

Taçon, P. S. C. 1999. All things bright and beautiful: the role and meaning of colour in human development. *Cambridge Archaeological Journal* 9: 120–6. [PT]

Taçon, P. S. C. in press. Behaviourally modern at 300,000 B.P.: was my ancestor brighter than yours? In D. Curnoe (ed.), *Modern human origins: Australian perspectives*. Pandanus Press, Canberra. [PT]

Taçon, P. S. C. and S. Brockwell 1995. Arnhem Land prehistory in landscape, stone and paint. *Antiquity* 69: 676–95. [PH-DH]

Taçon, P. S.C. and C. Chippindale 1994. Australia's ancient warriors: changing depictions of fighting in the rock art of Arnhem Land, NT. *Cambridge Archaeological Journal* 4: 211–48. [PH-DH]

Taçon, P. S. C. and C. Chippindale 2001. Transformation and depictions of the First People: animal-headed beings of Arnhem Land, N.T., Australia. In K. Helskog (ed.), *Theoretical perspectives in rock art research*, pp. 175–210. Novus forlag, Oslo. [PT] [PH-DH]

Taçon, P.S.C. and C., M. Wilson and C. Chippindale 1995. The semiotics of symbolic snakes: recognising Rainbow Serpents, their signs and associates in Arnhem Land rock art. Paper presented and the News 95-International Rock Art Congress. [PH-DH]

Watchman, A. 1987. Preliminary determinations of the age and composition of mineral salts on rock art surfaces in the Kakadu National Park. In W. R. Ambrose and J. M. J. Mummery (eds), *Archaeometry: further Australasian studies*, pp. 36–42. Department of Prehistory, RSPacS, Australian National University, Canberra. [PH-DH]

Watchman, A. 1990. A summary of occurrences of oxalate-rich crusts in Australia. *Rock Art Research* 7: 44–50. [PH-DH]

Wynn, T. 2002. Archaeology and cognitive evolution. *Behavioral and Brain Sciences* 25: 389–403. [PT]

Wynn, T. and F. Coolidge 2003. The role of working memory in the evolution of managed foraging. *Before Farming* 2003/2(1): 96–109. [PT]

Wynn, T. and F. Coolidge 2004. The expert Neanderthal mind. *Journal of Human Evolution* 46: 467–487. [PT]

Comment on
PRESUMED GIRAFFE PETROGLYPHS IN THE EASTERN DESERT OF EGYPT
by Tony Judd, *RAR* 23: 59–70.

Do giraffes sit everywhere?

By JAN B. DEREGOWSKI

T. Judd's paper on *Presumed giraffe petroglyphs ...* (*RAR* 23/1) does not consider the phenomenon of sitting giraffes to which several workers (e.g. Rhotert 1952; Scherz 1975) drew attention.

This implies that the phenomenon may not be as widespread as Deregowski and Berger (1997) thought on the basis of Northern Sudanese (Rhotert), Namibian (Scherz) and Nile Valley (Winkler) evidence and therefore that its explanation in terms of natural perceptual inclinations of the artists as demonstrated by their experiment carried out on Scottish children may be invalid.

Such conclusion may, however, be rash as Judd's paper may simply be yet another demonstration of the effect of attention; students of rock art in common with other observers, tend to see whatever they are looking for.

Professor Jan B. Deregowski
Department of Psychology
Kings College
University of Aberdeen
ABERDEEN AB9 2UB
Scotland
United Kingdom
E-mail: *psy022@abdn.ac.uk*
RAR 23-788

REPLY

Giraffes never, or rarely, sit in the Eastern Desert

By TONY JUDD

Professor Deregowski raises a very interesting point and he is right to imply that I should have drawn attention to it. The fact is that the sources available to me report *no* examples of 'sitting' giraffes in the Eastern Desert. There are, however, a few in the Nile Valley: Winkler (1939) reports three near El Hosh in Egypt (Pls LI and LII) and Hellström reports a further two near the Second Cataract in Nubia (Pls 47[5] and 48[2]). There are also a handful of rather dubious examples from Nubia, mainly of animals drawn at an inclined angle that is not unequivocally 'sitting'. Winkler reports four more in the Western Desert between Dakhla and Kharga oases (Pls LIII and LIV).

If we ignore the dubious cases there are two 'sitting' giraffes among the 266 in Nubia that I analysed — rather less than 1 %; and there are none among my 58 in the Eastern Desert. These statistics indicate that the absence is probably not significant: if the artists in both Nubia and the Eastern Desert chose the 'sitting' orientation at random but with a probability of less than 1 %, the absence of any examples in a sample of 58 is quite likely.

The question is, of course, whether 'sitting' was chosen at random or conditional on some other circumstance — a circumstance that did not arise in the Eastern Desert. A statistical comparison with the data from Sudan and Namibia might help to answer it.

Tony Judd
School of Archaeology
University of Liverpool
P.O. Box 147
Liverpool L69 3BX
United Kingdom
E-mail: *tony.judd@btinternet.com*
RAR 23-789

REFERENCES

Deregowski, J. B. and F. Berger 1997. 'Sitting' giraffes. *Sahara* 9: 87–92. [JBD]

Hellström, P. and H. Langballe 1970. *The Scandinavian Joint Expedition to Sudanese Nubia, Volume 1. The rock drawings*. Läromeldsförlagen/Svenska Bokförlaget, Stockholm. [TJ]

Rhotert, H. 1952 *Libysche Felsbilder.* Wittich, Darmstad. [JBD]

Scherz, T. R. 1975. *Felsbilder Südwest-Afrika. Teil II. Die Gravierungen im Nordwesten von Südwest-Afrika.* Blohau, Wien. [JBD]

Winkler, H. A. 1939. *Rock drawings of southern Upper Egypt*, II. Oxford University Press, London. [JBD]

Winkler, H. A. 1939. *Rock drawings of southern Upper Egypt,* II. Egypt Exploration Society, London. [TJ]

What's in a word, what's in a hyphen?

A modest proposal that we abandon the words 'petroglyph' and 'pictograph', and hyphenate 'rock-painting', 'rock-engraving', 'rock-art' among the words we use

By CHRISTOPHER CHIPPINDALE and PAUL S. C. TAÇON

Invented terms for categories in our field of interest

When a new category or class or concept comes into being, those who want to write or talk about it have a choice: they can invent a new word for it, suitably created and defined to match the novelty being referred to, or they can use an existing word, trying as best they can to make clear the novel element or revised meaning.

'Prehistory', and its cognates in other languages of *préhistoire*, *Vorgeschichte*, and so on, has been a successful novelty. Invented in the early 19th century (Chippindale 1989) to define the period that is 'pre' (text-recorded) 'history', it has established itself in the common languages today as an everyday, rather than a specialist term, to all our benefit. It has oddities, as do so many words: the period of time constituting 'prehistory' in English is not the same as the one constituting *préhistoire* in French.

For our special area of interest the invented English-language words have been less happy and less successful.

The word for marks cut into stone surfaces, 'petroglyph' is an invented word deriving, via the French *pétroglyphe*, from the Greek word *petros* meaning 'rock' combined with the Greek word *glyphe* meaning 'carving', it expresses well the idea of graphic images carved on stone.[1] With its roots in Classical languages few today know, its meaning is less obvious than it used to be; it has never gained common use as a technical term outside North America, and certainly never made its way into the common language, so before using it to any but a specialist audience you have to explain it.

The matching term 'pictograph', for marks made with pigment put on to stone, is not good. Devised from the Latin word *pingere* meaning 'to paint', combined with the Greek word *graphos* meaning 'written, writing', it expresses the long-obsolete notion that painted images in non-Western societies were commonly a kind of writing, as also expressed in the title of Garrick Mallery's celebrated book *Picture-writing of the American Indians* (1893).[2] Luckily,

[1] The *OED* (1989: 638) gives an early use for 'petroglyph' in the *Athenaeum*, 12 February 1870, referring to cup-and-ring marks in Scotland. A similar word 'petrograph', for writing carved on a rock, is recorded in 1814 and then spelled 'petragraph', failed to come into much use (*OED* 1989: 638).

[2] The *OED* (1989: 783) defines 'pictograph' as 'a pictorial symbol or sign; a writing or record consisting of pictorial symbols (the most primitive form of record)'. It gives an early use from Schoolcraft and Nichols (1851: 416), in relation to a petition from the Chippewa tribe to the U.S. President, and its use for marks on rocks in Tylor (1871: Vol. 1, 277).

it has also never gained common use outside North America, or there gone into the common language. (Also, its primary meaning is no longer ours, according to the *Concise Oxford English Dictionary*, but now '1 a pictorial symbol for a word or phrase; 2 a pictorial representation of statistics on a chart, graph, or computer screen'.)

For the general class of pictures and other kinds of art on natural rock surfaces, without indicating how the art is made, no invented term has ever gained general currency even as a technical term. Since our terms are aimed at facilitating communication, why invent or use a specialised and *élite* technical term if a perfectly good and commonly used term already exists and meets both popular and technical needs?

So we mostly use the ordinary or common-language terms. We should let 'petroglyph' and 'pictograph' slide further out of use to extinction.

Common-language terms for the categories

For the general term, we have 'art' (and equivalents, *art* in French, *arte* in Italian) which is fine.

For figures cut into rock, we much prefer 'engraving' to 'carving': carving includes, even implies the shaping of a three-dimensional figure in the round; engraving, because it derives from the art-printing technique, implies cutting into one exposed and more-or-less flat surface of a block with the image being formed by that cut-away area — which is well close to what we are usually addressing. It also matches other languages' terms, *gravures* in French, *incisioni* in Italian.

For marks made by adding material to the rock, we have 'painting' which is fine, and better than 'picture' because it references a certain technique rather than what it might depict. And we preface this with 'rock'. (French and Italian instead use *rupestre* as in *gravures rupestres* or *incisioni rupestri*.)

So rock art, rock engraving, rock painting.[3]

Hyphenating the common-language terms

There is one good way we can improve how we use the terms, which is to hyphenate them together.

In English, a (hyphenated) 'door-knob' has a meaning which is usefully more specific than (unhyphenated) 'door knob' — just the two words just placed side by side. It is a tiny aid in implying this will be knob in one of its narrow meanings as a certain kind of handle, rather than just a lump or protrusion in a more general sense, and that it will not be the same as, say, a 'drawer-knob'. Hyphens are rather drifting out of use, especially from the influential American habit of collapsing a pair of hyphenated words into one word without a hyphen, as 'doorknob'; that is a pity because the hyphen has a distinct function of its own and a valuable role. Another useful role is to help distinguish between words of different meanings where the spellings are otherwise the same: 'pre-date', when an earlier age is meant, and 'predate' when the meaning is to 'prey on'; 're-creation' when something is created again, and 'recreation' when the point is in the enjoyment.

English being a language with weak and inconsistent rules of grammar, as well as having decided differences in its regional variants across the world, there is no simple or single rule defining when hyphens are and are not rightly used. An excellent example of how they are usefully used to clarify meaning by linking words together which belong together is in Western conventions relating to first and second names. Most people with Western names begin with a first (often called Christian) personal name (sometimes abbreviated to its initial), then one or more alternative personal names in the middle (usually abbreviated to initial or initials),[4] and end with a family (or sur-) name, inherited usually from the father, and never abbreviated. So one of us is 'Christopher Chippindale' — clearly a first and a family name, no ambiguity (he has a second personal name, Ralph, which he does not like or use, so he provides neither it nor the initial R., unless legally required to for e.g. his passport). The other is 'Paul S. C. Taçon'; again no ambiguity, since the abbreviated names must be personal, so his three personal names are the 'Paul S. C.' and his family name is Taçon. The name of our senior French colleague Jean Michel Geneste allows ambiguity: Jean is clearly a personal name as it comes first, Geneste a family name as it comes last, but what about the Michel in the middle? So his name is hyphenated as Jean-Michel Geneste, showing that Jean and Michel belong together as two personal names,

[3] Both of us have — as we expect others have — had occasional little comedies over other meanings of the word 'rock'.

In the early days of e-mail, when such easy communication over the former Iron Curtain still had novelty, one of us remembers receiving an enthusiastic message from a stranger on a Polish e-address. Introducing himself as a serious student of rock art, he had heard I was one too, and could we be in touch, and then we could usefully exchange things between us. So I diligently replied, said a bit about the field of research in Britain and what I did myself, offered to send some off-prints of my work in exchange for some of my newly-found colleague. Not the right answer at all, it emerged: the Pole had a collection of LP record sleeves by modern Polish music groups, and had tracked me down as a fellow collector of 'rock(-and-roll) art' who — since I lived in England — could and surely would be able to get rare sleeves in perfect condition by the great English masters of the genre — Led Zeppelin, Pink Floyd, the Beatles (starting with *Sergeant Pepper* and the *White Album*), and the less famous rest . . .

The other, more recently, found one student joining my course on 'rock-art', already changed to 'rock art' by the university's automated course outline system, which did not tolerate the hyphen, was indeed expecting a groovy course on the imagery of rock-and-roll.

[4] A curiosity of US naming habits is its insistence on there being a middle initial, but not necessarily a middle name, so one of us could in the U.S.A. be either 'Christopher R. Chippindale' with the R. standing for a personal name like Ralph or 'Christopher R Chippindale' with the middle letter having no full stop, just a letter that stands for no name. If he was plain 'Christopher Chippindale' and was in the U.S. military he would be 'Christopher NMI Chippindale', 'NMI' (without full stops) standing for No Middle Initial. If he died in military service and was buried in a military cemetery, he would be 'Christopher NMI Chippindale' on his tombstone and for ever.

distanced from Geneste, the family name. The name of our senior South African colleague, J. David Lewis Williams, provides a similar ambiguity: the J. must be a personal name, since it comes first and can be abbreviated to an initial; the David will likely be a personal name, since it is rare to have family names of three words in Anglophone South Africa; the Williams, coming last, will be a family name; what about the Lewis — which could be either another personal name or the first part of a family name with two words? A hyphen links Lewis with Williams to show the family name is indeed 'double-barrelled' in the delightful English name for this habit, so the Lewis is not a personal name: his name is hyphenated as J. David Lewis-Williams. For both Jean-Michel and J. David, the hyphen usefully clarifies how their name is structured;[5] for the two of us, Christopher and Paul S. C., no hyphen is needed because our names have no risk of ambiguity as to which part is which. This homely example shows how hyphens are used in a flexible way, when it clarifies the structure and shows the intended sense.

Realising the benefit, we now always use hyphenated 'rock-art', 'rock-engraving', 'rock-painting' — when editors let us; one of us started by doing this in a 1997 paper (Barfield and Chippindale 1997) about rock-engravings, then we did it together in our edited *The archaeology of rock-art* (1998): see its introduction (Taçon and Chippindale 1998: 6) for our justification then: 'We hyphenate "rock-art", against common modern habit, in a slight attempt to make this term into a portmanteau'. Others are doing the same: Bruno David's recent book was entitled *Landscapes, rock-art and the Dreaming* (2002); and Carol Diaz-Granados and James R. Duncan's regional edited study, *The rock-art of eastern North America* (2004).[6]

We are not the first. A famous book of 1930, *Rock-paintings in South Africa. . . .* (Stow and Bleek 1930), published many of William Stow's great watercolour copies of San rock-paintings with an introduction and descriptive notes by Dorothea F. Bleek. She hyphenates the phrase 'rock-painting' in its title and throughout; she also hyphenates the phrase 'rock-shelter' for the places where the rock-paintings are found, usefully in our view. The successor volume, *More rock-paintings in South Africa . . .* (Van der Riet et al. 1940) again uses the hyphen in its title and text. The books were printed and published in London by respected houses, which surely would not have used the hyphen if they thought it crazy or wrong. Dorothea F. Bleek does not state why she hyphenates. Perhaps it relates to the sympathetic respect she has for the art, after a dismal period when San rock-paintings were seen as the rude daubings of primitive people; as we suggested above, she used existing common words, but in this slightly amended way so a novel attitude was quietly stated.[7]

Invited by the editor of this journal to write a note for publication (it appears in the previous issue of *RAR*, pages 17–18), one of us (Chippindale) used the hyphenated 'rock-art' in his manuscript. The editor brusquely replied, 'The hyphenation of "rock art" is obviously out until a clear majority of practitioners uses it and it is adopted by the IFRAO Glossary'. We do not contest his right to decide for these pages, since it is the custom in journal publishing that editorial house-style over-rules authors' own preferences, which is why Chippindale's comment duly appears reduced in the smallest way by losing its hyphens.

In the course of discussion, the editor asked Chippindale, 'In what way would "we all benefit" if IFRAO changed to the hyphenated version? You may be right but you need to justify it, and if you can convince me I will be happy to appeal to IFRAO to make the change. I have read several sharp and well-argued comments against this convention.' So here is why: we would benefit because, in a very small way many times repeated, we would use more precise and better-defined language in our work. We have also heard sharp comments against the hyphen — 'wrong', 'absurd', 'mistaken' — but these have always been assertions, not 'well-argued' justifications. That most respected academic publisher Cambridge University Press — whose hand-book of style (Butcher 1992) is the industry bible in these kinds of matters — is content to publish with the hyphen when book authors and editors show good cause (Taçon and Chippindale 1998; Chippindale and Nash 2004), as do other publishers of good reputation, such as Routledge (Nash and Chippindale 2001), and the University of Alabama Press, where editor Judith Knight's renowned archaeology list now includes Diaz-Granados and Duncan's *The rock-art of eastern North America* (2004).

So, we propose, as a community we start to use the hyphen, and when it is convenient — preferably forthwith — we accordingly adjust the names of our journals, like *Rock-Art Research* (now to be abbreviated as *R-AR*), of our institutions, like the Rock-Art Research Institute (R-ARI) at the University of the Witwatersrand and its Museum of Rock-Art, and of our organisations, like the International Federation of Rock-Art Organisations (IFR-AO). Changes in words and their usages often take decades to become widely adopted, but as rock-art researchers we can take the lead in making our world in this way a slightly better place.

---

[5] A supplementary point: because Michel is a common personal name in French and barely ever a family name, one could guess it was a personal name if there were no guiding hyphen; because Lewis can be both a personal and a family name in English, there is slight basis from which to guess correctly if the guiding hyphen is absent.

[6] See Whitley (2005) for a comment on the hyphenation of 'rock-art'. Denise Smith, reviewing Diaz-Granados and James R. Duncan for *Rock Art Research*, grumbles at their use of 'rock-art' as a hyphenated term (Smith 2005); she presumes they followed our suggestion, so as to distinguish the subject ' "from the Western artistic programme, which is closely tied to a market economy" (David 2002: 10, Note 5)'. While we agree with David that the art of a society is affected by other cultural characteristics of that society, the market economy was not our central concern, and finds no mention in our own definition in Taçon and Chippindale (1998).

[7] Our hyphenated colleague David Lewis-Williams offers us a different explanation. Dorothea F. Bleek was an inept writer of English, and her hyphenation of 'rock-painting' is sure to have arisen from her ignorance that the unhyphenated form is correct.

It is pleasing that the creator of this modest improvement seems to be Dorothea F. Bleek, a sympathetic pioneer in respecting non-Western rock-art.

In anticipation of this change, we ask the editor of the (currently) unhyphenated *Rock Art Research* to let us have our way in this article and its title.

Acknowledgments

We thank Bruno David and Ben Smith for useful conversations, and David Lewis-Williams (who thinks we are wrong) for the helpful suggestion that hyphenation conventions in respect of personal names would be a useful case to mention.

Dr Christopher Chippindale
Cambridge University Museum of Archaeology and Anthropology
Downing Street
Cambridge CB2 3DZ
United Kingdom
E-mail: *cc43@cam.ac.uk*

Professor Paul S. C. Taçon
School of Arts
Griffith University
Gold Coast Campus
PMB 50 Gold Coast Mail Centre. QLD 9726
Australia
E-mail: *p.tacon@griffith.edu.au*
RAR 23-790

COMMENTS

Trait d'union *(hyphen)?*

By YANN-PIERRE MONTELLE

Reaction No. 1: Hyphen in French is '*trait d'union*'. It is an orthographic and grammatical practice used to unify two discrete words/meanings into one. This welding (*soudure*) of two words has a long philological history in the French language and can be found in a variety of other languages. This being established, it is important to clarify that Jean-Michel is not Jean and Michel, as two distinct names, but is Jean-Michel — a singular name.

Reaction No. 2: As for 'prehistory', it finds its rhizomic emergence among other -isms — antiquarianism, colonialism and capitalism. Prehistory is a loaded word and, in my mind, should not be used as the epitome of neologism. Unfortunately, with such a 'starter', Taçon and Chippindale have mucked their arguments with an undesirable blot.

I do not think I need to preface this short response by acknowledging the voluminous contributions that both Christopher Chippindale and Paul Taçon have made to the field of rock art research. Yet, I am puzzled by their most recent proposal.

Rock art research is still a young discipline (with only a few grey hairs), in desperate need for unified and standardised approaches. Terminology is, therefore, critical. Without a proper index of defined terms, the discourses will continue to be peripheral points of view gravitating loosely around a chaotic absence of cohesion. In the last few years, IFRAO has provided the field with a glossary of terms that is sufficient to present a solid foundation. But, as this debate clearly suggests, it might be time to re-form[8] some of the 'established' terminology. So why not start with 'rock art'.

