# 6. ROCK ART RESEARCH IN SOUTHERN AFRICA, 2000–2004

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#### Introduction

For reasons of space, this chapter will only cover *published* texts for the period in question, and thus university dissertations will not be reviewed, even though most of them are remarkable, written by young researchers whose often innovatory approach presages some interesting developments. So one hopes for a rapid publication of the works by Siyaka Mguni (Mguni 2002), David Morris (Morris 2002) and Catherine Namono (Namono 2004). For the same reasons, and also in response to the vitality of research in that country, emphasis will be placed primarily on research concerning South Africa, although other countries of southern Africa are also taken into account. The greatest attention has been paid to compiling the bibliography, but some publications may have escaped my notice, so I ask their authors to forgive any such involuntary oversights. Several topics will be examined in turn, with no attempt to be exhaustive, but focusing particularly on innovatory work. After a survey of new discoveries, the hermeneutics approach will be evoked, and then a few new trends will be presented that seem to be emerging, before ending with the question of dates and chronologies

#### New discoveries

In southern Africa, there are thousands of sites that are known but unpublished, and so the notion of a "new discovery" is often relative. Hence John Parkington's excellent introduction to the rock art of the Cederberg is based on personal experience resulting from the study of about 2500 sites in the Eastern Cape, of which around a thousand are in the Cederberg, most of them being unpublished of course (Parkington and Rusch 2003).

Among the "new discoveries", there are some old ones, so to speak, which are the result of the exhumation of long-forgotten documents. During the period in question, this especially applies to six fragments of painted wall,

collected in 1893 in the Drakensberg by Louis E. Tylor, and conserved at the Pitt Rivers Museum in Oxford (Hobart *et al.* 2002). Since the sites visited by Tylor are known, this will make it possible to complete their documentation, but using them for comparison with the original walls, as has been suggested, for measuring possible deterioration of the sites does not seem to provide any really useful information, especially since Stéphane Hærlé began a well-thought out environmental study of the famous site of Game Pass Shelter, in the Drakensberg (Hærlé and Salomon 2004). In fact, it's an ill wind, because these fragments (the removal of which can only be regretted) may one day make it possible to carry out analyses and dating with no risk of further damaging the original site.

Painted portable art is quite rare, and especially located in the Eastern Cape and the Northern Cape (Rudner 1971; Deacon *et al.* 1976; Binneman 1999). Only a single example was hitherto known in the Drakensberg, and, since it is a fragment, it is not certain that it should be compared with those just mentioned (Mazel 1992). Hence the great interest of the stones discovered at Cascades 2, a large shelter decorated with poorly preserved paintings in the Highmoor region in the Drakensberg park. Three, including a grindstone and a block with traces of polishing, are of basalt and display traces of red, black and white pigments. The most interesting object is a circular river-pebble, in mudstone, bearing the four painted depictions of rhebuck in white and various shades of red, with traces of charcoal on the painted surface (Swart and Escott 2003).

Likewise in this domain, the application of certain techniques can make it possible for "new" documents to appear on objects that are already known. One fine example resulted from the application, by David Pearce, of ultraviolet photography to one of the two stones discovered by Johan Binneman (Binneman 1999) in the Tierkloof rock shelter (Eastern Cape), where they were placed on a burial containing plant remains dating to  $1930 \pm 20$  BP (Pearce

2002b, 2003b). This treatment revealed at least twelve yellow anthropomorphs on one of this stone's faces, and three on the other, where various unidentifiable stains were also distinguished (Pearce 2003a).

Where parietal art is concerned, a new examination of certain walls can lead to the recognition of species that had hitherto gone unnoticed, like the "roan antelope" of Main Caves at Giant's Castle, in KwaZulu-Natal (Thackeray and Russell 2004) or the "white camel" of Makgabeng. The latter, painted in the Northern Sotho style, had already been photographed in 1916, but it had not been recognised, and its recent linkage with the region's history, and especially the fact that, around 1908, some officers of the British South Africa police patrolled the region of the Limpopo river on two of these animals, has made it possible to date this painting and replace it in its historical context (Smith and van Schalkwyk 2002).