Chippindale and Taçon's effort to provide the field with a more accurate terminology ends up adding even more confusion to the current debate. 'Rock art' as a term used to define the field of research concerned with anthropic markings on different supports using different techniques is problematic, confusing, perhaps even inappropriate at times. Yet, in the absence of a more effective choice, it is the guiding flag under which cohorts of researchers try to unite. Some tend to gravitate more effectively towards the rocks, others prefer the art. So, 'rock art', with all its imperfection, does work. The question then becomes: can it be improved?

To use a hyphen as an improvement for the problematic compound 'rock art' is not a viable solution. I can only applaud the future critics of such a project. Rather than providing improvement, the authors are sinking this critical discussion in the murky waters of a grammatical wasteland. The debate remains open and the field is still searching for an appropriate and unifying designation. In the meantime, the unhyphenated 'rock art' must be retained (if only for sake of consistency).

Dr Yann-Pierre Montelle
140A Condell Avenue
Papanui
Christchurch 8005
New Zealand
E-mail: *yann_montelle@mac.com*
RAR 23-791

Names and hyphenation memes

By ROBERT G. BEDNARIK

Since I am named as the 'prompter' of this proposal it is appropriate that I respond to it. I emphasise that it is not my wish to monopolise this discussion, and readers are most welcome to contribute to it in a future issue of *RAR*. I think we can all agree with Chippindale and Taçon that when a

[8] The adoption of (unhyphenated) 'rock engraving' and 'rock painting', as opposed to petroglyph and pictogram is most welcome and would facilitate consistency in the papers, articles and debates in rock art research. But the words petroglyphs and pictograms should not be dropped just because their definitions and etymological provenance is too 'esoteric' for the commoners. They should be dropped because they are not universally used and therefore do not provide clear, efficient and standardised terms. Clarity and efficiency, I will add, is what is lacking in Taçon and Chippindale's proposal.

new category or class or concept appears, we need to find a word to refer to it. However, rock art is not a phenomenon that has appeared very recently, nor has the study of it. A name for this phenomenon has evolved naturally, over centuries, and until good arguments are raised to change it, I think it needs to be retained.

The question then is: have these authors, or has anyone else, presented such good reasons? To show that this advocacy for a terminology change abounds with errors of reasoning and fact, I shall pick my way through the arguments presented. The 'successful' term 'prehistory' is a linguistic aspersion offensive to non-Westerners, belonging into the 19th century. Westerners are not humanity's arbiters of what constitutes history, and the professed demarcation, the introduction of writing, is irrelevant. Most people in Europe a few hundred years ago were illiterate, does that mean they were prehistoric? The implicit assumption that written history is more reliable than oral history is unfalsifiable, hence unscientific, and above all is probably false. Only experts are (perhaps) capable of *properly* comprehending a text written just 2000 years ago, while geological and other observations have survived in orally recorded Australian *history* from the Pleistocene, and remain perfectly comprehensible today. Moreover, the term is illogical, how can there be a history before history? Therefore, in this journal, the term 'history' is always capitalised when it refers to a time span defining the Eurocentric concept of History. I draw the authors' attention to the fact that, in *RAR* and other journals taking great terminological care, their term always appears as 'pre-History', i.e. the time before the time a certain elitist minority of humanity believes is history. The Neanderthals are unhappy about this ethnocentrism and have already threatened to sue their descendents (who, conversely, tend to disown them nowadays).

The authors then incorrectly equate prehistory and *Vorgeschichte*. The correct equivalent term for prehistory is *Urgeschichte*, which already shows the problem with 'prehistory': *Urgeschichte* means 'first history', rather than a period prior to history, whereas *Vorgeschichte* is better translated as proto-history. Thus the German terminology is more precise and correct, as it usually is. As the authors themselves note, the words prehistory and *préhistoire* have different meanings. Certainly the term prehistory is unscientific, imprecise and objectionable, and I have suggested that it should be reserved for 'prehistoric monsters' and such, i.e. for popular vernacular.

The term 'petroglyph' was first widely used neither in France nor in the U.S.A., but in Russia, as *petroglifii*. The word 'pictograph' is frequently misused, especially in the U.S.A. It refers to a writing character of figurative appearance, such as a hieroglyph (Bednarik et al. 2003). Most American rock art researchers insist that their rock paintings are not a form of writing, so by using the term 'pictograph' they are actually stating that pictographs are not pictographs. The correct word defining a rock art motif that involved an additive process in its production is 'pictogram', and obviously not all pictograms are paintings (drawings, stencils, prints and beeswax motifs are also pictograms). Concerning the technical term 'engraving', I refer the authors to Maynard (1977): engravings were made with an abrasive action, using a burin or graver. Most petroglyphs in the world were made by percussion, some are finger flutings, and both types are not engravings. Moreover, the word refers to metal work, and specifically to plates for printing, even to the *prints* made with such plates.

The confusion of Chippindale and Taçon is greatest when they advocate the use of a hyphen to connect two words representing two ideas:

> The general principle to follow is to use a hyphen only when it is necessary to avoid ambiguity. A sweet-shop assistant is not necessarily a sweet shop assistant, and a little frequented place is not necessarily a little-frequented place. Note the difference between three year-old children and three-year-old children. But in expressions such as fellow member, stamp collector, real estate, there is no ambiguity and the hyphen is not necessary (Pitson 1978: 34).

The same applies to rock art, even where the term is used as a compound qualifier, as in 'rock art interpretation' (Greenbaum and Whitcut 1992: 349). By the way, I am happy with 'doorknobs', and the authors are also mistaken about the 'habit of collapsing a pair of hyphenated words into one word'; it is not a specifically 'American habit'. G. V. Carey (1957) writes in *Punctuation*, published by the reputedly 'respected academic publisher' Cambridge University Press:

> Most compounds graduate, so to speak, from separation, through hyphenation, to integration (for instance: *tea pot*, *tea-pot*, *teapot*); and everyone is entitled to his own opinion on the present status of any of them.

As a non-Anglophone, whose command of this splendid language is limited to Pidgin-English, I apologise for my impertinence in appearing to lecture a former editor of the 'respected' journal *Antiquity* on its finer points. But I should confess that I find the authors' repeated references to respectability of certain publishers weakening their argument: reputation that needs emphasising seems to lack respectability.

Conversely, the issues of 'pre-date' vs 'predate' or 're-creation' vs 'recreation' are irrelevant here because such ambiguity does not apply to rock art. Also, a portmanteau word is formed by the merging of two *word parts*, as in 'brunch', therefore to extract such a word from 'rock art' would have to yield something like 'rort', which would be unsuitable because it already has another meaning, at least in Australian English: to dishonestly gain control over an organisation. I suggest that we best forget the portmanteau notion.

As another aside, the term 'rock shelter' or 'rock-shelter' (Bleek) has been collapsed to 'rockshelter' (Bednarik et al. 2003). In this case, the reason was that this should be regarded as a scientific (geomorphological) term, corresponding to *abri* and *Halbhöhle* or *Felsdach*. Here, the German terms are the more precise, because the phenomenon itself is halfway between a cave ('cave' used as a scientific term, with a very precise meaning) and the absence of a cavity. After all, a rock shelter might well be a shelter made by piling up rocks (an artefact), which is certainly different from the

meaning implicit in *abri* or *Halbhöhle*. Once again, the vernacular nature of the English language requires that technical or scientific terms be rendered more precise and clearly defined. This is particularly obvious in the use of English archaeological jargon, which is notorious for its sloppiness (consider cobble vs pebble, definitions of rocks and minerals, of culture, etc.). As the editor of this journal, I am committed to terminological precision. If the authors could attempt presenting a better case for collapsing 'rock art' to 'rockart' I would be most interested in hearing it, or in seeing any other real improvements to our discipline's technical jargon. (Such suggestions are warmly welcomed in the discussion group of *http://mc2.vicnet.net.au/home/glossar/web/index.html*.)

The authors have clearly misunderstood the use of hyphenated personal names, which is not limited to France, but occurs widely in Europe (and elsewhere). However, Jean-Michel Geneste's first name is not Jean, it is Jean-Michel, and he does apparently not have a middle name. He would expect to be called Jean-Michel, whereas I have never been called Robert Gerhard by my friends, just plain Robert. If my parents had decided to furnish me with an unusual personal name, they could have called me Robert-Gerhard, but fortunately they did not. The use of hyphenated surnames, as in 'Lewis-Williams', is also of no relevance here, as Lewis-Williams would presumably agree. I recommend to Chippindale and Taçon to delve deeper into the practice of using hyphenated names, and I perceive no reason at all why it would be relevant to the naming of rock art-related entities. For instance, they might consider the near-universal practice of using two (unhyphenated) surnames in Spanish (e.g. Carola Kuramotto Bednarik, the name of my daughter-in-law), and the fact that an abbreviated name is not necessarily a middle name. It can be a second surname, as routinely used in Spanish, or it can be a first name, which the bearer eschews in favour of his or her middle name (as in J. David Lewis-Williams). Practically all of the assumptions the authors make about names are therefore false.

There are, in my estimate, perhaps in the order of 7000 rock art researchers in the world. Only around 0.1 per cent of them use the hyphenated word 'rock-art'. Until that term's approval rate exceeds 50 per cent in this population, it would be premature for the many rock art organisations of the world to change their names and the names of their journals and newsletters, or to reprint their letterheads, or change their mastheads or business cards. The notion of democracy may have its flaws, but when it comes to terminology, there are good reasons why majority consensus decides. There have been numerous attempts before to meddle with the term 'rock art', including long debates in this journal. They have all led to the same conclusion. Which brings us back to where we started: rock art is not a new category or class of concept. Neologisms are always resisted, even though they are perfectly justified for phenomena that have no agreed name. In this case the authors suggest not even a neologism, just the insertion of a hyphen, but they fail to justify this change. Instead of telling us why the term 'rock-art' would make the 'world a slightly better place', they have presented a series of misconceptions and misapprehensions, most of which would be irrelevant even if they were valid. Denise Smith is right in rejecting David's reason for the use of 'rock-art' (concerning market economy), and Chippindale and Taçon's disagreement with David's understanding shows that even the very few advocates of this term already differ about why it should be used. Perhaps the discipline would be better served if the advocates of any new name for it presented a far better argued case — and one they could agree on with others supporting its use.

Robert G. Bednarik
Editor, *RAR*
RAR 23-792

REPLY

Reply to Montelle and Bednarik

By PAUL S. C. TAÇON and CHRISTOPHER CHIPPINDALE

We thank the editor of *Rock Art Research*, Robert Bednarik, for allowing us to express our views in print, for his comments and for the comments of the hyphenated Yann-Pierre Montelle. The various points of criticism kindly made together confirm, rather than alter, our considered view that rock-art and its hyphenated cousins are the best way for our language to go forward. Indeed, Montelle's opening statement about the hyphen in French being '*trait d'union*' and that hyphenated names are singular names is exactly what we would like 'rock art' to become. The further contraction to 'rockart', as Bednarik suggests, could also be a good second step forward: one of us likes it, the other would stick with a hyphenated 'rock-art'. And when it comes to personal names of people, in many languages today each of Sally Ann, Sallyann and Sally-Ann can be considered either one or two names depending on the individual, although 'Sally Ann' is usually, but not always, understood as two. We feel strongly that 'rock' and 'art' should commonly be considered as one, hence the hyphen we suggest be placed between them. Montelle's second reaction, to 'prehistory' is not a reflection on us but rather larger society; closely working with indigenous colleagues, we are well aware of problems with this loaded term. Some people also find 'history' problematic, wondering what happened to 'herstory'. However, it is interesting that we have both 'history' and 'heritage' in common usage when we discuss the past.

Bednarik and others are to be applauded for producing a rock-art glossary so rock-art researchers and indigenous custodians across the globe can begin to speak a common rock-art language. Our point is that the glossary, like language itself, should not be a static thing — there will always be room for new terms and refinement of old. Our modest proposal that 'rock' and 'art' be hyphenated is a

suggested refinement. Among other things, it could alleviate confusion among prospective students in university Arts programs, who think they are signing up for a visual exploration of rock-and-roll album covers and other art of the music industry. Taçon had 3 of 28 students fall under this misapprehension this year alone, and this is no joke.

Did you hear the one about the English, German, Japanese and Chinese visitors to central Arnhem Land, Australia? They all got on fabulously with the traditional owners because they understood the rock-art. Long live rock-art research and *Rock-Art Research!*

RAR 23-793

REFERENCES

Barfield, L. and C. Chippindale 1997. Meaning in the later prehistoric rock-engravings of Mont Bego, Alpes-Maritimes, France. *Proceedings of the Prehistoric Society* 63: 103–28.

Bednarik, R. G., M. Consens, A. Muzzolini, D. Seglie and Y. A. Sher 2003. *Rock art glossary: a multilingual dictionary*. Brepols, Turnhout. [RGB]

Butcher, J. 1992. *Copy-editing: the Cambridge handbook for editors, authors and publishers*, 3rd edn. Cambridge University Press, Cambridge.

Carey, G. V. 1957. *Punctuation*. Cambridge University Press, London. [RGB]

Chippindale, C. 1989. The invention of words for the idea of prehistory. *Proceedings of the Prehistoric Society* 54: 303–14.

Chippindale, C. and George Nash (eds) 2004. *Pictures in place: the figured landscapes of rock-art*. Cambridge University Press, Cambridge.

Chippindale, C. and P. S. C. Taçon (eds) 1998. *The archaeology of rock-art*. Cambridge University Press, Cambridge.

David, B. 2002. *Landscapes, rock-art and the Dreaming: an archaeology of preunderstanding*. Continuum, London.

Diaz-Granados, C. and J. R. Duncan (eds) 2004. *The rock-art of eastern North America: capturing images and insight*. University of Alabama Press, Tuscaloosa (AL).

Greenbaum, S. and J. Whitcut 1992. *Guide to English usage*. Longman, Harlow. [RGB]

Mallery, G. 1893. *Picture-writing of the American Indians*. Washington (DC): Government Printing Office. Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution 10. [Reprint, New York (NY): Dover.]

Maynard, L. 1977. Classification and terminology of Australian rock art. In P. J. Ucko (ed.), *Form in indigenous art: schematisation in the art of Aboriginal Australia and prehistoric Europe*, pp. 385–402. Prehistory and Material Culture Series 13, Australian Institute of Aboriginal Studies, Canberra. [RGB]

Nash, G. and C. Chippindale (eds) 2001. *European landscapes of rock-art*. Routledge, London.

OED (*Oxford English Dictionary*) 1989, 2nd edn, Vol. 11: *Ow – poisant*. Clarendon Press, Oxford.

Pitson, J. (ed.) 1978. *Style manual for authors, editors and printers of Austyralian government publications*, 3rd edtn. Australian Government Publishing Service, Canberra. [RGB]

Schoolcraft, H. R. and F. Sellman Nichols 1851. *Historical and statistical information respecting the history, condition and prospects of the Indian tribes of the United States 1*. Lippincott, Grambo. Bulletin of Smithsonian Institution Bureau of American Ethnology 152, Philadelphia (PA).

Smith, D. 2005. Review of C. Diaz-Granados and J. R. Duncan (2004). *Rock Art Research* 22: 213–14.

Stow, G. W. and D. Bleek 1930. *Rock-paintings in South Africa: from parts of the Eastern Province and Orange Free State, copied by George William Stow; with an introduction and descriptive notes by Dorothea F. Bleek*. Methuen, London.

Taçon, P. S. C. and C. Chippindale 1998. Introduction: an archaeology of rock-art through informed methods and formal methods. In C. Chippindale and P. S. C. Taçon (eds), *The archaeology of rock-art*, pp. 1–10. Cambridge University Press, Cambridge.

Tylor, E. B. 1871. *Primitive culture: researches into the development of mythology, philosophy, religion, language, art and custom*. John Murray, London.

Van der Riet, J., M. Van der Riet and D. F. Bleek 1940. *More rock-paintings in South Africa from the coastal belt between Albany and Piquetberg mainly copied by Joyce and Mollie van der Riet, with notes by the same and an introduction and explanatory remarks by Dorothea F. Bleek*. Methuen, London.

Whitley, D. S. 2005. Putting the art back in rock art. Review of T. Heyd and J. Clegg (eds), Aesthetics and rock art (2005). *Before Farming* 2005/3(4): 1–12.

BRIEF REPORTS

Rock art destruction at El Mauro, Chile: one of the world's largest mining waste dams

By PATRICIO BUSTAMANTE DÍAZ

Approximately in September 1998 the mining company Los Pelambres asked the private consulting company Gestion Ambiental Consultores to estimate the cost of an environmental impact assessment for a new tailings dam. This dam was to store 1700 million tonnes of harmful mining waste, such as arsenic, cadmium, strontium, silicon oxide, chlorine, aluminum oxide, sulphur, lead and copper waste. The researchers working for Gestion Ambiental were asked to provide an estimate of the cost of the assessment for their particular specialties. Interestingly they were not supposed to be told *where* the project was, or what it was about. A year later, in 1999, the impact study was awarded, and fieldwork began around July of that year. The initial project entailed two valleys that would be used to accommodate two dams: one to be located at the head of the Pupio stream basin and the other to be located downriver in the mid-section of the river basin. The two valleys had until then been used for farming. Just upriver from the lower dam project we find the small township of Caimanes, which, if the two dams had materialised, would have ended up sandwiched between the two tailing dams.

Archaeological assessment was carried out by a team led by archaeologist Andrea Seelenfreund who with three archaeologists spent one week in July 1999 surveying the lower dam site (Monte Aranda) and some of the proposed transects where the tailings-canal would be located. Another week in October 1999 was spent surveying the upper dam site, El Mauro. As a result of the two surveys, a total of thirty-four sites were identified in Monte Aranda and another fifty-five sites in El Mauro, plus a number of other sites along the proposed canal. Table 1 summarises the location of these sites and the degree of impact these would suffer.

The above study was strictly limited to the areas to be flooded and did not include a survey of the access roads that needed to be built, or the location of future camps and other construction work associated to the building of the dams.

A total of 107 archaeological sites were documented in those two field seasons. Over 70 % of those sites had never bee recorded before. The archaeologist in charge of the survey concluded that the recording of the sites was of singular importance due to the sheer number and type of sites found. The sites belonged to different chronological periods, ranging from Archaic to Historic periods. A large number of the sites were rock art sites, but there were also an important number of occupation sites and lithic workshops.

The rock art sites belong to the local rock art style previously described for the Limari, Illapel Elqui and Choapa river basins. The rock art is pecked onto boulders, which vary greatly in size. Some are very large granite blocks while others are small rocks level with the ground.

In the conclusions of the study Seelenfreund indicates that the rock art sites are part of the global context of a culture, that they may be indicating routes but can also be reflecting other social or economic aspects of a particular culture (territory, control or access to resources, ideology). It was also made clear that rock art sites, be they paintings or petroglyphs, have been recognised by Unesco and other international institutions (ICCROM, ICOMOS) as one of the priority areas in world heritage conservation, and that a number of regulations and recommendations have been issued by international agencies relating to rock art preservation. All of these stress the importance of on-site conservation over any other form of intervention on rock art sites.

The document also stated that even if there are some examples in the world of the removal of cultural monuments, these types of actions are generally not acceptable. They disturb the original setting and context and increase the risk of extensive damage or destruction during removal, movement and/or relocation. The transport and removal of monumental granite blocks is technically complex and very

Site number	MAURO	MONTE ARANDA	Canal or pipeline	% of sites to be impacted severely	Type of Impact
Sites 1 to 34		x		100 %	Total destruction
Sites 35 to 89	x			100 %	Total destruction
Sites 90 to107			x	Could not be evaluated since the location was only approximate at the time.	Probable impact on a number of rock art sites expected to occur.

Table 1. *The sites and the impact on them.*

Figure 1. *View of El Mauro, looking north-east, as it will be never be seen in the future.*

expensive.

Seelenfreund also stressed the need to widen the archaeological study, particularly to perform test excavations on the sites in order to gain a perspective on their extent and depth, and to do an extensive register of the rock art sites. This is a normal procedure in Chile and is regarded as part of the required baseline information.

A preliminary report was presented to the mining company around March 2000. Shortly after this, the Minera Los Pelambres changed the archaeologist's report, deleting the parts that indicated the heritage wealth of the place. This is illegal in Chile and therefore all the subsequent process is also illegal, which has been pointed out repeatedly to the Chilean authorities. Then the company decided to hire another archaeologist to re-assess the Mauro valley. This archaeologist had done previous work for the company (in the year 2000, when 200 petroglyphs were relocated from the site called Cuncumen, located east of El Mauro). He was given a copy of the preliminary archaeological report, and with this in hand he produced a second report, which did not vary substantially from the first one, except that it included as Historic sites those places that up to October 1999 had been the homes of the local farm workers (who had been relocated). The mining company invested US$20 000 in this study, carried out by the archaeologist Gastón Castillo in 2004.

Test pit excavations were bypassed and the project received its environmental approval early in 2004 (i.e. before the study was finished).

Due to the opposition expressed by a researcher in archaeoastronomy, Patricio Bustamante, who indicated the lack of registration of astronomical and surrounding parameters, the Consejo de Monumentos Nacionales (National Monuments Council) was obligated to reject the study carried out in 2004 and to request a new study.

It was around August of that same year that the archaeological report was challenged by a new member of the National Council of Monuments. After this a new study was requested, and the archaeologist was told by the Council that he needed to include a number of additional specialists as part of his team (up to then he worked alone). The new study included a new survey of the Mauro site, this time conducted by a team of ten people in ten days. They recorded around fifty additional sites, which are mainly of petroglyphs. Monte Aranda was not included since the mining company had decided to use that valley for promotional purposes, i.e. for the relocation of the last relict *canelo* forest (in the Region IV) — a task that according to a number of specialists is impossible: the valley does not have the appropriate soil or water conditions.

The interesting thing, however, is that the National Council of Monuments never challenged the idea of the relocation of the petroglyphs proposed as part of the impact mitigation. It was announced that the initial archaeological site survey was insufficient, and needed to be redone, but the decision to relocate the petroglyphs was taken beforehand and accepted as such.

Test pits were excavated at all of the sites during January 2005, and rescue excavations started immediately after that (February 2005 and later again, in June – July 2005). Areas to be salvaged were only those parts of the sites where the test pits indicated the highest artefact density. Peripheral site areas were only subjected to controlled surface collecting.

All blocks with petroglyphs were recorded using a site record form; photographs and video shots were taken in relation to their surroundings. Boulders were analysed by a geologist for general state of conservation and if necessary a bolt was placed in them, in order to prevent breakage during transport. Each boulder was to be packed in a special box, surrounded with sand. These boxes with the engraved rocks were then to be taken to a collecting point to await further transport to the Monte Aranda valley where they are going to be exhibited as part of an outdoors site

museum (property of the company). Relocation began in April 2006.

During the study carried out in 2005, the basic parameters indicated by Bustamante to the Consejo de Monumentos Nacionales were documented. These will serve in the future to study the relations between the petroglyphs and astronomy. However, specialists in archaeoastronomy did not participate in the study and did not carry out observations of astronomical events.

The study began in January 2005 and was approved in the same month. The final report of this study was delivered in November 2005, but already had been approved months before. This violates the minimum norms of any scientific study, 'a study should be finished before approval is granted'. The archaeological impact mitigation plan was thus approved before conclusion of the study. This is illogical.

The second study carried out in 2005 had a cost of two million dollars; the 2004 study had cost 20 000 dollars. This shows the negligence of the environmental authorities of Chile (COREMA, Region IV), who gave their approval to the 2004 project.

Figure 2. *Small rock with pecked designs (El Mauro, Sector 53, petroglyph 2).*

Chilean law

Regulations of the Law No. 17.288:

Artículo 3º: *El territorio comprometido en una prospección comprende espacios geográficos reducidos, como quebradas o sectores de valles. Por regla general, no se concederán permisos para áreas muy extensas.*

Article 3: The territory included in archaeological research is limited to reduced geographical spaces, such as gorges or sections of valleys. As a general rule, permits are not granted to excavate very extensive areas.

(Comment: The area of the excavations in El Mauro covers a surface area of 70 km^2, an entire large valley. This is not legal.)

Artículo 4º: *Los permisos para excavaciones se cursarán para un sitio y, excepcionalmente, para varios siempre que su número no resulte excesivo*.

Article 4: Permission will be granted to excavate only one reduced area. Only in exceptional circumstances will it be extended to more areas, provided that they are not excessive in numbers.

(Comment: Up to now, one hundred archaeological sites have been excavated at El Mauro. A site should never be excavated 100 %, yet in El Mauro, 100 sites were excavated 100 %. In El Mauro, approximately 500 petroglyphs will be relocated with irretrievable loss of heritage. That infringes on international norms.)

Danger for human beings

About 2000 people inhabit the town Caimanes, located 15 km below El Mauro. The wall of the dam that contains 1.7 billion tonnes of toxic waste sludge is made of compacted sand (*arena ciclonada*). In the future, one of the frequent earthquakes in the region may destroy the dam and cause the toxic waste to spill out over the town of Caimanes and its inhabitants. Such a spill could also affect the highly populated port of Los Vilos.

Negligent action of the National Monuments Council

The following observations are from the article " 'Error' del Consejo de Monumentos condenó existencia de unos 500 petroglifos" ("The Monument Council's 'Error' condemned the existence of some 500 petroglyphs"), by journalist Helmuth Huerta, *www.elmostrador.cl*, 12 July 2005:

- The Sociedad Chilena de Arqueología (Chilean Archeological Society) defined the case as 'the greatest intervention in heritage in modern Chilean history', because it involves a 100 % loss of local context.
- The highest authority of the Consejo de Monumentos Nacionales (CMN), Angel Cabeza Monteira, admitted the 'error' by fax, but explained that 'the Council revises, in the Environmental Impact Evaluation System alone, nearly sixty cases a month and does not have the capacity to evaluate with specialists in situ each case presented'.
- The CMN archaeologist María Elena Noel added that 'this was a previous political decision'.

Patricio Bustamante Díaz
Leonor de Corte 5548
Quinta Normal
Santiago
Chile
E-mail: *bys.con@gmail.com*
RAR 23-794

Earlier versions of the following text were published a quarter of a century ago. At the invitation of the RAR *editor, the pioneer of rock art recording standards, Professor Ben Swartz, provided this updated version of what he wrote in 1981. (Ed.)*

Minimum standards for recording rock art, revised[1]

By B. K. SWARTZ, Jr.

It is impossible to prepare a universal, objective set of standards for recording rock art. Data collected often relate to specific problems being investigated. Many of the data are not objective, but observational and contextual. Also, strictness of standards should vary with site fragility and accessibility. A deteriorating petroglyph 100 miles from permanent settlement encountered by a solitary archaeologist doing survey work in rugged wilderness is to be differently treated than one to be scheduled to be destroyed by imminent highway construction, or one that is thoroughly stabilised on a bluff across from a national park headquarters. The following standards are minimal in the sense that expensive high-tech equipment is not involved and the recording is intended to apply particularly to single transitory visits to friable surface localities. Ideal conditions for recording, such as the relation of the season and time of day with face light exposure for photographic enhancement, may not always obtain. Broad regional archaeological observations should be made in concert with specific recording.

In deciding which techniques are to be applied in any particular case, the goal should be optimal data recording and minimal resource destruction. Methods requiring surface pressure, application, or insertion, such as painting (aluminium powder, tempera etc.), tracing, rubbing, moulding or grid-anchoring, cannot be universally condoned and should not be attempted on friable surface markings. These approaches break down the basic rock structure, and some also contaminate or alter surfaces in such a way as to distort potential trace-element studies. Direct transfer records demand storage space that may not be available. Chalking should never be done, and water spraying, especially of pictograms, should not be done except when there is no doubt that destruction is imminent. Varied photographic techniques are stressed since they document and do not require physical contact. Careful photographic work and draughtsmanship are probably sufficient for basic recording, but metric data are included because they are easy to gather and may provide useful comparative information.

The following types of records should be made:

I. FACE RECORDING FORM

Metric data (objective)

1. Site and face (or panel) designation
2. Face datum
3. Face dimensions (straight)
4. Face dimensions (surface)
5. Direction of face (in degrees, compass; check for magnetic distortion, iron in rock etc.)
6. Inclination of face (in degrees, plumb bob and protractor)
7. Height of base of face from ground
8. Height of top of face from ground (check overhangs, boulder tops etc.)
9. Discrete design-element designation and dimensions
10. Distances between design elements
11. Distances of design-element data from face datum
12. Range of line width (for each discrete design element and each style)
13. Range of line depth (for each discrete design element and each style [petroglyphs])
14. Cross-section of lines (for each discrete design element and each style [petroglyphs])
15. Colours, including rock surfaces (Munsell Color Charts [pictograms])
16. Hardness of rock (Moh's scale)

Observational data (descriptive)

1. Vandalism
2. Natural defacement (e.g. erosion of surface, water lines, lichen, patina, smoke blackening etc.)
3. Old ground surfaces
4. Superimpositions
5. Type of rock
6. Conformation of rock (cracks, holes, incorporation etc.)
7. Wear surfaces (e.g. carved, cut, engraved, pecked, ground, or abraded, rubbed, drilled, with secondary smoothing etc. [petroglyphs]; or brushed, daubed, blown, stencilled etc. [pictograms])

II. PHOTOGRAPHS

Take many (especially when site is difficult of access). Take duplicate exposures, one with a scale and colour checker and one without to avoid cluttered shots. Vary exposure and angles, take close-ups and panoramas from site and of site, use side lighting, and experiment with filters. Photograph everything; attempt to use constant distances

[1] I have used the term 'rock art' in the title of this revision with misgivings. Much of rock art is not art in the usual meaning of the word. Usage is now so pervasive that I fear I must relent. The official version is 'Minimum recording standards proposed by the American Committee to Advance the Study of Petroglyphs and Pictographs', *Occasional Papers of the American Committee to Advance the Study of Petroglyphs and Pictographs*, Vol. 1, pp. 127–30 (1981), Harpers Ferry WV, U.S.A. The American Committee to Advance the Study of Petroglyphs and Pictographs, formed in 1979 and numbering some 80 scholars at that time, proposed a set of minimum standards for rock art recording. Though an institutional statement, a text was compiled and written by me. Contributors were V. E. Richard Baraville, Georgia Lee, Doris Lundy, William Breen Murray, Karen Nissen, Joseph J. Snyder, James L. Swauger, Christy G. Turner II and Sharon L. Warner. There were earlier releases of the statement in 1980. The version that is the most widely disseminated, though slightly copy-edited from the official version, was published in *Current Anthropology*, Vol. 22, No. 1, pp. 94–95 (1981). The authority of this revision is based on my position as President of ACASPP.

and systematic coverage, and record procedure. Keep records of photographs with site and face designations.

III. DRAWINGS

Make drawings to a consistent scale. Work with pencils to allow for revision. Use a different colour for each technique of rendering or style or (in pictograms) pigment on face and to note, by 'drawing over', superimpositions. Learn important design-element conventions; note offsetting in designs. Do not assume the markings are art, and avoid interpretive preconceptions. Record all markings, including 'graffiti'. If at all possible, have two or more persons make drawings independently. Include scale, directional indicator, and site and face designations on each drawing.

IV. MAP (if area with multiple sites or sites with multiple faces)

Show relationship of faces within sites and of sites to each other, unmarked boulders, trails, other significant landforms, data points (preferably from survey maps showing bench marks) to map, site, and include face designations, directional indicator, and complete field numbering of sites and faces.

V. GENERAL DESCRIPTION (subjective)

Describe geomorphology of area; landforms (routes, passes, washes etc.), site situation (river-valley cliff, cave, mountaintop etc.), distribution of plant cover, location of other archaeological sites in the area, and cultural associations (portable and stationary), especially diagnostic and decorated remains such as points and pottery or tools or materials that may have been used to produce the markings. Note unique features of the surroundings. This section can be refined and standardised by eventual comparison of such accounts in various areas.

Offer conservation recommendations based on site uniqueness, condition and location, e.g. ignore (initiate no policy — keep from public), protect (barriers, fences, grilling, security system), restore, stabilise (impregnation, coating), salvage (record more intensively), especially if being destroyed.

Professor B. K. Swartz, Jr.
President, ACASPP
Ball State University
Muncie, IN 47306-0435
U.S.A.
E-mail: *01bkswartz@bsu.edu*
RAR 23-795

Micoquian engravings from Oldisleben, Germany

By ROBERT G. BEDNARIK

The habit of denying all pre-Upper Palaeolithic peoples the ability of symbolling (or any other form of what some commentators define as 'modernity') has always been based on lack of familiarity with available archaeological information. This fad of the past few decades has survived through the rejection of any early engraving as either natural or fortuitous, and by promoting the falsity that to be symbolic, a marking has to have been made repeatedly. The crucial property of a symbolism is that it represents a form of storage of human knowledge external to the brain (Donald 1993), a point most Pleistocene archaeologists failed to appreciate. Here I present three bone fragments of the Eastern Micoquian that bear incised lines which even the most hardened opponents of early symbolism may find hard to reject.

Oldisleben, north of Weimar, Germany, is located in the Saale drainage basin, i.e. in the region where Pleistocene geochronology is perhaps better established than anywhere else. It is one of the Lower and Middle Palaeolithic occupation sites in that region that remain largely unknown outside Germany. The finds described here are from substantial Eem sandy gravel deposits overlain by Weichselian loesses, covered by a weathered soil horizon and capped by a humus layer. The finds described here were recovered in late 1986 and early 1987 from almost 12 m below present ground level. They were accompanied by a suite of well-made lithics of distinctive Eastern Micoquian characteristics, with thinly worked, well-trimmed bifacial points and handaxe-like implements of fine cherts and quartzite, found with more archaic, Lower Palaeolithic types. Some of this material was slightly worn by fluvial transport, some is unworn. This typology, free of distinctly mousteroid or acheuloid characteristics (Fig. 1), is well documented from several other Micoquian sites in the region. Some of them, such as Neumark-Nord near Merseburg, date from about 80 000 BP, the fossiliferous seam at Oldisleben (exposed also at other sites, such as Wiehe) is thought to be somewhat earlier (Bednarik 2006a). These finds occur with remains of a typical Eem fauna.

The three specimens described here show unequivocally purposeful decoration, comprising evidence of numerous tool applications arranged in pre-meditated organisation of engraved marks. One of the objects is in all probability the world's oldest currently known example of two-dimensional iconography. These objects are therefore of considerable relevance to the study of hominin cognitive and symbolic evolution. In terms of the quality of preservation and detail of surviving microscopic diagnostic evidence the Oldisleben pieces are almost unique (for details of their microscopic analysis, see Bednarik 2006a). Like the accompanying lithics, the bones include both worn and unworn specimens. The combination of unworn and slightly worn material might suggest that the occupation site was on a gravely riverbank, and that some of the finds have been transported a short distance.

Oldisleben 1

This in section distinctly wedge-shaped fragment of a scapula of an undetermined species is 166 mm long, with a maximum width of 38.2 mm and a thickness of up to 16.4 mm. It bears twenty-one engraved grooves on one side, the other side is unmarked (Fig. 2). The flat surface of the bone is largely coated by a greyish carbonate deposit, some

Figure 1. *Some of the Eastern Micoquian stone artefacts found together with the engraved bone fragments of Oldisleben 1. The tiny 'handaxe' in the centre is rolled, the two other objects are unworn. Scale in cm.*

of the grooves still contain securely lodged quartz grains and they are as heavily corroded and patinated as the surrounding surface. Therefore the possibility of this being a modern fake can be excluded.

The engravings form two discrete groups. On the right is a set of thirteen sup-parallel lines, roughly perpendicular to the thin edge, on the left a set of diagonally arranged lines connecting to the 'lower' margin. The grooves forming the first group are up to 24.4 mm long and of such distinctively similar morphology that it is highly likely that they were made in one sitting, by one person, with one tool. Most of them have short subsidiary markings to the right of each groove, adjacent to the bone's thin margin. While these secondary markings are relatively shallow, the depths of some of the long grooves relative to their widths are quite extraordinary. All grooves are clearly the result of repeated tool applications, apparently up to four or five.

The second set of markings in this arrangement of linear grooves is that of the eight 'diagonals'. They appear to have been made in sequence from right to left, and again from the edge of the panel inwards, therefore the bone would have been turned between the executions of the two sets. However, there is no evidence here of the subsidiary markings observed in the first set.

Differences in groove morphology are minimal and in all sections the distinctive narrowness of the point's furthest end is always evident. However, the degree of asymmetry is somewhat less pronounced in the 'diagonals', which is likely to be the result of the stone tool point having been applied at a slightly different angle relative to bone surface. The subsidiary marks are remarkable, particularly as their great similarity suggests a very distinctive, deliberate process. These short subsidiary markings seem to indicate that the maker either hesitated, or spaced out the markings before choosing the precise course of each main groove of the perpendicular set. It is even possible that the layout was planned first by placing all the subsidiary markings along the margin of the fragment, as if to balance or plan the spacings before the actual grooves were made. Either way, the procedure would confirm what is already amply evident from the several repeated tool applications in the grooves: that these cannot possibly be randomly executed, thoughtlessly placed engraved lines. They were made very deliberately indeed, even though this tells us nothing about purpose, meaning or motivation.

Oldisleben 2

The second find from the same site and deposit is in a cognitive sense even more significant, because it conclusively refutes a long-held view of many commentators on the cognitive evolution of hominins — that no evidence is available of structured symbols prior to the Upper Palaeolithic. A structured arrangement of five lines forming a recognisable graphic form (Fig. 3) occurs on a partially preserved shoulder blade of unknown attribution. The bone is 153 mm long and maximal about 103 mm wide, and its surface bears two taphonomic markings. The engraved design is placed much in accordance with the extant margins, but one of the five lines connects to the edge and runs slightly over it, so at least this margin predates the

Figure 2. *The engraved bone fragment No. 1 from the Oldisleben site.*

engraving. The design's central line is 51.5 mm long and, at one of its ends, where it extends just slightly beyond the point of meeting two other grooves, is about 700 microns deep. This is by far the deepest part of the five grooves, most of the groove depths range from 250 to 500 microns. All five lines were made with a particularly sharp stone point, and clear evidence of reworking (second application of tool) is lacking. None of the grooves contains any remaining striations, and all of them are relatively symmetrical in section. The heavily weathered surfaces of all engraved grooves and the absence of striations safely exclude the possibility of a recent fake. About 5 mm from the end of the central line, slightly offset to its general direction, occurs a small pit whose artificiality could not conclusively be established because of weathering. Although it lacks evidence of tool rotation, it resembles marks occasioned by stone tool impact and can tentatively be regarded as artificial. Similarly, the two curved lines on both sides of this dot are so worn and corroded that secure identification as anthropic is not possible.

The five lines forming this motif connect to others, yet they were clearly executed in separate actions. Each time a line was completed, the tool was raised from the surface, however slightly, and turned to face a new direction. The similarity of the groove sections indicates not only that a single stone tool was probably used, but also that it was very likely turned for each groove to be applied in the same direction. Therefore the five grooves were arranged deliberately, they were meant to meet the end of another line and connect with it. Indeed, in two instances three separately incised lines meet up at the same location. The probability of such a construction occurring in a pattern of five randomly placed lines on a given area is almost nil. This in not merely a question of probability of connecting, but also a probability that four short lines and one long line would form a symmetrical arrangement by chance. This engraved motif is therefore a pre-conceived design and a fully developed graphic symbol. As a scientist I have no desire to speculate about its meaning or purpose, the creation of archaeological myths is the domain of archaeologists. Several possible explanations come to mind, but if this motif occurred in rock art, it would certainly be described as a human figure, and indeed as a male human figure. The depiction of such anthropomorphs with detached 'head' shown by a pit (or dot) certainly does occur often in rock art.

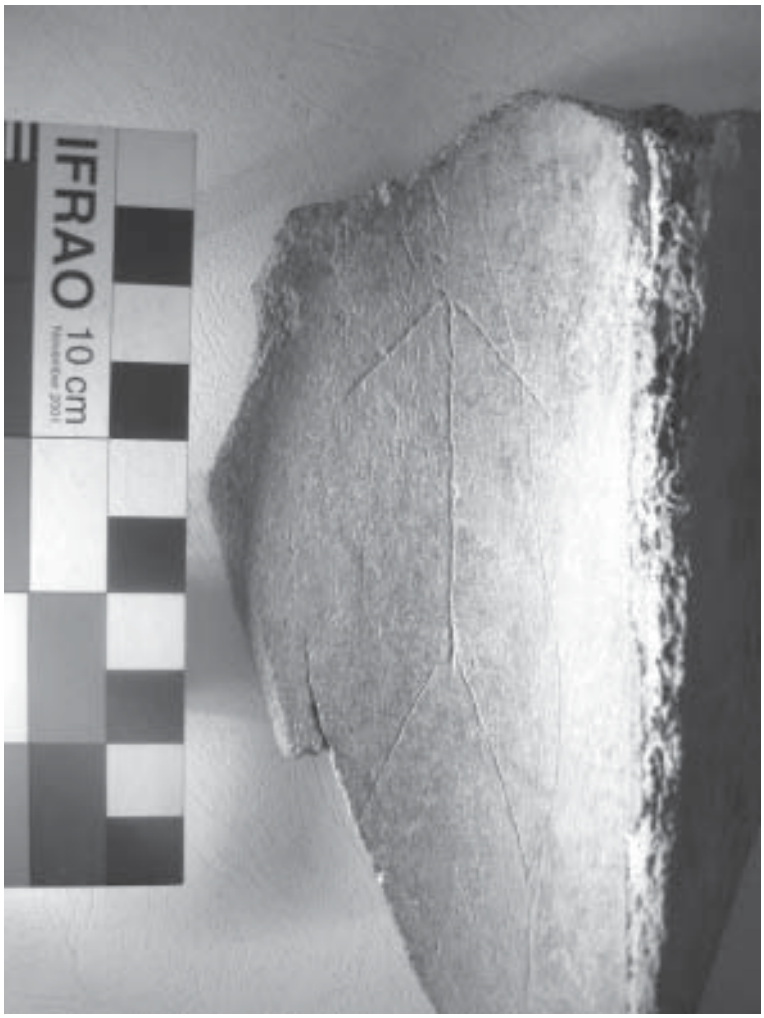

Figure 3. *The engraved bone fragment No. 2 from the Oldisleben site.*

Oldisleben 3

The third engraved object from the Micoquian of Oldisleben is a flattish, rounded and heavily worn fragment of a large long bone of an undetermined species, 78.1 mm long, maximal 31.4 mm wide and 8.1 mm thick. The bone's compactness and superb state of preservation have helped to preserve the set of engraved grooves on its convex outer surface. Beginning from the left (Fig. 4) there are two short grooves whose orientation or spacing do not conform to that of the markings in the main body of engravings. The remaining six marks show distinctive traces of multiple tool applications, the deepest being the last (160 microns depth at 200–220 microns groove width). The stone tool used was not very sharply pointed but extensive splintering in all grooves prevents reliable determination of its cross-section in most places. From left to right, the point of commencement at the top of the grooves is progressively raised to extend into the rounded margin of the bone. At the same time, there is an increasing degree of curvature towards the right with each consecutive tool application. These two factors convey the impression that the markings were produced in their order from left to right, in the sequence of their increasing 'conventionalisation'.

The characteristics of these engraved marks suggest that they were made in one sitting from left to right, drawn from top to bottom. After some hesitant initial markings, a pattern was established of equally spacing these grooves, and although there are morphological changes from left to right, these are progressive, and each mark offers formal aspects of the previous mark. Therefore this set of engravings is not just a set of sub-parallel grooves, each mark was made carefully, deliberately and with an overall outcome in mind,

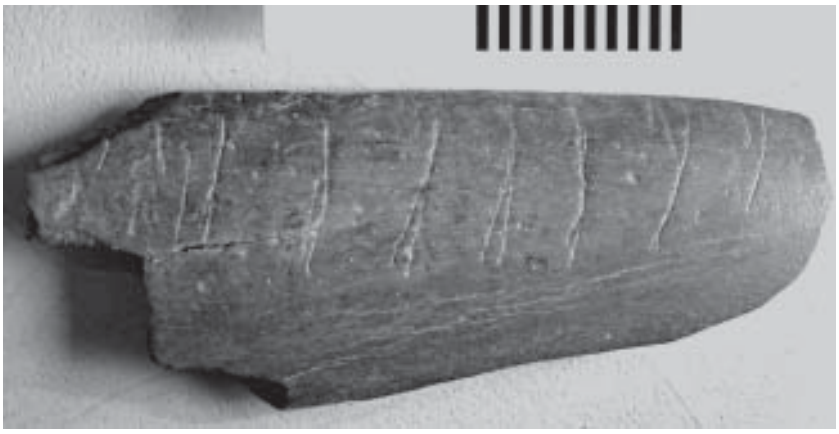

Figure 4. *The engraved bone fragment No. 3 from the Oldisleben site. Scale in millimetres.*

with increasing confidence and determination. The extensive fluvial wear that occurred after the marks were made excludes the possibility that these are modern fakes.

Discussion

It has often been argued that Lower and Middle Palaeolithic line markings made with stone tool points were not made deliberately, but are in fact incidental results of some utilitarian activity, notably where bone surfaces were used as cutting boards (e.g. Davidson 1990; White 1995; cf. Marshack 1991). The three Oldisleben specimens, however, provide unequivocal evidence that all three were 'decorated' deliberately and purposefully. The patterns engraved on objects 1 and 3, with their numerous repeated tool applications and pre-meditated organisation of individual marks already show this most adequately. The motif engraved on object 2 is the structurally most complex motif so far found in a European Middle Palaeolithic context, consisting of five deliberately interconnected lines. They form what is in all probability the oldest currently known iconographic composition. Irrespective of its iconic status, the motif's structure could not realistically be attained without a preconceived idea of its form, i.e. without a prior mental construct or template of what this symbol was to comprise (as is also the case with the Mousterian Tata nummulite; Bednarik 1992).

The Oldisleben engravings are not the only Micoquian palaeoart objects known from the specific region (I will consider others separately). They suffice, however, to refute not only the common claim of pre-Upper Palaeolithic absence of symbolism, but apparently also the long-held view that iconicity is lacking in such early graphic markings. The dominant archaeological dogma that recognisable and repeated patterning does not occur prior to the Aurignacian is decisively falsified by these finds. This dogma has always been part of a simplistic mindset based on the belief that the Aurignacian is the culture of the 'invading moderns', a belief that itself is probably just as false. There is no evidence linking the so-called Aurignacian to the so-called modern humans, but there is adequate evidence that the Aurignacian, and all other Early Upper Palaeolithic traditions up to the Gravettian, belong to Neanderthaloid robusts (Bednarik 2006b). Therefore the orthodox model is at the point of collapse, and Pleistocene archaeologists repeating the old mantra are anachronisms.

Acknowledgments

I record my gratitude to Professor Dietrich Mania, Dr Ursula Mania and Dr Sven Ostritz, and I thank the Thüringisches Landesamt für Archäologische Denkmalpflege and the Landesamt für Archäologie Sachsen-Anhalt for generously providing laboratory space and facilities for my research.

Robert G. Bednarik
P.O. Box 216
Caulfield South, VIC 3162
Australia
E-mail: *auraweb@hotmail.com*

REFERENCES

Bednarik, R. G. 1992a. Palaeoart and archaeological myths. *Cambridge Archaeological Journal* 2(1): 27–43.

Bednarik, R. G. 2006a. The Middle Palaeolithic engravings from Oldisleben, Germany. *Anthropologie* 44(2): 113–121.

Bednarik, R. G. 2006b. Short-range versus long-range theories. Cognition and symbolism in human evolution, lecture 2. *http://www.chass.utoronto.ca/epc/srb/cyber/rbednarik2.pdf*

Donald, M. 1993. Précis of the origins of the modern mind. Three stages in the evolution of culture and cognition. *Behavioral and Brain Sciences* 16: 737–91.

Davidson, I. 1990. Bilzingsleben and early marking. *Rock Art Research* 7: 52–6.

Marshack, A. 1991. A reply to Davidson on Mania and Mania. *Rock Art Research* 8: 47–58.

White, R. 1995. Comment on R. G. Bednarik, 'Concept-mediated marking in the Lower Palaeolithic'. *Current Anthropology* 36: 623–5.

RAR 23-796

Update on the crisis in Lascaux

By MELODY DI PIAZZA

The current crisis in Lascaux, proliferation of *fusarium* in the cave attacking its 17 000-year-old paintings and walls, has gained international attention in recent months due to a *TIME Europe* magazine piece and subsequent press articles. However, French authorities continue to mislead the public as to what happened and what is now happening inside the cave.

World-wide attention drawn to Lascaux

The 15 May 2006 issue of *TIME Europe* featured an exclusive cover story on the crisis in Lascaux exposing the cover-up by the French authorities about the contamination of the cave's pre-Historic paintings. The story was published

in *TIME United States* in June.

Current conditions in the cave

- New colonies of black spots have appeared in large numbers in the entrance of the cave. They have not been reported for analysis.
- Calcite is growing on some of the paintings as well as on non-painted surfaces.
- Some color tones are fading.
- In the Hall of the Bulls, pieces of the calcified ledges have broken off. The pre-Historic pigments which had dripped on them have disappeared.
- Workers are still unsupervised in the cave.
- Ladders of the workers lean against the walls (unpainted) breaking some calcified ledges.
- Too many workers are inside the cave for too much time. Currently, there are three to four people (the survey team and the art restorers) three times a week for the entire day. Their work requires extra lighting. Peaks of temperature have been recorded. Specific data are readily available to the authorities on the number of people and the length of stay that the cave can tolerate. Five to six people per day for 35 to 40 minutes have no impact on the temperature of the cave. Studies have shown that any number of people over this amount and any extended lengths of time have immediate negative impact on the cave.
- The removal of the lime from the cave's floor (poured by authorities in 2001 in an ill-advised attempt to stop the *fusarium*) required digging. The floor surface of the cave is impacted and 'dug out' in places.

Critical issues remain

- Lack of scientific follow-up. Specialists, like microbiologists, come only twice a year.
- French authorities continue to mislead the public on the condition of the cave and its paintings (see below).
- The new adverse air-conditioning machine, which is still in place and operating, is less refined than the original machine. There is no ability for fine regulation of the climate inside the cave.
- The art restorers continue to manually remove fungus from the affected paintings. However, as the fungus is removed, dark and gray spots are left. Without meticulous photographic documentation, there is no way for future researchers to know if the dark spots are left by the contemporary *fusarium* removal or if they existed at the time of the cave's discovery. It is imperative that an accessible body of photographic history, not only of current work inside the cave, but also past historic photographs of the cave, be readily available for comparative study.

Exposing the cover-up

TIME Paris Bureau Chief, James Graff, wrote an excellent article, 'Saving beauty', after thorough investigation, interviews and a personal visit inside the cave. Graff chronicles the Lascaux crisis from the first invasion of fungus through the steps and missteps of the authorities to the present. There is a vivid photograph of fungus growing on one of the pre-Historic paintings. While some success has been noticed with the slowing down of fungus growth, one member of the French-appointed Scientific Committee of Lascaux Cave, told *TIME*: 'They tell us the cave's condition is stable. But that is what they say about Ariel Sharon'.

In June, Jean-Michel Geneste, curator of Lascaux, told the *Wall Street Journal* exactly that: 'Now the situation is stable'. *WSJ* reporter Lee Rosenbaum writes Geneste stated explicitly, 'There is no damage to the paintings', and asserted the growth of fungi has 'disappeared naturally from the paintings'.

But one must ask: if the fungi have 'disappeared naturally', why are restorers in the cave three days a week manually removing the fungi by its roots? And, how can one say the paintings have not been damaged when the root extractions leave dark marks and circles on the paintings? Clearly, the public is not being told the truth about the state of Lascaux.

The International Committee for the Preservation of Lascaux (ICPL) and other concerned citizens wrote the French Ambassador to the United States, Jean-David Levitte, following publication of the *TIME* article urging the French government to take immediate action to remedy the situation in Lascaux. The official response, while polite, was dismissive with no assurances that the government would do anything but maintain its current course blaming much of the degradation on the 'first two decades of intensive frequenting of the cave'. Levitte also added it is 'highly probable that global warming has fostered the explosion of molds and bacteria in the cave'.

However, it must be noted that Lascaux was stable and free of fungus for more than two decades until lichens were found growing in 1998. The French authorities took no action then and proceeded with the invasive installation of an ill-fitted air conditioning system in 2000 which began the huge proliferation of fungus growth inside the cave on painted and unpainted surfaces.

The *TIME* article was picked up by many news organisations around the world and much attention has been focused on Lascaux and its critical state. There is a link to the *TIME* article in its entirety on the ICPL's website at *www.savelascaux.org*. Unfortunately, to date (August 2006), the French press has remained silent.

The ICPL continues to call for a truly independent, international committee of scientists and experts in cave art and its conservation to monitor and report to the world on Lascaux and its health.

Melody Di Piazza
International Committee for the Preservation of Lascaux
322 Lewis Street
Oakland, CA 94607
U.S.A.
E-mail: *Mkd812@aol.com*
RAR 23-797

RAR REVIEW

Waking the trance fixed by PATRICIA A. HELVENSTON and PAUL G. BAHN. 2005. Wasteland Press, Louisville, KY, U.S.A., 126 pages. Softcover, ISBN 1-933265-19-1.

One of the peculiarities of Palaeolithic art has been its capacity to inspire a succession of theories, each claiming to have solved the mystery contained in its strange shapes and forms. This, unfortunately, has led to a situation where many ad hoc, ill-informed accounts are given undue attention in both academic and not so academic circles. Considering the failure of nearly every one of these attempts to account for the facts, one would have thought that the word might have got around by now that there is no Palaeolithic 'Rosetta Stone' to be had. This, however, seems not to be the case, as is testified by the latest version of this kind of speculation, namely Lewis-Williams and Dowson's shamanic Three-Stages of Trance model, which Helvenston and Bahn, in *Waking the trance fixed*, set out in a precise and systematic manner to refute. This collection of previously published and unpublished criticisms of Lewis-Williams and Dowson's position vividly describes the twists and turns of the debate and casts some welcome light on to a controversial and much contested subject. Helvenston and Bahn have the advantage of being foremost experts, in neuropsychology and rock art respectively, and are therefore able to discuss the underlying issues with great perspicuity. By returning to original sources, the authors reveal how important texts and documents have been misrepresented, leading to a biased reading of the data with all the distortions that this implies. From a position of undoubted authority, they show why Lewis-Williams and Dowson's model came to prominence, the reasons for its acceptance, and how the purported neuropsychological and archaeological evidence has been misapplied both to palaeoart and rock art more generally.

One of the main criticisms concerns a general lack of understanding of the complexities involved that has led to, and perpetuated, a confused and limited understanding of the major issues. For example, Lewis-Williams and Dowson conflate the different kinds of mind-altering drugs with their psychological effects. An error compounded by an inadequate account of what constitutes an altered state of consciousness (of which there are seventy different kinds) and the diverse range of subjective experiences that can accompany them. Moreover, there may be many predisposing factors that produce such an altered state, of which shamanic trance may be but one. Depending on how these altered states are induced, different parts of the brain will be stimulated leading to different kinds of experience, none of which induce the notorious three-stages of trance. Crucially, altered states of consciousness, generated by such things as sensory deprivation, fasting and 'bad air' do not appear to produce the geometric imagery central to this debate. Rather, this imagery seems to be the exclusive preserve of psilocybin, mescaline and LSD which, again, do not necessarily involve the three stages favoured by Lewis-Williams and Dowson. More seriously, because these substances were unavailable to Palaeolithic people, the chances that the geometrics of Palaeolithic art were inspired by the trance states of shamanism turns out to be close to zero.

Another major criticism is that shamanism is applied without discrimination to a broad range of different groups. As Helvenston and Bahn point out, rather than one common definition applied arbitrarily, shamanism should be seen against the prevailing cultural norms. In this respect, it is important the myths, customs and rituals of a community are given due regard, which may be more relevant in determining the subject matter of art than shamanism per se. Indeed, Lewis-Williams and Dowson's primary ethnographic example, the San, may be more influenced by such factors of which shamanism could be just one example. The fact that we are unable to determine whether shamanism had any direct connection with San art further disqualifies any comparisons between San and Palaeolithic communities. We may, however, the authors suggest, be on safer ground in attributing some mythic tendencies to palaeoart based on a 'religious' striving, the exact nature of which has yet to be ascertained.

In what should become a classic of its kind, the hazards of applying ethnographic comparisons carelessly and prescriptively are beautifully illustrated in Chapter 7, where Whitley's shamanistic analysis of Native American Rock Art is laid bare. Whitley, a convert to Lewis-Williams and Dowson's model, attempts to illustrate how the shamanic proposition can be usefully applied to the art of indigenous groups such as the Coso Shoshone. The original documentation on this issue, it seems, remains silent or, alternatively, can be interpreted as referring to mythic thinking that determines the content of dreams, initiation ceremonies, healing rituals and the like, all of which Whitley ignores. By supporting Keyser and Whitley's claim that documentary evidence *does* exist for shamans producing rock art, thereby contradicting Kehoe's assertion that there is no such evidence, Helvenston and Bahn's integrity and fairness in these matters is demonstrated in that they are ready to affirm the role of shamanism in instances when the facts clearly imply that this did sometimes occur. Having said this, the authors continue to maintain that such evidence is restricted to one or two examples and there is, nevertheless, still no ethnographic data that directly connects rock art to trance.

The final chapter is a withering indictment by Bahn on Lewis-Williams's competence to comment on Palaeolithic art. By drawing attention to some glaring inaccuracies and omissions contained in Lewis-Williams's *The mind in the cave*, Bahn shows how inattention to detail can be construed as symptomatic of failings on a more theoretical level. This disregard is all too obvious in relation to neuropsychological terminology, which Helvenston and Bahn provide a valuable service in correcting by defining entoptics, phosphenes, form constants, geometrics and hallucinations with reference to the various processing stages of the visual hierarchy. Because neuropsychology deals with subtle nuances of meaning, it is absolutely essential that these terms are clearly and unambiguously defined, as the lack of precision has often led to much of the debate being conducted at cross purposes. Helvenston's authority on such matters is underscored by the fact that she personally knew Klüver and was intimately acquainted with his work. As Lewis-Williams and Dowson place great emphasis on, and misrepresent, Klüver's research, this throws into sharp relief the difference between their highly selective and superficial reading of the data compared to Helvenston's more informed understanding.

The authors conclude that the preoccupation of the archaeological community with Lewis-Williams and Dowson's theory

has seriously undermined the study of Palaeolithic art. They suggest that this partially stems from the recent fashion for New Age philosophies with the associated obsession with shamanism that the media has latched onto. Richard Dawkins might call this a 'bad meme' that has infected the minds of archaeologists and public alike — a meme which Helvenston and Bahn have so eloquently exorcised. *Waking the trance fixed* should stand as a warning to all archaeologists and anthropologists who would turn to neuropsychology to prop up their theories and is a long overdue antidote to the shamanic 'neuropsychological' trance model. For those who wish to gain a proper understanding of the complexities and intricacies of the issues involved, Helvenston and Bahn's book is an indispensable read.

Derek Hodgson
England, U.K.
RAR 23-798

Aesthetics and rock art, edited by THOMAS HEYD and JOHN CLEGG. 2005. Ashgate, U.K., *xxv* + 316 pages. Hardcover, US$99.95, £55.00**,** ISBN 075463924X.

Aesthetics and rock art is a mosaic of contributions strategically organised to discuss in depth what is perhaps one of the most elusive topics in rock art research. At least that seems to have been the editorial intent. Have Thomas Heyd and John Clegg succeeded in their attempt?

If I had to select a definition for 'aesthetics' in the book, I would choose aesthetics as 'the science of sensible cognition' (5). Sensible here, I presume, refers to our capacity to perform sound reasoning and empirical judgment about perceived features in the material world. So, according to the definition, aesthetics is the chosen means for an investigation concerned with a degree of individual or collective 'attentiveness to our perceptual world' (5). Basically, aesthetics is about attentiveness, and attentiveness is really about perception. Perception, as we all know, is a complex phenomenological practice that is common to all, and yet differs on an individual basis. This degree of variability, unfortunately, spreads an undesirable fog over the whole project. Hence, the book becomes a difficult navigation between persuasive discourses on the nature of aesthetics and what amount to be weak contributions about the aesthetics of rock art. But let me peregrinate further into the table of contents. This book basically contains one powerful introduction and seventeen chapters of varying relevance divided into three parts.

The first part is concerned with the difficult question as to 'whether aesthetics can or should have a place in encounters with rock art'(10)[1]. This question is thoroughly dissected through a collection of essays written from a multidisciplinary perspective. But neither contribution from philosophy, anthropology, archaeology, nor art history has been able to provide a solution to the core problems inherent in this question. Is individual aesthetic appreciation a systematic cultural appropriation? Can we establish reliable taxonomies for what amount to be aesthetic assumptions? Can aesthetics provide an empirical methodology (a basic requirement for scientific discourse)? For Peter Lamarque, cultural appropriation is an assimilation (not to say a digestion) of common aesthetic features by a dominant culture. The 'otherness' of pre-Historic motifs, for example, is systematically absorbed into a hermeneutics 'entirely ignorant of the social and cultural contexts' (10). For Thomas Heyd, aesthetics is elastic enough so that it can stretch beyond a score of basic objections and provide a valid forum for appreciation rather than interpretation. Heyd endorses the appreciation of context rather than the precarious interpretation of 'text'.

Howard Morphy's undeniable command of his material makes his article one of the key contributions. However, I will argue that aesthetics cannot provide the type of data[2] that, he claims, are needed to reform archaeology and introduce aesthetics as a genuine and important contributor (especially in the context of rock art research). Despite his effort, Morphy's overall theses, that individual's appreciation, interpretation and perception are empirically measurable and archaeologically discernible is flawed. Aesthetic motivations, while inherent in the production of forms, are not 'sedimented' and therefore cannot be retrieved. To impose a categorised motivation on a given motif or artefact is to perform the type of insidious cultural appropriation Lamarque condemns.

Reinaldo Morales Jr's contribution comes across as a redemptive crusade against the uninformed for whom the term rock art is inappropriate. Using a high dosage of academic rhetoric from the field of art theory, Morales makes a good effort to establish the appropriateness of the word 'art'. The effort is commendable, but it does not contribute anything new to the debate.

For Williams Domeris, the best way to avoid aggrandising the gap between the notion of artefact and that of art '[…] is to find a way of redefining aesthetics so as to break free from a binary opposition […]' (83). Etymologically speaking, art comes from the Latin *ars*, and in turn is derived from the root *ar-* meaning 'to fit'**.** In its original context it implied a sense of skill in transforming artificially an object or an environment. Artefact is rooted in *ars* and *facere* (to make) and is usually defined as an artificial product as distinguished from natural remains. The key word here is 'artificial', and the important point is the fact that both art and artefact require human agency. So, Domeris is quite right in pointing out the dilemma that has plagued many attempts at discussing objectively art and artefact. As it stands, the two words have come to express two discrete environments and practice: manufacture and creation.

The book's second part 'seeks to uncover the factors that constitute the aesthetic values found in rock art' (11). Through an

[1] But is it art? The fact that the discipline has been branded with the word 'art' since its conception would indicate that aesthetic concerns are indeed genuine. However, I would suggest that in the innovative wind of the twenty-first century, the word 'art' be dropped. Would this terminate the potential encounter between anthropic markings and individual attentiveness? I do not think so. Alphabets, for example, evolved out of aesthetic principles and concerns for effectiveness. In some cultures, it reached an aesthetic height that was above and beyond practicality. Questioning the aesthetic virtue of calligraphy would, in my mind, be a complete waste of time. Anthropic markings on lithic supports are as aesthetically oriented as is any handwriting. In other words, rock art research is intrinsically involved with aesthetics and there are a plethora of reasons why this pursuit is genuine.

[2] According to Morphy (59) '[t]he avoidance of studies of meaning and aesthetics in rock art may have more to do with a particular ethos of prehistoric research than with the lack of data as such'. This may be so, however, hermeneutic investigations and aesthetic assessments have always produced problematic results. The main reason for this is that rock art research is a discipline about 'absence' — and archaeology is not ready to discuss 'absence'. In fact, I will argue that before 'including aesthetics in archaeological analysis' (51), it would be more pressing to equip archeology with new terminology so that it is prepared to face the problematic absence of meaning, purpose and practice (just to name a few). The interpretation of 'absence' cannot be successful if it remains the unaccounted-for projection of semantic constructs that are organised in the definitional reality of the archaeologist's meta-language'.

eclectic collection of papers, the reader is invited to assess aesthetic values inherent to the processes of manufacturing, observing and reading the artefactual evidence in the context of rock art. This second part suffers from a lack of thematic cohesiveness.

The section begins with Michael Eastham discussing in his usual cogent way the distortion of perspectives in some of the Upper Palaeolithic iconography. For Eastham this distortion is not the result of a lack of skill, but rather the manifestation of a particular gaze that can be reconstructed using geometrical theorem. Here, it seems, the attempt is to dissect geometrically a motif until it reveals its complexity and, more to the point, the complexity of its maker(s). According to Eastham '[b]oth archaeological and anthropological investigations of pictures on rock surfaces involve an aesthetic assumption — an assumption of gradual aesthetic evolution' (89). I disagree. Rock art research is not confined to a gradual aesthetic evolution, but, in Bruno David's words, is concerned with 'specific forms of social and environmental engagements'.

Masaru Ogawa's contribution is primarily concerned with the eidetic image and the salience of concretions in the caves during the Upper Palaeolithic. He argues that there might be more than meets the eye in the spatial relationship between a motifs' outline and it's support. He argues that the integration of an image within pre-existing salient features is a fundamental 'dialogue' between the image-maker and the surface of the cave wall. According to Ogawa, the perceived image was born out of the salient features rather than manipulated to 'fit' the preconceived motif. This is reminiscent of the Sapir/Whorf dilemma. The debate is open.

J. B. Deregowski's article has the merit to question 'absence'. In this case he writes about the absence of naturalistically rendered anthropomorphous images in Upper Palaeolithic iconography. According to Deregowski, the 'typical contours of human beings are such that they are inherently more difficult to portray than bovines, equines, and similar animals, and that this explains the rather late appearance of depictions of human beings' (131). He highlights the aesthetic dilemma between the elusiveness of forms and the rigidity of categories (132). I particularly enjoyed the following example: 'Unlike the linguistic label "cat", which attaches to the animal whatever its shape, the depiction changes markedly with a cat's shape' (132). Do I need to add anything? Man is indeed 'a difficult beast to draw' (137).

Ute Eickelkamp offers an interesting anthropological commentary on the emergence, transmission and reiteration of stylistic forms in a given cultural unit. In this case, we are specifically involved with women from a particular Australian Aboriginal community and we learn how their aesthetic imagination coupled with their intention to recycle specific artistic conventions and innovations impact on the meaning of forms and the forms of meaning. For John Clegg, the intellectual peregrination in Gestalt and optical tricks is a subject that he has already pursued in other published form. In fact, I would humbly suggest that this is a rehash of a topic that could use a facelift. The ideas are excellent, but the analytical framework used is dated. Perhaps neuroscience might provide Clegg with a new and very effective resource to discuss the brain, its tricks, and how we do not have to trephine the shaman to see that these types of neurological manifestations occur to all the common mortals.

The second part ends with Rowan Wilke's think-piece on authenticity, copy and simulacra. The core discussion in this essay has to do with the problem of extracting images from a site and presenting these images in ways that claim originality. Take any images from a coffee table book on Lascaux, for example, the caption will describe the image as the image and not necessarily give the reader a long (and painful) description of all the synthetical processes that have been put into place so that the motif in situ is now two-dimensionally rendered in the book. But for most people this is how the motif is experienced (for lack of access). Now, if the reader decides to enter the third dimension, she can make the effort to go to Lascaux and visit the simulated and 'hyper-real' simulacrum. Once again, this will generate a synthetical experience of the cave — for lack of access to the original. So, at the end, whatever the individual decides to do, she will never attentively experience the original cave. So the question becomes: is the simulacrum good enough? Obviously Lascaux is in such a bad shape (thanks to the irresponsible behaviour of the French administrations, see *RAR* 23: 137), that for many years to come the simulated two-dimensional image or the three-dimensional copy will do!

Part three contains 'case studies on the application of an aesthetic perspective to rock art in a diversity of areas around the world, the emphasis being on the possibilities, as well as the problems, of rock art appreciation […]' (13). This concluding part of the book is the weakest — a melting pot of essays that do not seem to follow a planned layout ('random' I guess is the best word to describe how these articles follow one another). 'Opportunities and tensions in cross-cultural appreciation' is the title of this last section of the book. A chapter is dedicated to how rock art is being perceived, analysed and described from the subjective perspective of the observers' gaze. This is a very important topic, and I only wish it had been tackled more strategically. As is, the random collection of essays forces the reader to hop from continent to continent, from medium to medium, from culture to culture, from period to period without holding on to an organised thematic thread.

John Coles' contribution is, put simply, precariously speculative. Coles' claims that our sensible aesthetic capacities for observing and 'reading' motifs (in this case petroglyphs in Scandinavia) are investigative techniques that allow conclusions to be made about 'the producer and the customer', and this despite the absence of empirical data. Indeed, if aesthetics is that powerful, then rock art research should immediately cease all its palaeo-scientific pursuits and researchers should be reformed into aestheticians! Obviously, aesthetics cannot and will not provide the kind of reliable information that micro-analysis and behavioural analysis based on in situ evidence provide. To engage in an empirical discourse based on individual aesthetic appreciation of a given motif is a good practice, but is not scientific. Coles, however, does make the following statement: 'The aesthetic quality of rock carvings […] cannot in reality be measured, or perhaps even expressed in clearly understandable terms' (199). So if is not quantifiable and cannot be described, then what is the scientific value of aesthetic appreciation?

Pippa Skotnes breaks new ground: '[t]his essay marks the first attempt in the critical literature to assess the significance of one of the formal components of the paintings, distinct from iconography — in this case the support or case wall' (202). Analysis of this kind is not new, in fact there is a large volume of available discussions on this particular topic in the literature about rock art. Skotnes is basically concerned with the notion of 'experience'[3] — as in experiencing the site, the support, the motif etc. The emphasis for this concern (rightly defined as culturally mediated by Bruno David) is on the dichotomy between experiencing and describing. The author argues that the meaning of many San rock art sites and motifs have been approached from the wrong perspective (a Vasarian perspective that will, among other things, normalise the observer's angle of perception). Overlooked, we

[3] A word such as 'experience' is problematic. It can be used as a term 'for lack of real choice amongst unproblematic terms' (15), but it needs to be prefaced by a thorough introduction.

are told, are the 'true' meanings inherent in the choice of support. By downplaying the importance of support and orientation, the observer will appose to the site arbitrary framing devices and boundaries. As Skotnes argues, '[t]he boundary between "this world" and the "world of the spirit" is a special western construct' (209). Unfortunately, in the absence of the image-maker, it is a difficult task to analyse sites and motifs without referencing back to the type of perspectives and ways-of-seeing/understanding that is inherent to the culturally mediated gaze of the observer. Unless the observer has unmediated access to the image-maker's motivations for the choice of sites, the processes of manufacture and the meaning of the motifs, investigations about the artistic choices and aesthetic concerns at play will always be highly speculative.

According to Andrea Stone, modified speleothems in Mayan caves present the modern observer with an interesting case of abstraction of form that is not necessarily the result of a lack of technical abilities, but rather a deliberate stylistic choice that emphasises the subterranean and chthonic nature of these 'guardian deities'. Contrast these rather plain modified speleothems with the well-known Maya art and architecture and Stone's theses become interesting. This essay also provides the reader with a commentary on expectations. In this case, it might be the reader's expectation for some kind of homogeneity in the overall corpus of artistic manifestations. Needless to say, this expectation needs to be 'exorcised'. Homogeneity is potentially one of the most corrosive expectations in rock art research. Expectations, assumptions; these are cultural practices that can be harmful in our analysis of rock art motifs.

For George Nash, assumptions about what is or isn't rock art must be approached carefully. He writes, 'can marks on rock configuring a text, either accompanying other visual representation or by itself, be considered rock art?' (236). Nash argues that indeed text can constitute rock art. Pallava script and petroglyphic images on semi-portable stones from Java provide an effective case study. Rock art, Nash emphasises, is polysemic. Its 'grammar' can be analysed on three levels: the image itself, the syntactic organisation and comprehension. In the written text aesthetic choices have been made about symmetry and repetition (as recurring thematic indexed into recognisable grammar). The same choices can be found in literate and non-literate forms of expression. All in all, Nash is advocating a reassessment of rock art taxonomies to include textual manifestations on rock surfaces. The implications for this reform are wide and this proposal needs to be considered carefully.

This final section ends with a very lyrical (and entertaining) essay by Sven Ouzman. He writes that 'San societies were thus deeply concerned with producing sound by singing, clapping, dancing and by hammering certain rocks and engraved images' (261). For Ouzman, rock art becomes the repository of social practices. The question is: are these hammered impacts and hand polished surfaces rock art? These manifestations are associated to rock art images, but seem to be triggered by a different index of behavioural activities (questing is suggested), and do not seem to imply any aesthetic motivations per se (or do they?). If we step out of an iconocentric gaze and start to observe the motif in the site, the site in the landscape, and the landscape in terms of cosmology, then obviously, these marks become fundamental in the understanding of these petroglyphs — as beacons in a cognitive map.

Rock art is about the visible as much as it is about the invisible. The question is: how do we investigate empirically the invisible? If the reader can provide an answer to this question, then he or she will validate the purpose for this book and the commendable efforts made by John Clegg and Thomas Heyd to discuss aesthetics in the context of rock art (helped by a number of contributors).

Dr Yann-Pierre Montelle
Christchurch, New Zealand
RAR 23-799

Shadows of a northern past: rock carvings of Bohuslän and Østfold, by JOHN COLES. 2005. Oxbow Books, Oxford, 222+vii pages, 20 colour plates and numerous further illustrations; a project supported by The British Academy, the Royal Swedish Academy of Letters, History and Antiquities, and Berit Wallenbergs Stiftelse. Hardback, ISBN 1-84217-181-X.

Bohuslän and Østfold are neighbouring areas of the present southern Sweden and Norway, where there is a rich corpus of rock art pecked into the glaciated granite. This coastal area has a convoluted topography with many long sea inlets, islands and promontories. Here the sea level rose rapidly when the glacial ice melted; the land rose more slowly, no longer weighed down by the ice. The sea was 15–16 m or more above present levels in 1600–1500 B.C., dropping to 11–12 m around 900–800 B.C. Accordingly the maps in this book show a sea level above the present, approximating its level at the relevant time. The multitudes of carved ships and other pictures now look down to flat pasture or wetlands, where once they faced tidal flats or the sea of the northern Skagerrak, then receding at perhaps 1 cm per year.

One of the most important activities of writers about art is sometimes called 'art appreciation': guiding readers to be able to make their most of art. Nowadays excellent examples are to be seen on television, when a charismatic authority leads viewers to see and appreciate art objects with a new intensity and appreciation. It is best done by a well-informed authority that knows the oeuvre very well, and is a good presenter, able to communicate their enthusiasm. John Coles has those qualities, having won awards for his work in pre-Historic wetlands archaeology, including for the best archaeology book of 1985/6. For the past 30 years he has been looking at the rock carvings of southern Scandinavia.

The book is hardback, with 20 colour plates, colour cover, endplates plus 264 impeccable monochrome photos, site plans and maps. The book is standard A4 in height, which fits conveniently on shelves, with an extra inch of page-width to do justice to the illustrations.

The book has five main sections:

Introduction: a traveller's tale, a brief history of work, the canvasses and carvers.
Images — a complex simplicity: with boats, humans, other animals, trees, discs and vehicles, other images, time and timelessness.
The organisation of the rock: site structure; below the carvings.
Landscapes of the past: mapping and a case study.
The meaning of it all, or of nothing: a traveller's tale.

Beyond the bibliography are 87 pages of detailed and uniformly excellent site plans that substantiate the book and provide data for further analysis.

This superb and transparently honest book is personal; it leads us into the rock art and lets us make of it what we will, rather than asserting, arguing or trying to convince. The references are rightly focussed on Scandinavian rock art; they do not delve

deeply or generally into the literature about rock art outside southern Scandinavia or its theory. This orientation makes this book a giver to other rock art studies, rather than a learner from them. Many parts remind of attitudes, tools and procedures we might apply more to our work, particularly the excellent maps with their stress on the ancient landscape, and attention to the physicality of the sites and the carvings. At this scale the impact is immediate; we are led to realise the appearance of the art as it changes with light and season, on slopes some of them steep and slippery when wet. He is sympathetic to the visitors, as well as to artists and their physical tasks in planning and executing the petroglyphs. On p. 9 quality of line is tabulated against quality of surface. The results that most, but not all fine quality carvings are found on the best surfaces and vice-versa suggests that the importance of the place may not have been the over-riding factor in the location of 'essential images required by the society'. These close practical considerations lead the reader to understanding the taphonomic evidence of the pictures' production through several stages of pecking into the granite, and their re-use and modification or superposition, perhaps deliberate destruction by fires, and slow deterioration through weathering.

*Introduction: w*ith a light touch the author presents summaries of the history of work on the petroglyphs, and what is known of their making and history, apparently from the early Bronze Age to the pre-Roman Iron Age; 1500 to 300 B.C. These dates are well established in general terms through knowledge of many comparable but small decorative engravings on excavated artefacts of bronze and other materials.

Images — a complex simplicity is the second and longest section. It describes and discusses the motif types, beginning with the more common ('boats'), about which most is known, but leaving till last the cup marks, which are most common but whose interpretation relies on association, and a summary of 'Time and timelessness'. Every fascinating detail and interpretation is clearly expounded, but leaving readers to reach their own conclusions. For me the most convincing is the fact that, of thousands of sites with 'boats', only one shows the everyday mundanity of fishing. (Fig. 9, p. 32, and Fig. 225). The others are all eloquent of symbols and spirituality. Most of them are inscrutable, but some, such as 'flutterers', 'sun-discs', 'acrobats doing back-flips' and evidently 'sacred trees' link to stories and movies of this and last century.

In *the organisation of the rock: site structure* Coles widens the focus to the organisation of the motifs into structured sites, in some cases compositions. Here his particular sensitivity to details of slope and orientation, natural rock cracks and their relations to the orientation, composition and distribution of the rock art and its concentrations and sites is particularly informative and stimulating. Coles discovers images packed or even crammed into small areas, with nearby spaces where the pictures waver their orientation between compositions focussed on the direction of natural cracks, or the imperative of intended viewing from below. The evidence of distribution and structure within a macro-landscape is now added to a very few recent studies of deposits at the base of decorated slopes, containing evidence from the making of the carvings, and their active (apparently ceremonial) use by their societies.

Landscapes of the past, with its maps and a case study, broadens the studied landscape even further. This work is Coles' alone. The first seven pages discuss the complex relations of land, sea, time and rock art. The excellent maps which illustrate this whole section allow the reader to judge overall patterns, suggesting that many of the pictures were first made in the early Bronze Age very close to sea level, favouring sheltered inland waters. Focussing further to minor and major catchments provides clear evidence of complexly inter-linked distributional associations and structures of land, sea, rock art, monuments and settlement scatters through the Bronze and Iron Ages. Quite how these tie together is illuminated by a case study of Bro Utmark.

The meaning of it all, or of nothing, reviews the burgeoning interpretive and explanatory literature bearing on the petroglyphs in their Bronze Age context. Coles begins with the powerfully simple suggestion that the powers relevant to the rock art comprised:

1. The story, idea or belief that prompted the existence of the symbol;
2. The griot, the holder of ancestral voices and the interpreter of traditions of society;
3. The artist-craftsperson who was empowered to transform the surface to reveal the images in the rock to
4. The viewers, onlookers, consumers of the system of belief.

Beyond this much is speculated but little usefully known. The context of a northern fringe of the European Bronze Age that had indigenous myths and beliefs to help cope with a changing environment and constantly renegotiable rights to land and sea resources. Trading connections with the metal-rich south must have led to cultural interchange and mutual enriching. While these Bronze Age myths likely connected to the later stories and religion, the latter is so rich that almost any petroglyph could reflect the Norse tales of around A.D. 1000. In *A traveller's tale,* Coles concludes the book with a fictional account of a Bronze Age traveller, moving between the far south and far north of Europe.

Our guide leaves us with appended 87 pages of detailed and uniformly excellent site plans with their insights and data for further analysis.

John Clegg
Sydney, Australia
RAR 23-800

Australian Apocalypse. The story of Australia's greatest cultural monument, by ROBERT G. BEDNARIK. 2006. Occasional AURA Publication 14, Australian Rock Art Research Association, Inc., Melbourne, 97 pages, 32 pages of colour plates, plus monochrome images in the text. Softcover, $A40.00, price for researchers $A20.00, ISBN 0-9586802-2-1.

The word *journey* is often used today as a metaphor for a range of human and personal experiences, but in *Australian Apocalypse* this word has found a near-cosmic significance. The book is about Australia, a continent that is defined most of all by distance and remoteness. The antipodal terminus of the migration of one of the earliest human groups to have left Africa, Australia, became the lure for modern European explorers and also a dreadful prospect for their ostracised fellow men. In the sixties, the hot plains and flat shores of this continent became the dream-land for Robert G. Bednarik, a European youth who was reared amidst the cool valleys and crisp heights of the Alps. Fascinated by the rockshelter drawings and paintings of the Old World but unhappy with contemporary speculations as to their origin and age, he sought paradigmatic answers elsewhere. Inspired by scientific promises such as those of Roland Beschel, an Austrian whose lichenometric method was opening new investigative horizons, and by a newspaper revelation in 1965 that 'no archaeological research had ever been conducted in the entire north-western quarter of Australia', Bednarik headed south (p. 26). There, to

his delight, he discovered Murujuga/Puratha and its rupestral treasures.

Bednarik is a soul driven by an insatiable curiosity: how old is the rock art of the Murujuga region? When did the ancestral Australians arrive to this continent? How did they get here? The geography of the land, its archaeology, all pointed to a sea crossing sometime between 60 ka and 40 ka. Having discovered the remains of a hominin presence in West Timor in 1998, Bednarik set out with a group of collaborators to replicate a Stone-Age maritime experience. Using primitive tools, they built bamboo rafts, and after a few failures and a perilous monsoon storm, their island-hopping successfully took them from Timor to Darwin, a distance of about 1000 km, which they survived by subsisting on harpooned fish and water carried in termite-hollowed logs (p. 6).

One accomplishment of this daring experiment was to shake the established anthropological thinking and its tendency to dogmatic thinking (e.g. facile notions of diffusion and replacement). But questions regarding the age of the rock art of Australia and how to preserve it are yet to be firmly answered.

The task is daunting, but always a *bricoleur*, Bednarik invented his own machines and devised his own methods and laboratory tests, always spending his own money. For example, he created a machine that uses sixteen kilograms of mercury to create a vacuum to measure the porosity of rock samples. He built his own high-powered field microscope by cannibalising Russian, Japanese, German and Chinese machines. But the difficult task of surveying the multitude of rock art sites in the Dampier Archipelago was complicated by an ominous development: the unprecedented scale and invasiveness of a growing mining industry. A systematic destruction of the rock art of the area and defacement as a result of pollution was underway. Driven by corporate profit, this destruction of an ancient human heritage and the abuse of environment were carried out with the complicity of a corrupt local government and unprincipled academics. This challenge alerted Bednarik to what was happening elsewhere in the world of rock art, in Portugal for example. His determination in the pursuits of scientific goals gave rise to the activism of a believer, and he began organising local groups and environmentalists, arranging scientific seminars, orchestrating media campaigns, and seeking the help of national and international institutions in preventing the destruction of rock art in Australia, Portugal and elsewhere. The narrative of the intrigues and personal motives in these confrontations is captivating, and the substantial successes and promised hopes are encouraging.

What is most remarkable about the book are the exuberant energies of its author, his extraordinary intellect and his commitment to science. Bednarik single-handedly undertook a Leibnitzean task of creating a 'calculus' for the scientific study of rock art, and fought valiantly to save this discipline from opportunistic theories such as those of shamanism. But this man's dedication to science is not a betrayal of faith. In fact his respect for the Aborigines, the history of whom he gives a moving account at the beginning of the book, has long earned him privileged access to their most sacred traditions, directly from the mouths of its elder custodians, 'the silly old men' — a secret he has honoured in the face of a great many temptations (p. 31).

As to the rock art of Australia, most of it is fairly recent (Holocene), some of it is of a greater antiquity, but all of it is beautiful, sacred, evoking the disturbing sadness of the bereaved, a moving portrayal of which is in the image that is appropriately called in *Australian Apocalypse* 'the face of genocide'.

Dr Ahmed Achrati
Chicago, U.S.A.
RAR 23-801

The appropriation of Indigenous images: a review essay

Lost world of the Kimberley: extraordinary glimpses of Australia's Ice Age ancestors, by IAN WILSON. 2006. Allen and Unwin, Crow's Nest, 315 pages. Softcover, $A35.00, ISBN 1-74114-391-8

It is not often you have the pleasure of reviewing a book you know you are going to loathe before you have opened the first page. This book intrigued me when I read a scathing review of it by Nicolas Rothwell, in the *Weekend Australian*. I was aware of the general argument presented in the book (since it is not new, in any sense, despite the claim of 'startling new discoveries'), but wanted to know: could this book really be as bad as these reviewers suggested? The answer was 'yes'. The question then became: who is to blame?

Wilson's book is yet another example of the appropriation of Indigenous images in the search for a 'good story'. In this book, Wilson revives the notion that Australia may have been inhabited by a 'mystery race' that lived in the Kimberley prior to colonisation by Aboriginal people. He interprets the Gwion Gwion figures, an ancient rock art tradition in the Kimberley, as evidence of this mystery race. It is clear that Wilson was inspired by Grahame Walsh's (1994) book *Bradshaws: ancient rock paintings of north-west Australia*, which suggested that the 'Bradshaw' paintings had a non-Aboriginal origin, an idea which Walsh propounded in numerous television and radio appearances and feature articles in *Craft Arts International, Australian Business Monthly*, the *Bulletin* and *Sydney Morning Herald's Good Weekend*.

Building on the interest initially generated by Walsh, Wilson's volume is a book in search of a mystery — irrespective of whether there is a real mystery to be solved. I think every archaeologist in Australia, except Grahame Walsh (who is not trained as an archaeologist, but is certainly talented, meticulous and hard-working) would agree that the ancestors of contemporary Aboriginal people produced the rock paintings in this region. Stylistic differences in rock art through the spans of time involved are to be expected, and occur in other parts of Australia and, indeed, the world. Like Walsh's volume, Wilson's book provides no evidence, other than his own interpretations of the paintings, to support the notion of a mystery race inhabiting the Kimberley prior to Aboriginal occupation. But this is not surprising — the many omissions and errors of fact in this book lead to conclusions that are logically fallacious. As with other books of this populist 'mystery race' genre, a lack of evidence does not prevent publication of a potentially income-generating idea.

Building on the 'mystery race' idea put forward by Walsh, Wilson's book keys into a long tradition of either advertently, or inadvertently, attempting to dispossess Aboriginal people of their cultural heritage in the Kimberley. Joseph Bradshaw, the first Western 'discoverer' of these rock art images, established this trend when he compared their elegant figures of this region with Egyptian temple paintings (Rothwell 2006). Similarly, Hull (1846: 32, 39, cited in McNiven and Russell 1997) associated the rock paintings of the Kimberley with sun worship and an Egyptian deity 'Amoun', while Chauncy (1878: 223, cited in McNiven and Russell 1997) used these paintings to argue that another 'race' had existed in this region of Australia prior its colonisation by Aboriginal people. These figures are regularly compared to those of Tassili n'Ajjer in southern Algeria (e.g. Hanbury-Tenison 2006). As McNiven and Russell (1997: 801) point out, many of

these interpretations 'echo 19th-century scholarship and deep-seated colonialist perceptions of Aboriginal people'. A number of ubiquitous, untenable and ethnocentric (sometimes racist) assumptions underlie such 'mystery race' views. These include:

- That another (more advanced/civilised) race lived in a place before the Indigenous population.
- That the interpreter's histories are the 'true' 'discovered' histories of a place.
- That Indigenous people were incapable of producing sophisticated architecture, or superb rock paintings.
- That the only 'real' archaeology is that which is concerned with ancient civilisations, exquisite art and/or monumental structures.
- That evolution is uni-directional, with contemporary Western culture as a pinnacle of human evolution.

On the up side, I found this book useful for a topic I co-teach with Heather Burke, called 'The archaeological imagination', in which we try to teach students how to distinguish between tenable and untenable interpretations of the past (i.e. between 'fringe' archaeology and 'real' archaeology), and to recognise the ways in which images are used to appropriate other people's cultural patrimony. It is a rare thing to get a timely example of something you are warning students against, and is especially useful when it is written about an Australian context in which you already have an interest (Smith 1996). In fact, it would be possible to craft several lectures around Wilson's ill-conceived, under-researched but potentially lucrative publications (e.g. Wilson 1986, 1998), and their ability to inspire the imagination of a general public.

So, who is to blame for this particular book? I think Grahame Walsh has to take some of the responsibility (though he is not a supporter of this book, even if he is mentioned in the acknowledgements), since his own wild intellectual meanderings inspired Wilson's even less scholarly approach. But while Walsh has recorded the rock art of this region over the last thirty years, and done so meticulously, Wilson has not bothered with such effort. Whereas Walsh's errors are those of interpretation only, Wilson's are of both method and interpretation. Certainly, Wilson has to carry most of the blame for this book, since he chose to put forward such sweeping views from such a fragile basis:

> The problems with Wilson's project lie as much in the manner of its undertaking as in the specifics of his critique and his claims of discovery. The north Kimberley is a subtle, recalcitrant place that discloses its tone and the relation of its parts only over the slow passage of years. There are many serious writers and historians who have spent half a lifetime travelling its remote quarters, yet would not dare to boast that they have come close to its core.
>
> Wilson, by contrast, presents a 300-page book of grand interpretation on the basis of a few shepherded days (Rothwell 2006: R9).

Certainly, this is not a scholarly volume. Wilson's 'fieldwork' was what others might call a holiday and his citing of previous work is biased and unscholarly: for example, while he extensively cites Walsh and others who have taken a similar view (e.g. Crawford 1968), he somehow failed to find his way to any of the criticisms of these views (e.g. Smith 1996; McNiven and Russell 1997). More insensate is that while his book acknowledges the publication by Kimberley Aboriginal people, *Gwion Gwion. Dulwan Mamaa: secret and sacred pathways of the Ngarinyin Aboriginal people of Australia* (Doring et al. 2000), it fails to give their views legitimacy. However, Wilson is well aware of the criticisms of his work, and is certainly prepared to defend the grounds he marks out for his books (e.g. Wilson 2006).

There are many serious ethical problems with Wilson's current book. It seems clear that the images in this book were published without consultation, or permission, from the Aboriginal groups involved — and some of them appear to be of ceremonial contexts, which would not normally receive permission for publication. Of course, the possibility of being denied permission is not a problem if you do not seek permission in the first place. Images from other communities are used without permission, as well: for example, the image of Warren Djorlom, from Gunbulanya, on page 256, was used without his permission, and it appears that the photograph was taken without normal research permission, under the guise of visiting the site in the capacity of a tourist (Sally May, pers. comm., 1 August 2006). While Wilson may be able to claim that his ethical infringements are due to a relative unfamiliarity with the ethics of publishing on Indigenous cultures in Australia (though he is Brisbane-based, he only emigrated to Australia in 1995), Allen and Unwin have no such recall.

This raises the question: to what extent is the publisher to blame for the production of such books? Rothwell (2006) certainly blames Allen and Unwin and this book did make me think about the responsibility held by the publisher, and how publishers can present books, not only to attract an audience but also to attribute authority to an author. My first book was commissioned for Allen and Unwin by the late, and much missed, John Iremonger, and I still publish with them on occasion. But Wilson's book is not the kind of book that John Iremonger would have commissioned — or, if he had, he would have presented it with a different persona.

Wilson's book is clearly what publishers call a 'potboiler', a literary work of poor quality, produced quickly for profit, poorly researched and written controversially to enhance saleability. Another potboiler with a mystery race theme, which also drew inspiration from Kimberley rock art, is Erik von Däniken's best-selling *Chariots of the gods. Unsolved mysteries of the past* (von Däniken 1969). In Wilson's case the book has been produced with all the accoutrements of authority — it is published on good quality paper, with images inserted into the text, rather than being relegated to an inserted section. The cover design uses rock art images from the region to imply the authority of the author, supported by a cover blurb that emphasises the 'lithe, graceful human figures depicted in a fashion altogether different from that of even the oldest traditional art'. The publisher makes such presentation decisions (though the author can attempt to influence them), so Allen and Unwin have to bear responsibility for the public persona of this book.

I started the first draft of this review while sitting on a rock at Drupmi, a rock art shelter in the Barunga region of the Northern Territory, Australia, while my colleague Inés Domingo Sanz finished meticulously recording every image in this shelter, under the guidance of Aboriginal custodians and community members. While I have been working in this region for seventeen years, and getting information about the rock art sites for this entire period, it is only now that I feel even close to publishing anything significant on this material, and when I do, the royalties from any book that is published will go to the community. In Australian archaeology today, this is getting to be standard academic practice. Clearly, such an approach to rock art recording and publishing is antithetical to that taken by Wilson. In fact, Wilson's book makes me long for, and appreciate, the scholarly aspects of Grahame Walsh's work.

Finally, I'd like to return to Nicolas Rothwell's review in the *Weekend Australian*:

> If a leading Australian publisher feels licensed to put out such material in the quest for profit, then we have reached a sad moment in the degeneration of the nation's writing culture (Rothwell 2006: R9)

Professor Claire Smith
Adelaide, Australia

REFERENCES

CHAUNCY, P. 1878. Appendix A: Notes and anecdotes of the Aborigines of Australia. In R. B. Smyth (ed.), *The Aborigines of Victoria 2*, pp. 221–88. John Currey, Government Printer, Melbourne.

CRAWFORD, I. M. 1968. *The art of the Wandjina. Aboriginal cave paintings in the Kimberley, Western Australia*. Oxford University Press, Melbourne.

DORING, J. (ed.) 2000. *Gwion Gwion. Dulwan Mamaa: secret and sacred pathways of the Ngarinyin Aboriginal people of Australia*. Konemann, Köln.

HANBURY-TENISON, R. 2006. Evidence of pre-aboriginal Australians? *Times Literary Supplement*, on-line commenta-ry, 26 July 2006. Available on-line at *http://tls.timesonline .co.uk/article/0,,25338-2286453,00.html* (Accessed 1 August 2006).

HULL, W. 1846. *Remarks on the probable origin and antiquity of the Australian natives of New South Wales*. Herald Office, Melbourne.

MCNIVEN, I. and L. RUSSELL 1997. 'Strange paintings' and 'mystery races': Kimberley rock-art, diffusionism and colonialist constructions of Australia's Aboriginal past. *Antiquity* 71(274): 801–9.

ROTHWELL, N. 2006. Rock bottom. *The Weekend Australian*, Jan. 28–29: R8–R9. Available on-line at *http://www.theaustralian.news.com.au/story/0,20867,17924896-5001986,00.html* (accessed 1 August 2006).

SMITH, C. 1996. Review of G. Walsh's 'Bradshaws. Ancient rock paintings of north-west Australia'. *Rock Art Research* 13: 72–3.

VON DÄNIKEN, E. 1969. *Chariots of the Gods*. GP Putnam's, New York.

WALSH, G. 1994. *Bradshaws. Ancient rock paintings of north-west Australia*. The Bradshaw Foundation, Caouge-Geneva.

WILSON, I., 1986. *The mysterious shroud*. Doubleday, New York.

WILSON, I. 1998. *The blood and the shroud. New evidence that the world's most sacred relic is real*. The Free Press, New York.

WILSON, I. 2006. Bradshaw paintings deserve intelligent debate. Author Ian Wilson responds to Nicolas Rothwell's review of his book 'Lost world of the Kimberley'. *The Australian*, 4 February 2006. Available on-line at *http://www.theaustralian.news.com.au/story/0,20867,17997233-5001986,00.html* (accessed 1 August 2006).

RAR 23-802

*

RECENT ROCK ART JOURNALS

International Newsletter of Rock Art. Newsletter of the Association pour Rayonnement de l'Art Pariétal Européen (ARAPE). Edited by JEAN CLOTTES. Bilingual newsletter (French and English). Recent issues include these research articles:

Number 45 (2006):

SALIH, A. and M. HAMMAN: New rock art discoveries in the Jbel Saghro and its Saharan outskirts.

SALIH, A. and H. BEN AMARA: The rock art of the Figuig Mountains, Morocco.

SOLER SUBILS, J.: Late prehistorical paintings in the Zemmur (western Sahara).

JACOBSON, E.: A new petroglyphic complex in Bayan Ölgiy Aimag, Mongolia.

BEDNARIK, R. G.: Pleistocene rock art in central Europe?

*

SAPAR Bulletin. Journal of the Siberian Association of Prehistoric Art Researchers. Edited by Y. A. SHER. Bilingual journal (Russian and English). The most recent issue includes these research articles:

Volume 6–7 (2003–2004):

SHER, Y.: On the jubilee of Marianna A. Devlet.

VADETSKAYA, E. B.: Depictions on the slabs from Lebyazhye cemetery of the Okunev Culture on the Yenisei.

MIKLESHEVICH, E. A.: Some additional material regarding the publication of the slabs from Lebyazhye cemetery.

BAHN, P. G.: Creswell Crags: discovering cave art in Britain.

LEONTYEV, N. V. and I. D. RUSAKOVA: The early Iron Age petroglyphs on the Ilyinskaya Mountain (middle Yenisei).

CHEREMISIN, D. V.: Study of a rock art composition from Chaganka (Kara-Oyuk) in the Altay.

ERDY, M.: Art objects from the Sidorovka Kurgan cemetery and the analysis of its ethnic affiliation.

MIKLESHEVICH, E. A. and N. S. BLEDNOVA: Electronic catalogue of 'Rock art of Siberia'.

MIKLESHEVICH, E. A.: Project of 'Preservation of rock art sites in south Siberia'.

DEVLET, E. and E. MIKLASHEVICH: Field seminar 'The documenting and monitoring of rock art sites: history, problems and perspectives'.

*

Sahara. International journal of pre-History and History of the Sahara, with a strong emphasis on the region's rock art. Edited by D. CALATI, G. NEGRO, A. RAVENNA and R. SIMONIS. The most recent issue includes these articles:

Volume 17 (2006):
DUPUY, C.: L'Adrar des Iforas (Mali) à l'époque des chars: art, religion, rapports sociaux et relations à grande distance.
HACHID, M.: Du nouveau sur le monument d'Abalessa (Ahaggar, Algérie).
RAIMBAULT, M., H. JOUSSE, A. PERSON and K. SANOGO: Deux nouvelles stations rupestres du 'Camélin récent' dans le Faguibine et les Daounas (Sahel malien).
SOLER SUBILS, J. N. SOLER MASFERRER and C. SERRA SALAMÉ: The painted rock shelters of the Zemmur (western Sahara).
CAMPBELL, A., D. COULSON, S. CHALLIS and J. KEENAN: Some Mauritanian rock art sites.
FOUILLEUX, B. and A. MOUCHET: Deux abris inédits du Tassili de Tamrit (Algérie).
LACHAUD, S. and G. LACHAUD: Quelques remarques sur les femmes parées du Messak (Libye).
JUDD, T.: Problem petroglyphs of the Eastern Desert of Egypt: are they wild asses?
NAMI, M.: Découverte d'une station rupestre d'un style particulier au sud marocain.
ZBORAY, A.: A shelter with paintings of the 'Uweinat roundhead' style in upper Karkur Talh (Jebel Uweinat).
GAUTHIER, Y. and C. GAUTHIER: Nouveaux abris peints de l'Ennedi (Tchad).
FOUILLEUX, B.: Suite aux 'Faux du Tassili' et intérêt des relevés des missions Lhote.
MORELLI, M., A. BUZZIGOLI and G. NEGRO: Segnalazione di nuovi siti d'arte rupestre nel Great Sand Sea egiziano.
MILBURN, M.: Some vanishing Saharan and European rock carvings.

*

Almogaren. Journal of the Institutum Canarium. Edited by HANS-JOACHIM ULBRICH. Recent issues include the following papers:

Volume 36 (2005):
PICHLER, W.: Die Felsbilder Fuerteventuras (II).
SOMMER, H.-M.: Von linearen Ritzungen, Klang- und Schälchensteinen.

RECENT BOOKS OF INTEREST

Corpus de arte rupestre en Extremadura, Volume I. Arte rupestre en el Parque Natural de Monfragüe: el sector oriental, edited by HIPÓLITO COLLADO GIRALDO and JOSÉ JULIO GARCÍA ARRANZ. 2005. Junta de Extremadura, Consejería de Cultura, Mérida, 283 pages, numerous colour plates, maps and recordings throughout the text. Softcover, ISBN 84-7671-873-X.

Further approaches to southern African rock art, edited by GEOFFREY BLUNDELL. 2005. Volume 9 of the Goodwin Series, South African Archaeological Society, Johannesburg, 113 pages, with ten contributions comprising monochrome plates, drawings and bibliographies. Softcover, ISSN 0304-3460.

The nature of Paleolithic art, by R. DALE GUTHRIE. 2005. The University of Chicago Press, Chicago and London, 507 pages, very numerous monochrome illustrations, bibliography, index. Hardcover, US$45.00, ISBN 0-226-31126-0.

Pitture paleolitiche nelle Prealpi Venete: Grotta di Fumane e Riparo Dalmeri, edited by ALESSANDRA ASPES and MICHELE LANZINGER. 2005. Museo Civico di Storia Naturale di Verona and Museo Tridentino di Scienze Naturali, 192 pages, numerous colour and monochrome illustrations, bibliographies. Softcover, ISNN 0392-0070.

Europreart II. Prehistoric art research and management in Europe, edited by LUIZ OOSTERBEEK. 2006. Centro Universitario Europeo per i Beni Culturali, Ravello; Edipuglia, Bari, 104 pages, numerous colour and monochrome illustrations. Sostcover, ISBN 88-7228-439-2.

RECENT PAPERS OF INTEREST

El arte Rupestre en la provincia de Albacete. Desdo los descubrimientos hasta las interpretaciones. Bibliografía e historia de la investigación, by JUAN F. JORDÁN MONTÉS. 2004. *Cuadernos de Arte Rupestre*, Volume 1, pp. 83–128.

The Bagudae petroglyph in Ulsan, Korea: studies on weathering damage and risk prognosis, by B. FITZNER, K. HEINRICHS and D. LA BOUCHARDIERE. 2004. Environmental Geology, Volume 46, pp. 504–526.

Middle Pleistocene beads and symbolism, by ROBERT G. BEDNARIK. 2005. *Anthropos*, Volume 100, Number 2, pp. 537–552.

Archaeology and science: a response to Huffman, by ROBERT G. BEDNARIK. 2005. *The South African Archaeological Bulletin*, Volume 60, Number 181, pp. 39–41.

L'interazione pastori/agricoltori e le dinamiche del Deserto Occidentale egiziano, by BARBARA E. BARCH

and GIULIO LUCARINI. 2005. *Origini*, Volume 27, pp. 51–77.

Different paths: rock art sites and landscape in the Wadi Raharmellen (Tadrart Acacus, Libyan Sahara), by MAURO CREMASCHI, DANIELA ZAMPETTI and ANDREA ZERBONI. 2005. *Origini*, Volume 27, pp. 191–217.

La Venere si Savignano: scoperta, polemiche, descrizione e prospettive, by MARGHERITA MUSSI. 2005. *Origini*, Volume 27, pp. 219–246.

Anotaciones bibliográficas para la investigación de las interpretaciones antropológicas en el arte Rupestre levantino español, by JUAN F. JORDÁN MONTÉS. 2005. *Verdolay, Revista del Museo Arqueológico de Murcia*, Volume 9, pp. 35–50.

Arte Rupestre postpaleolítico en el altiplano de Jumilla-Yecla (Murcia): descubrimientos, debates e interpretaciones, by JUAN F. JORDÁN MONTÉS. 2005. *Cuadernos de Arte Rupestre*, Volume 2, pp. 81–126.

Palaeolithic cave art in Britain? by ROBERT G. BEDNARIK. 2005. *Cave Art Research*, Volume 5, pp. 1–6.

A brief history of cave art research, by ROBERT G. BEDNARIK. 2005. *Cave Art Research*, Volume 5, pp. 7–8.

Presente-pasado. Definición y usos de una categoría historiográfica en historia de la ciencia: El arte prehistórico como paradigma, by OSCAR MORO ABADÍA and MANUEL R. GONZÁLEZ MOREALES. 2005. *Complutum*, Volume 16, pp. 59–72.

The lasting legacy of V. S. Wakankar, by ROBERT G. BEDNARIK. 2005. *Purakala*, Volume 14–15, pp. 5–12.

Using behavioural postures and morphology to identify hunter-gatherer rock paintings of therianthropes in the Western and Eastern Cape Provinces, South Africa, by JEREMY C. HOLLMANN. 2005. *South African Archaeological Bulletin*, Volume 60, Number 182, pp. 84–95.

Une figuration inédite de léporidé dans la couche 3' de l'abri Duruthy (Sord-l'Abbaye, Landes, France), by MORGANE DACHARY, FRÉDÉRIC PLASSARD and DELPHINE HARO. 2005. *Paleo*, Volume 17, pp. 135–144.

Mulka's Cave Aboriginal rock art site: its context and content, by R. G. GUNN. 2006. *Records of the Western Australian Museum* 23: 19–41.

The geology of the Kensington rune stone: relative age dating of the inscription using the mineral pyrite, by SCOTT F. WOLTER. 2006. *The Epigraphic Society Occasional Papers*, Volume 24, pages 99–103.

Southern African Rock Art Project, by NEVILLE AGNEW. 2006. *Conservation: The Getty Conservation Institute Newsletter*, Volume 21, Number 1, pp. 25–26.

Aproximación evolutiva a la complejidad y al orden social temprano a través del estudio de representaciones rupestres de la quebrada de Matancillas (Puna argentina), by HERNÁN J. MUSCIO. 2006. *Estudios Atacameños*, Volume 31, pp. 9–30

Out of India? The world's earliest rock art, by ROBERT G. BEDNARIK. 2006. *Minerva*, Volume 17. Number 1, pp. 31–32.

The spiral that vanished: the application of non-contact recording techniques to an elusive rock art motif at Castlerigg Stone Circle in Cumbria, by M. DÍAZ-ANDREU, C. BROOKE, M. RAINSBURY and N. ROSSER. 2006. *Journal of Archaeological Science*, Volume 33, pp. 1580–1587.

Please visit the Save the Dampier Rock Art site at
http://mc2.vicnet.net.au/home/dampier/web/index.html
and sign the Dampier Petition. Thank you!

ORIENTATION

Some thoughts on the 15th Congress of the UISPP

ROBERT G. BEDNARIK

The congresses of the Union Internationale des Sciences Préhistoriques et Protohistoriques, occurring once every five years, are large, and the larger a conference is, the harder it is for the individual participant to provide a balanced account of the event. So much transpires, there are so many people, so many papers are presented, and there is so much choice — a veritable overload of information. There would have been hundreds of participants at the Lisbon congress whose paths never crossed mine, and who might have experienced a very different event from the one I shall attempt to describe.

Certainly Portugal was an excellent choice for this major event in archaeology. This is a bright, friendly country, modern and yet steeped in history, with a most agreeable climate and much archaeology. Most importantly, the country's archaeological establishment has undergone a painful period of repairing its sullied international reputation, so much damaged by the rock art disasters of the Côa and Guadiana valleys from 1995 to 2002 (Bednarik 2004). The Portuguese archaeologists not implicated in these controversies have succeeded in just a few years in turning this unsatisfactory situation around, a feat that required rare qualities and is in fact an astonishing achievement. This congress was the very occasion that re-established the public credibility of Portuguese archaeology, and the discipline is indebted to its architects. Of course there were many Portuguese involved in the renewal, including Professor Vítor Oliveira Jorge, but there can be no doubt that this congress and all it stood for was the work principally of one man, Professor Luiz Oosterbeek. If all participants of this event were to agree on just one detail, I think this would be it. The resurgence and rejuvenation of Portuguese archaeology was sealed with the Lisbon congress, and this event had 'Oosterbeek' written all over it. In particular, Oosterbeek's mediatory approach to problems facing the discipline are a great asset, and it is to a considerable extent due to his negotiating skills that world archaeology is now undergoing a phase of reconciliation. It was a foregone conclusion that he would be elected President of UISPP for the next five years, and we can expect this to be reflected in the discipline's course over the years to come.

Twenty years after the discipline split down the middle, resulting in the establishment by Peter Ucko of the World Archaeological Congress (WAC), a healing process is at last underway. The UISPP and the WAC are now gradually moving closer, which is largely due to the wisdom of the current leadership on both sides. Professor Claire Smith, the President of WAC, and Oosterbeek, have initiated effective and cordial communication and tentative collaboration between the two organisations. Oosterbeek has emerged as a statesman-like figure in European archaeology, encouraging collaboration, minimising differences and re-negotiating the role of the discipline with a clear vision of a less fragmented world archaeology. He has also encouraged the affiliation of IFRAO with UISPP, which has already occurred — despite opposition from within his own organisation's ranks to such a move. Of course it remains to be seen how the conservatives in European archaeology will take to the idea that their practice is non-scientific, and that their worldview is myopic. The underlying reason for the split twenty years ago was not just about politics, it was about philosophy: do the archaeology boffins of Europe have a mandate to dictate to 'the others' of humanity (indigenous or non-Western societies) compliance with an ethnocentric and philosophically absurd construct of the world? Since archaeology is always a political pursuit, it would be preposterous for a body such as UISPP to claim that it has no political role. Time will tell whether this lesson has been learnt in Europe, but it may be even beyond the undoubted abilities of an Oosterbeek to break through the mental barriers of people whose righteousness reminds me of that of religious extremists. After all, Europeans still believe in such mythological constructs as the three-dimensional space and linear time they perceive themselves existing in, and that neo-colonialist hobbies such as archaeology and anthropology are legitimate sciences.

What I found most striking about this event is how it illustrated that European archaeology, despite all the efforts in the second half of the 20th century, still remains as parochial as it does. A world congress of 'prehistoric' and 'protohistoric' 'sciences' is a problematic concept in any case: who decides what is or is not 'history'? It seems taken for granted that Europeans decide this, and do so on the basis of a concept that is irrelevant to most humans who ever lived. Then there is the idea that the mythologies about the human past created by archaeologists deserve the label of 'sciences'. But more specifically, there are the distortions of Europe's continuing cognitive colonialism of the world, reflected in many of the symposia held at Lisbon. To select a random example: when a full day's symposium is dedicated to the question of when Europe might first have been occupied by hominins, one wonders why this should be considered in such an insular fashion. There is a controversy between two schools of thought, the long-range version

(first occupation up to 1.5 Ma ago, ignoring Dmanisi) and the conservative shorter range. Europe, however, is a relatively unimportant part of Eurasia, in a geographic and an archaeological sense. This issue is reminiscent of other long and short-range polemics, notably the perennial debate of 'anatomically modern' origins of Europeans. That, too, was much discussed in Lisbon, and also in a Eurocentric framework, as if European researchers still remained unaware that the gradual change from robust to gracile *Homo sapiens* is not a unique feature of Europe. Gradual gracilisation, after all, occurred in all continents occupied by humans during the second half of the Late Pleistocene, therefore the most sensible way of examining the phenomenon, surely, is by considering its near-universal validity. Examining European trends in isolation is not very conducive to recognising underlying currents in hominin evolution.

In the case of the initial settlement of Europe, discussion centred on the possibility that it might have occurred at the Strait of Gibraltar — but again, without any consideration of the global picture. The many archaeologically demonstrated sea crossings elsewhere, dating also from the Early Pleistocene, were not mentioned at all, and one gains the impression that these researchers are so preoccupied with their narrow views that they are probably not aware of what the rest of the world has to offer in terms of relevant information. Thus Eurocentrisms continue ruling the discipline in this continent, and the issues attracting controversy could perhaps be resolved if scholars would step back to see the greater picture, and tried to fit European 'prehistory' into a world *history* of human past. In the early 21st century, the tail is still wagging the dog as much as it has done so since the mid-19th century. And the definition of 'history' should not be made contingent on some scientifically irrelevant factor such as writing, the relevance of which as a discriminating factor is unfalsifiable, hence unscientific.

In this anachronistic academic environment it is not surprising that the discipline split twenty years ago. The causes were not so much political, they were ultimately epistemological, and to repair the rift will require a good deal of introspection. Nevertheless, it is most encouraging to see the UISPP moving in the right direction, of which the Lisbon congress provided good evidence.

To place this event into some kind of perspective, I note that it consisted of almost one hundred symposia and sessions, comprising about 1500 papers that were simultaneously presented in twenty lecture rooms. About 25 % of these papers dealt with Palaeolithic societies, and an astounding 11 % more specifically with Middle and Early Upper Palaeolithic periods, compared with 35 % addressing post-Palaeolithic subjects. However, 49 % of the presentations crossed chronological boundaries, including regional and technological studies. The Congress as well as many participants faced economic difficulties, as a result of which 35 % of the intending participants were unable to come. Despite the lack of any governmental support, the Congress managed to assist some 250 participants, mainly drawing on the congress registration fees. Publication of the congress proceedings, to consist of about 45 volumes, is secured by Archaeopress.

One of the most significant academic aspects of the Congress was the high number of rock art-dominated symposia, vastly exceeding the rock art content at previous UISPP congresses. The most enjoyable, to me, was the session I chaired with Derek Hodgson (on Pleistocene rock art), which was marked by significant innovativeness and some very original papers, showing again that the 'upper end' of the rock art spectrum is engaged in closing the gap with the cognitive sciences. On the last day of the Congress I found myself conscripted as the chairperson of the *Global state of the art* session, which turned out to be a tightrope walk for me. The program had been replaced with an entirely new version that left several delegates irate about having been struck off the program. Suffice it to say that I struggled to find compromises between warring parties, but spurned on by Oosterbeek's example I somehow managed to preserve a semblance of decorum. This was at the price of failing to adequately lobby for my Dampier campaign. Fortunately delegates in the audience came to my rescue and managed to formulate and circulate two spontaneous resolutions in support of Dampier during proceedings, which are reproduced below.

A large academic conference such as the Lisbon UISPP Congress cannot be expected to run its course without shortcomings and disappointments. There is no value in dwelling on these, it is more constructive to establish the greater picture: has the discipline gained from the event or not? I think the answer is unequivocally affirmative: the new UISPP President has been given a mandate to reinvigorate world archaeology. If he can maintain his course over the next five years, this has been a change for the better. He has my best wishes in this, and I am sure he can expect the support of IFRAO in his quest.

MOTION 1: We, the representatives of the various international rock art organisations affiliated with IFRAO and meeting at the 15th UISPP Congress in Lisbon, express our concern at further industrial developments planned for the Dampier Archipelago (Western Australia) and ask both the Australian Federal and the Western Australian State Government to act immediately to stop the destruction of rock art (which we regard as being of world importance) and so plan towards the relocation of future industrial complexes at nearby coastal sites which would not be injurious to rock art.
Proposed by Dr Jean Clottes (France), President of IFRAO
Seconded by Dr John Greer (U.S.A.), Eastern States Rock Art Research Association
Vote: passed unanimously

MOTION 2: At the moment Australia is being challenged to join the concerned international community of rock art researchers in its respect for the past by preserving at Dampier what is one of the largest densities of rock art in the world. The destruction is wanton, unthinking and ongoing. It must stop.
Proposed by Dr Pat Dobrez (Australia), ANU. Signed by all delegates of the symposium *Global state of the art*, 9

September 2006.

REFERENCE

BEDNARIK, R. G. 2004. Public archaeology and political dynamics in Portugal. *Public Archaeology* 3(3): 162–6.

RAR 23-803

Rock art protection in Tasmania

ROBERT G. BEDNARIK

In the previous issue of *RAR* (23: 119–22), Peter C. Sims reported the most recent incident of rock art vandalism in Tasmania. After he wrote to me enlisting the support of IFRAO in alleviating rock art destruction in Tasmania I travelled to the island to see the damage and examine the circumstances of its occurrence (see *AURA Newsletter* 23/1: 3). We secured the help of the Tasmanian media and a series of articles in Tasmanian newspapers, severely critical of government reluctance, appeared over subsequent months. I wrote two letters to the Premier of Tasmania, making them available to the media. Our main concerns were that the legislation relating to rock art protection in Tasmania is inadequate and outdated, that prescribed fines are not high enough to deter vandalism by certain fundamentalist groups, that protective site signage was required, and that the traffic of off-road vehicles in declared conservation areas needed to be regulated to prevent erosion of sites.

In May 2006, the national leader of the Australian Greens, Senator Dr Bob Brown, came to our aid and discovered that the police had not been requested to investigate the rock art vandalism. He contacted the Tasmanian police and prompted an inquiry. The Premier then responded to our concerns in a vaguely supportive but essentially non-committal tone. But on 15 August 2006, the State Minister for Tourism, Arts and the Environment, Hon Paula Wriedt MHA, wrote to me to respond to our requests in some detail.

The Minister has met with members of the Aboriginal community and has gone to the Arthur Pieman Conservation Area, on the north-western coast of the island, to investigate the matter first hand. She predicts that there will be increased control of recreational vehicles, including a permit system and the rationalisation of vehicle tracks. She also admits that the current legislation protecting rock art is inadequate and that she 'is determined to have new legislation developed, which is to include meaningful involvement of the Aboriginal community, effective management and protection mechanisms, and appropriate compliance provisions and penalties'.

The Minister has asked her department to determine whether amendment of the current legislation could provide interim support until the new legislation has been developed. She hopes to introduce interim improvements to the legislation this year 'to send a clear message to all that vandalism of Aboriginal heritage will not be tolerated in Tasmania'.

We are grateful to the Minister for promising this decisive action but we will continue to monitor the state of cultural heritage protection in Tasmania to see that good intentions are translated into effective action. For the time being, we request that no locations of new rock art sites be made public or be released to any state agency.

RAR 23-804

AURA Honour List

Individuals who have been continuous members of AURA for more than twenty years deserve to be distinguished for their loyalty and dedication. We have therefore established a special Honour List of them, which reveals a most encouraging trend in the demography of the AURA membership. The Australian Rock Art Research Association Inc. has a significant proportion of long-term loyal members. The following founding members of AURA, who joined us between November 1985 and October 1986, have remained members continuously for over twenty years. I ask you to join me in honouring them; the long-term members are the major source of core strength of AURA, which has been an inspiration to all of us who have worked to make this organisation what it is. As the founder of AURA, I thank each and every one of the following members personally, and from the bottom of my heart. They, and those previously listed (*RAR* 21: 204, 22: 222–3), have made my work worthwhile.

National Library of Australia, Canberra, A.C.T.
Dr Paul G. Bahn, Hull, United Kingdom
Trevor Kennedy, Warrnambool, VIC
ICCROM Library, Rome, Italy
Tozzer Library, Cambridge, MA, U.S.A.
University Museum Library, University of Pennsylvania, Philadelphia, PA, U.S.A.
Dr Charles Warner, Picton, N.S.W.
Professor Tang Huisheng, Nanjing Normal University, China
The Robert Goldwater Library, The Metropolitan Museum of Art, New York, NY, U.S.A.
Dr Joerg W. Hansen, Saint Lizier, France
Getty Research Institute, Los Angeles, CA, U.S.A.
André Blain, Nyon, Switzerland
Dorothy C. Brown, Auckland, New Zealand
Professor Roy Querejazu Lewis, Cochabamba, Bolivia
Dr Fred E. Coy, Jr, Louisville, KY, U.S.A.

New Editorial Board member

We are pleased to welcome Dr Yann-Pierre Montelle from New Zealand as a new member of the Board of Editorial Advisers of *RAR*. Dr Montelle has been a major contributor to recent AURA conferences and to *RAR*, and the journal is fortunate in securing the support of his outstanding academic rigour.

Back issues

All back issues of *RAR* remain in stock, beginning with Volume 5(2), November 1988. The early issues have been out of print for sixteen years but will be republished on CD. Back issues can be ordered singly, or the whole series 1988 to 2005 can be ordered for $A330.00 (about US$270.00 abroad), postage paid.

The entire set of the *AURA Newsletter*, 1983 to 2006, is available and can be purchased for $A60.00, postage paid to anywhere.

Forthcoming events

Speleo Art Down Under, Mt Gambier, South Australia, 6–12 January 2007. This cave art exhibition will be held as part of the 26th Biennial Conference of the Australian Speleological Federation. To present exhibits or papers, please contact June MacLucas, 11 Gulfview Parade, Valley View, S.A. 5093, Australia; Tel. No. +61-8-8261-4180; e-mail *junemacl@ senet.com.au.*

Sixth World Archaeological Congress (WAC-6), Kingston, Jamaica, 20–27 May 2007. Proposals for sessions will be accepted through 31 December 2006. Individual papers may be submitted prior to 28 February 2007, and will be assigned to appropriate sessions and themes. Both themes and sessions should emphasise international participation and global perspectives. Abstracts of 150–250 words should be submitted via e-mail or mailed to the following addresses: academic program *wac@ flinders.edu.au*; general inquiries *wac6jamaica@gmail. com*; web-site at *www .worldarchaeologicalcongress. com*.

International Cupule Conference 2007, Cochabamba, Bolivia, 17–23 July 2007. For details and list of symposia, please see *RAR* 22: 228. E-mail: *aearcb@gmail.com* Postal address: AEARC, Casilla 4243, Cochabamba, Bolivia.

New members

We have had the pleasure of welcoming the following new members of AURA recently:

June MacLucas, Valley View, South Australia
Stelios Papanikolaou, Sikourio, Larissa, Greece
Professor Charles Swedlund, Cobden, IL, U.S.A.
Sally McGann, Port Hedland, Western Australia
Matthew Caruana, Pasadena, CA, U.S.A.
Jayne Chromy, Santa Fe, NM, U.S.A.
Professor Ian D. Clark, University of Ballarat, Victoria, Australia
Jennifer Rooke, Honolulu, HI, U.S.A.
The H.W. Wilson Company, Bronx, NY, U.S.A.
Oldrich J. Sadilek, Bairnsdale, Victoria, Australia
Gloria Andrews, St Helens, Tasmania, Australia
Miguel Rogerio Candalera, Instituto de Recursos Naturales y Agrobiología de Sevilla, Consejo Superior de Investigaciones Científicas, Sevilla, Spain
Jenny E. Morris, Wagga Wagga, New South Wales, Australia
Emmanuel J. Bwasiri, Kondoa, Dodoma, Tanzania
Sharon Taylor, Calala, New South Wales, Australia
BNF, Birmingham, AL, U.S.A.
Di England, Wentworth Falls, New South Wales, Australia
Andrea Jalandoni, Tambo, Paranaque, Metro Manila, Philippines
Bob Rau, Diggers Rest, Victoria, Australia
Dr Didier Bouakaze-Khan, London, United Kingdom
Josh Connelly, Armidale, New South Wales, Australia
Lisa M. Amore, Templestowe, Victoria, Australia
Meg Taylor, West Hobart, Tasmania, Australia
Senator Dr Bob Brown, Canberra, A.C.T. , Australia
Patricio Bustamante Díaz, Santiago, Chile
Philip Davies, Karratha, Western Australia
Melody Di Piazza, New York, NY, U.S.A.
Mike Kibblewhite, Warrnambool, Victoria, Australia
Lisa Mollenmans, Mango Hill, Queensland, Australia
Craig D. Alison, Bourke, New South Wales, Australia
Dr Robert J. Inkpen, University of Portsmouth, United Kingdom
Dr Ahmed Achrati, Chicago, IL, U.S.A.
Marco Ferrandi, Padova, Italy
Ronald W. Smith, Lake Havasu City, AZ, U.S.A.
Siri Omberg, Alice Springs, Northern Territory, Australia
Donna Gillette, San Jose, CA, U.S.A.
Tania Ross, North Maclean, Queensland, Australia
Anthony M. Judd, Knutsford, United Kingdom
Peter Foster, Richmond, Victoria, Australia
Cameron Chaffey, Dubbo, New South Wales, Australia
James B. Harrison, Tucson, AZ, U.S.A.
Indonesian Asssociation of Rock Art, Bandung, Indonesia
Sandra Wier, San Marcos, TX, U.S.A.

Erratum

In the previous issue of *RAR*, on page 74 of A. Achrati's paper, the second of the three quotations by J. D. Lewis-Williams was incompletely reproduced. Here is the full text of the quotation:

> there are those who challenge the seers's [sic] revelations and (some of) the rules that they try to impose, but within the general framework of belief. These dissidents are able to assert their independence without wishing to overthrow the entire religious system. By contrast, other societies — post-Enlightenment, post-Darwin Western society is the prime example — offer an alternative cosmology that does not require any belief whatsoever in supernatural entities. We now know that the 'rather natural' human propensity to believe (to us) manifestly absurd beliefs about spirit is created by the electro-chemical functioning of the human brain, a functioning that is, given the right intellectual circumstances not ineluctable (ibid.: 276).

IFRAO Report No. 37

New member of IFRAO

Recently the **Indonesian Association of Rock Art** (IARA) has been accepted by postal ballot as the 43rd member of IFRAO. IARA is the first rock art organisation in Southeast Asia, a recently founded non-profit non-governmental organisation espousing the ideals and principles of IFRAO. Its Board of Directors has mostly Indonesian members, led by Dr Pindi Setiawan, and two French rock art specialists, including Jean-Michel Chazine. Some of the Directors have been involved with rock art and its study for many years.

IARA intends to concern itself with the survey of rock art sites, and with the study and analysis of rock art throughout Indonesia, as well as with presentation and protection measures. Its current priority is an extensive and long-term research project of cave art in Kalamantan (Indonesian Borneo) that has already received wide international attention, but it will hopefully extend its research nationwide. It is known that there are extensive rock art bodies in the Indonesian archipelago, but little is known about most of them. The contact address of the latest addition to IFRAO is IARA, Sangkuriang R-2, Bandung, Indonesia 40135; Tel. No. +62222504896; the e-mail address is *rockart_indo@yahoo.com*

IFRAO affiliated with UISPP

The International Union of Prehistoric and Protohistoric Science (Union Internacionale des Sciences Préhistoriques et Protohistoriques, UISPP) has formally invited IFRAO to become an Affiliated Association. This invitation has been made through the Secretary General of the 15th UISPP Congress, Professor Luiz Oosterbeek of Portugal. UISPP is the world's largest federation of archaeologists and IFRAO shared the 2006 Lisbon Congress with UISPP. As there are no disadvantages for IFRAO in such affiliation, the membership of IFRAO approved this step by postal ballot. IFRAO has now become the ninth international organisation to affiliate with UISPP. We have thus acquired the right to have a representative on the Executive Commission of UISPP, and we may be able to significantly influence that body's policies on such matters as rock art protection. The website of UISPP is at *http://www.uispp.ipt.pt/en/enmain.html*

International Cupule Conference 2007

The Cochabamba Rock Art Research Association (AEARC) invites cupule experts from all over the world to the International Cupule Conference, to be held in Cochabamba (Bolivia, South America) from 17 July to 23 July 2007.

The International Cupule Conference will take place in the city of Cochabamba, situated in a beautiful valley in central Bolivia. This region presents a huge variety of cupule sites, which vary in their antiquity, symbolism and function. Three days of the conference will be dedicated to the different symposia and the remaining four days to the excursions to cupule areas. Cupule experts are invited to present papers in the following symposia:

1) Cupules and their antiquity (dating). Chaired by R. G. Bednarik.
2) Possible symbolism of cupules. Chaired by Roy Querejazu Lewis.
3) Possible function of cupules. Chaired by Roy Querejazu Lewis.
4) The re-use of cupules (ethnographic research). Chaired by Roy Querejazu Lewis.
5) Different types of cupules an their combination with other types of rock art. Chaired by Roy Querejazu Lewis.
6) Natural cupules (non-anthropic). Chaired by R. G. Bednarik.
7) Replication work with cupules. Chaired by Giriraj Kumar.
8) The taphonomy of cupules. Chaired by R. G. Bednarik.
9) Cupules and rock gongs (lithophones). Chaired by R. G. Bednarik.
10) Cupules and their lithologies (the importance of understanding the relationship between cupules and the rock types they are found on). Chaired by R. G. Bednarik.
11) Preservation of cupule sites. Chaired by R. C. Agrawal.
12) Different types of cupules in Bolivia (a presentation of cupule areas for the conference excursions).

The eleven first symposia will be for the international experts. English will be the main language. All papers will be of an international scientific standard. The last symposium (on cupules in Bolivia) will be reserved for AEARC's and other Bolivian researchers and will have an introductory purpose for the excursions.

The main excursion, which will comprise 4 days, will be to the Mizque area where participants will have the opportunity to visit Inca Huasi Uyuchama, Uyuchama 2,

and the three terraces of Lakatambo including the recently discovered rocks with cupules. The cupules of the Mizque area present a remarkable variety in their chronology, symbolism and possible function. The remaining excursions comprise one day visits to Llave Chico, Kalatrancani, and the area of Tarata. Likewise, excursions to cupule areas beyond the Department of Cochabamba can also be arranged. This excursion needs a minimum of three days. Participants will be able to choose their respective cupule excursions during the Conference. All excursions will have low costs directed to cover the main expenses.

The City of Cochabamba and the Town of Mizque have a variety of hotels and restaurants with low, moderate and high prices. During July it is winter in Bolivia with sunny days (when it can be quite warm) and cool nights when a sweater or jacket is needed.

The participation fee for the international experts will be $US100.00 and can be paid during the first day of the conference. Paper titles and abstracts should be sent before 31 March 2007.

The interest shown so far by several cupule scholars worldwide clearly shows the importance this subject has in rock art research and as an expression of human activities since pre-Historic times. Please contact AEARC, a member of IFRAO, at:

E-mail: *aearc@hotmail.com*
Postal address: AEARC, Casilla 4243, Cochabamba, Bolivia

Professor Roy Querejazu Lewis
President of AEARC
RAR 23-805

New activities by SIARB
(Bolivian Rock Art Research Society)

Rock art exhibit. The exhibit on rock art of SW North America and the highlands of Bolivia, organised by SIARB and the U.S. Embassy in Bolivia, has toured most of the capitals of Bolivian departments, accompanied by an education campaign among school children, as explained in the SIARB web-site *www.siarb-bolivia.org* (Spanish section, current projects) and the following site: *http//rupestreweb.tripod.com/hablan.html*

Boletín 20. The 20th annual journal by SIARB will be presented in January 2007.

Incamachay project. SIARB has prepared a video on the archaeological park (National Monument) of Incamachay-Pumamachay, Dept. of Chuquisaca. A new training course for villagers of the region who wish to work as tourist guides to the site in the future has been carried out by SIARB member Pilar Lima.

Vallegrande rock art. A new project to protect rock art in Vallegrande and the neighbouring region of Pampagrande started in 2006. It includes recording of two major rock art sites (Paja Colorada, Mataral), conservation condition survey, preliminary training of guides and archaeological survey.

Mutún. Mutún on the border of Bolivia and Brazil has one of the world's biggest iron ore mines in the middle of which lies an important petroglyph site recently recorded by SIARB member Carlos Kaifler. SIARB has distributed a report to state and regional government institutions and hopes that they will support the proposal to declare the site a National Monument and have it protected as an archaeological park. Funding for creating the park should come out of a multi-million investment by the Indian company Jindal Steel and Power which in July 2006 was about to secure development rights for the 20-billion-tonnes iron ore reserves.

International meetings. SIARB has co-sponsored the first national rock art symposium which took place in Cusco, Peru, in 2004 and will participate in the VII International Rock Art Symposium in Arica, Chile, in December 2006.

SIARB has regional representatives in several Bolivian cities, in Peru, Argentina and Central America. E-mail address: *siarb@acelerate.com*

Matthias Strecker
Secretary of SIARB
RAR 23-806

CeSMAP report for 2004 – 2006

The activities of the Centro Studi e Museo d'Arte Preistorica during 2004 to 2006 were:

1. The 40th anniversary of the CeSMAP was celebrated in Pinerolo, Italy, by the international conference *Save rock art — Protection and study of the world's most endangered rock art sites*, 22 to 24 October 2004 (see *RAR* 22: 107–8). The event was held in conjunction with the City of Pinerolo and the Museo Civico di Archeologia a Antropologia. It included the opening of a public exhibition of the same name in the nearby Palazzo Vittone, which has been made available to CeSMAP by the City of Pinerolo, as the site of a new initiative announced at the conference: the IFRAO World Rock Art Museum (IWRAM).
2. The new CeSMAP headquarter in Pinerolo was inaugurated in 2004, a large modern building containing offices, library, depots, laboratories, meeting/class rooms, and main hall with space for temporary exhibitions and events.
3. Since 2004, the project of the new International Museum of Prehistoric Art, the Land Archaeological and Anthropological Museum of Pinerolese and Cottian Western Alps, was undertaken in the Palazzo Vittone. That building, a substantial baroque palace (18th century) of three storeys in a commanding position (alongside the large main square of Pinerolo, and thus flanking the Municipal Palace on the right), has been made available to CeSMAP by the City of Pinerolo, as the site of the

IFRAO World Rock Art Museums.

4. In 2005 – 2006, the main work of the CeSMAP was the conclusion of the African Project started in 2002 aimed to the construction of the Jbel Sarhro Global National Park in Morocco. The CeSMAP is the joint project leader (of a pool of Italian Institutions, Universities and Museums) with the INSAP of Rabat, the Cultural Office of the Morocco Ministry of Culture and AMAR, the Moroccan member of IFRAO. The main focus of this project is the rock art of a region between the Atlas mountains and the Sahara desert, with many large sites integrated with archaeological remains (tumuli, settlements).
5. Other activities included the production of the *ArtRisk Exhibition* and *ArtSigns Exhibition*, both set up first in Philippi, Greece, later in Lisbon, Portugal, as a partner of a EU Project, led by the Politecnico of Tomar, with other IFRAO Members.
6. A new project in Morocco, in co-operation with the Errachidia University, IFRAO member AMAR and others, with the main focus on the palaeoanthropology and on the rock art of the Kem Kem region, in the country's south-east, near the Algerian border.
7. The activities focused on rock art and prehistory of the CeSMAP Didactic Museum Dept. that works with schools (5000 pupils and students per years) in the Museum Labs.
8. The organisation, in co-operation with IFRAO member AARS, from 1991 to the present, of the International Sahara Meeting, held every three years in Pinerolo, an event founded by the late Alfred Muzzolini.

The idea of the 2008 IFRAO meeting in Salta, Argentina, was proposed during the meeting by the IFRAO Members present in Pinerolo in 2004 and then approved by the 2004 IFRAO Meeting in Agra, India. The IFRAO Convener appointed Dario Seglie to support the Argentine colleagues (Mercedes Podestá, Comite de Investigación del Arte Rupestre de la Sociedad Argentina de Antropología, IFRAO Representative, and Mario Lazarovich, Salta). Recently, the Argentine Colleagues have communicated difficulties to organise this large event in Argentina. IFRAO member ABAR (Associaçao Brasileira de Arte Rupestre) is now preparing a proposal to host the next IFRAO Congress in Brazil.

CeSMAP proposes to celebrate the 20th anniversary of IFRAO with a year of events. This could include exhibitions, public lectures etc., with a final ceremony in Brazil during the IFRAO 2009 Meeting. The production of a special leaflet on the theme of twenty years of IFRAO, for widest circulation, is also proposed under the co-ordination of the IFRAO Convener.

The IWRAM (IFRAO World Rock Art Museums) is to be a network of collections in Pinerolo and elsewere in the world. In the restored baroque Palazzo Vittone in Pinerolo, since 2005 the new location of the CeSMAP Prehistoric Art Museum founded in 1964, we have a huge floor space of about 1,500 m^2. In this palace will be displayed the documents (original casts and tracings) deriving from the archaeological/rock art missions operated by the CeSMAP in the Western Alps and around the world during the last 42 years. The international exhibition, *Save rock art*, set up in Pinerolo in 2004, with the co-operation of several IFRAO Members, is now proposed by CeSMAP as a first nucleus of the IWRAM, a net of specialised museums under the aegis of the federation, in line with the ethical principles, working with the absolute respect of the native rights in the regions where traditional cultures survive.

The IWRAM of this proposal will be also a mark of guarantee and an aid to the representative of the museums in day-by-day problem solving. The IFRAO President will assume the role of the International President of the IWRAM's Museums Scientific Committee, a body formed by all the IFRAO member organisations.

Professor Dario Seglie
Secretary of CeSMAP
RAR 23-807

Minutes of the 2006 IFRAO Business Meeting, Lisbon, Portugal

Organisations present: American Committee to Advance the Study of Petroglyphs and Pictographs (ACASPP), represented by B. K. Swartz (U.S.A.); American Rock Art Research Association (ARARA), represented by Mavis Greer (U.S.A.); Asociación Cultural 'Colectivo Barbaón' (ACCB), represented by D. Hipólito Collado Giraldo (Spain); Asociación de Estudios del Arte Rupestre de Cochabamba (AEARC), represented by Robert G. Bednarik by proxy (Bolivia); Associaçao Brasileira de Arte Rupestre (ABAR), represented by Cristiane de Andrade Buco (Brazil); Associaçao Portuguesa de Arte e Arqueologia Rupestre (APAAR), represented by Mila Simões de Abreu (Portugal); Association pour le Rayonnement de l'Art Pariétal Européen (ARAPE), represented by Jean Clottes (France); Australian Rock Art Research Association (AURA), represented by Robert G. Bednarik (Australia); Cave Art Research Association (CARA), represented by Robert G. Bednarik (Australia); Centro Studi e Museo d'Arte Preistorica (CeSMAP), represented by Dario Seglie (Italy); Eastern States Rock Art Research Association (ESRARA), represented by John Greer (U.S.A.); Hellenic Rock Art Centre (HERAC), represented by George Dimitriadis (Greece); Institutum Canarium (IC), represented by Inge Diethelm-Loch (Switzerland); Le Orme dell'Uomo, represented by Angelo Fossati (Italy); Moscow Centre of Rock Art and Bioindication Research, represented by Arsen Faradzhev (Russia); Nevada Rock Art Association (NRAA), represented by Donna L. Gillette; Rock Art Society of India (RASI), represented by Giraraj Kumar (India); Société Préhistorique Ariège-Pyrénées (SPAP), represented by Jean Clottes (France).

The meeting was held in the Faculty of Letters, Lisbon University, Portugal, and commenced at 6:15 p.m. on 8 September 2006. It was chaired by the outgoing President

of IFRAO, G. Kumar; and after his election co-chaired by the incoming President, J. Clottes. The IFRAO Convener, R. G. Bednarik, was appointed as recording secretary.

1. *Apologies and declaration of proxies*. There were no apologies, and one proxy was declared as listed above.

2. *Confirmation of previous minutes*. The minutes of the previous IFRAO Business Meeting (Agra, 30 November 2004) have been published in *RAR* (22: 104–5), but CeSMAP requested that they be read in full. The President read the minutes, after which they were accepted unanimously.

3. *Matters arising from these minutes*. No matters arising from the previous meeting were discussed.

4. *Report by the IFRAO Convener*.

4.1. The Indonesian Association of Rock Art (IARA) has been accepted by postal ballot as the 43rd member of IFRAO, with all of 24 votes so far received affirming that affiliation.

4.2. The same postal ballot has confirmed the wish of IFRAO to affiliate with the International Union of Prehistoric and Protohistoric Sciences (UISPP), and the application has just been formally accepted by UISPP on the previous day, 7 September 2006.

4.3. The Convener summarised the program of the International Cupule Conference to be held in Cochabamba, Bolivia, in 2007, by IFRAO member AEARC, extending an invitation to attend.

4.4. The Convener summarised the report of IFRAO member SIARB (Bolivia) of that organisation's recent activities program.

4.5. It is pointed out that the issue of global rock art protection is becoming more acute. There is an increase in the frequency of reports of rock art destruction. However, the Convener suggests that this is perhaps more a reflection of increased awareness facilitated by IFRAO, rather than an increase in the rate of destruction. Nevertheless, this is of particular importance, because IFRAO is the only international organisation that is genuinely active in global rock art protection.

5. *Reports of IFRAO Representatives outlining their organisations' work*.

5.1. CeSMAP (Italy) held a meeting concerning the preservation of rock art in Pinerolo, Italy, in October 2004. A new centre with offices, library, laboratories etc. has been occupied in 2004, and a substantial baroque palace along the central city square of Pinerolo has been made available for the establishment of a world rock art museum, to occupy two floors. In 2005–2006, CeSMAP conducted research projects between the Atlas mountains and the Sahara in Morocco, in collaboration with Moroccan organisations.

5.2. RASI (India) reports that the Agra IFRAO Congress was very successful. The Early Indian Petroglyphs Project being conducted by RASI is considered to be of great value to IFRAO. RASI intends to organise a workshop of specialists in relation to this project.

5.3. APAAR (Portugal) was asked by the UISPP to assist with the Lisbon congress, and the symposium *Global state of the art* is one of the results, as well as a greatly increased participation of rock art researchers.

5.4. Moscow Centre (Russia) has become an organisational founder of the Federal Agency of Culture and Cinematography of Russia, a well-funded body.

5.5. SPAP (France) has continued the publication of its journal.

5.6. ARAPE's (France) principal activity is the publication of *INORA*, an important bi-lingual rock art newsletter that is sent to 65 countries. This includes many subscribers who receive the newsletter free. The IFRAO logo is to be added to the front page of the newsletter.

5.7. Le Orme (Italy) has managed education projects for schools, colleges and universities. Fieldwork has been conducted with international students, and a seminar will be held in October 2006.

5.8. ACASPP (U.S.A.) has conducted an inspection of the Hidden Valley sites and has detected no evidence of portable art there.

5.9. HERAC (Greece) has participated in conferences, and in July 2006 has held a rock art exhibition in Philippi. HERAC is also involved in round table discussions involving Unesco.

5.10. ARARA (U.S.A.) has published the proceedings of the 1999 IFRAO Congress, in addition to its ongoing publishing activities and annual conferences. An exchange project has been established with Chinese researchers.

5.11. ESRARA (U.S.A.) members have conducted individual research projects and the association's newsletter has been published.

5.12. IC (Europe) focuses mostly on the research of its members in the Canary Islands, and has continued to publish its journal.

5.13. ACCB (Spain) has conducted extensive cultural heritage studies in Extramadura, Spain. About 160 new rock art sites have been found and are being studied, and a conference will be held in October 2006.

5.14. NRAA (U.S.A.) has now engaged A. Woody as a full-time executive director of the Association.

5.15. ABAR (Brazil) has held a conference with 350 participants at Capivara. The Association is preparing sixteen of the Capivara rock art sites for access to handicapped visitors, in all 126 sites are now accessible to tourism, out of the 900 located in the park. During the last two years, 129 rock art sites have been discovered, and dating work of rock art is being conducted. There is substantial public involvement, including education programs conducted for young people to find roles in the tourism industry.

5.16. AURA (Australia) continued its own publishing program (*RAR*, *AURA Newsletter*, *Cave Art Research*, the Occasional AURA Publications series) and collaborated with other publishers, held regular conferences (last in Cairns, August/September 2005), and hosts the largest rock art site on the Web. AURA members conduct research in every continent every year. A significant effort concerns the campaign to save the Dampier rock art, for instance AURA assembled a major travelling public exhibition, seen by many thousands of people.

6. *Report of the outgoing President*. The outgoing President emphasised the importance of teamwork and collaboration. He expressed his hope that the foundation laid for such collaboration with UISPP would prove of benefit to IFRAO. Special mention was made of the ongoing rock art destruction at Dampier in Western Australia, and of the need that IFRAO provided all possible support of this endeavour. The outgoing President, G. Kumar, then congratulated his successor, J. Clottes, and asked him to chair the remainder of the meeting with him.

7. *Further matters raised by delegates*.
7.1. APAAR raised the renewed rock art conservation problems in Portugal, most specifically in the north of the country, where sites remain under severe threat. Support will be required from IFRAO, and APAAR will provide details in due course.
7.2. ABAR reports difficulties in the management of the Capivara park due to funding shortages. The discussion centres on the World Heritage status of the park, which means that Unesco is in a position to influence the Brazilian national government.

8. *New business*. The timing of the next IFRAO Congress is discussed, which ABAR proposes to hold at Saõ Raimundo Nonato, Brazil, tentatively in March 2009. A formal proposal will be submitted to IFRAO.

9. *Adjournment*. The meeting was adjourned at 7.35 p.m.

Minutes by R. G. Bednarik, Convener of IFRAO
RAR 23-808

Occasional AURA Publication No. 14,
Australian Rock Art Research
Association, Inc., Melbourne
ISBN 0-9586802-2-1
First edition, 2006, RRP $A40.00
Price for members of IFRAO-affiliated
organisations $20.00 + $3.00 postage
in Australia, or + $A11.00 elsewhere.
Contains 32 pages of full colour plates
of rock art in the Dampier Archipelago.

"There is little a mere review can do to cupture the intensity of Bednarik's tale: it relates to conventional scientific writing as pure ethanol relates to an evening glass of cool white wine. In his pages, compressed, stripped down to basics, is the entire political, environmental and ideological history of the coastal Pilbara ... Bednarik's volume includes a series of remarkable photographs capturing the range of carvings and their spectacular siting ... Bednarik has penned an art historical *J'accuse*, an unfamiliar form of public argument in this nation of whispered co-options, stakeholder coalitions and backroom deals."

Nicolas Rothwell, *The Australian*

"The word *journey* is often used today as a metaphor for a range of human and personal experiences, but in *Australian Apocalypse* this word has found a near-cosmic significance. The book is about Australia, a continent that is defined most of all by distance and remoteness. The antipodal terminus of the migration of one of the earliest human groups to have left Africa, Australia became the lure for modern European explorers and also a dreadful prospect for their ostracised fellow men ... Bednarik's determination in the pursuits of scientific goals gave rise to the activism of a believer, and he began organising local groups and environmentalists, arranging scientific seminars, orchestrating media campaigns, and seeking the help of national and international institutions in preventing the destruction of rock art in Australia, Portugal and elsewhere. The narrative of the intrigues and personal motives in these confrontations is captivating, and the substantial successes and promised hopes are encouraging.

What is most remarkable about the book are the exuberant energies of its author, his extraordinary intellect and his commitment to science. Bednarik single-handedly undertook a Leibnitzean task of creating a 'calculus' for the scientific study of rock art, and fought valiantly to save this discipline from opportunistic theories such as those of shamanism."

Dr Ahmed Achrati, *Rock Art Research*

To order copies of *Australian Apocalypse. The story of Australia's greatest cultural monument*, please complete and post the order form included in this issue of *RAR*, or visit *http://mc2.vicnet.net.au/home/dampier/web/AA.html* and complete and post the order form provided there.

All money recouped from the sale of this volume is directed into the Rock Art Protection Fund of the International Federation of Rock Art Organisations, which meets the cost of the campaign to save the rock art of Dampier Archipelago.