However, the most interesting contributions come from newly recognized sites, such as that called MK1, which dominates a river of the eastern Free State Province of South Africa, and which has few equals in the density, the detail and the diversity of the images on such a small surface (130 cm by 70 cm). Some eland figures are associated with fish, apparently aquatic hybrid beings, horned therianthropes, an antelope-headed snake, and some "rain animals", as well as a motif which the authors call "fragment of eland" (Lewis-Williams and Pearce 2004, fig. 3, and p. 205).

Above all, several publications have made known what seems to be the most important site discovered in South Africa during the last decades of the 20th century, thus proving right those who believe that many major sites still remain to be found in this country. This site (discovered in 1992 by Sven Ouzman and Geoff Blundell who were seeking shelter from a storm - hence its nickname of "Storm Shelter") is in the region of the South-Drakensberg, formerly known as Nomansland, and which was one of the last refuges of the southern San (/Xam). Due to very local circumstances, this site, which contains 231 painted figures, is in an exceptional state of preservation (Blundell and Lewis-Williams 2001; Lewis-Williams 2001c), and four layers of superimposition have been observed. Its interest comes above all from the fact that, grouped on a single panel, there are themes that are found isolated elsewhere. In particular it contains a peculiar type of anthropomorph with a very big head, and with anatomical details, some of which are realistic and others which are not or exaggerated, which leads one to ascribe to them a mythical meaning, in terms of a hypothesis that is confirmed by the presence nearby of several therianthropes, but on the latter the emphasis seems to be more on their animal aspect than on their human aspect. Among the subjects in this site, some of the monsters known as "Eldritch figures" were painted on top of the other images, whereas some are beneath them, which demonstrated for the first time that this stylistic type (formerly known as "weird

whites") fully forms part of the assemblage of subjects in the final period of the Drakensberg painters. These figures are now interpreted, very convincingly, as depictions of spirits-of-the-dead (Blundell 2004: 97-112). The site also contains one of those fantastic animals that are usually seen as "rain animals", and several images are joined by so-called "Threads of light" lines (Lewis-Williams et al. 2000; Lewis-Williams 2001e). The location is kept secret, and no publication has been produced before the complete recording of the site is finished (Blundell and Lewis-Williams 2001; Blundell and Lewis-Williams 2002) - a task which formed the subject of Geoffrey Blundell's thesis (Blundell 2004). Using all the tools available to him (oral testimony, travel writings, linguistics, ethnological and historical documents, etc) he succeeded in producing a "total history" of the site, a procedure which is fortunately becoming widespread. It is no longer a matter of seeking at all costs the meaning of the rock images, but rather of using them as documents which have a very important role to play in writing a history of the population. From this viewpoint, the hermeneutic approach (cf. below) is not a priority, but forms a complement to other means, all of which are aimed at drawing up the history of people without writing. All the same, the hypotheses put forward on this occasion require validation through excavation or direct dating, and it would be interesting for example to subject to such analyses the idea of an evolution in somatic depiction at Storm Shelter and its vicinity, passing from "Significantly Differentiated Figures" (SDF) to the "Large-Headed-Significantly Differentiated Figures" (LH-SDF), and ending with images of heads without bodies. If this is confirmed, it is quite probable that this evolution should be linked with the progressive "creolisation" of the region (arrival of Bantu-speakers, runaway slaves, explorers, shipwrecked people, etc), as has been proposed by Blundell (2004: 156), but many elements in this schema still remain to be verified, as is recognized by that author.

Systematic prospections carried out in various zones that are poorly known have begun to yield some very interesting results, showing in particular that rock art there is richer, more diverse and more complex than was thought. Hence, more than a hundred new painted sites have been inventoried by Conraad De Rosner in and around Bongani Mountain Lodge Game Reserve, on the southern edge of the Kruger National Park: all of them are of San tradition, although there are a few shelters with geometric finger paintings, in red and sometimes white, outside the well-documented area – but this remains very rare. This quasi-absolute predominance of San paintings is usual in the Drakensberg, but is astonishing here, in view of the very marked presence of other traditions in the neighbouring region of the Limpopo-Shashe Confluence Area (Hampson et al. 2002).

All these discoveries already enable one (or will soon do so) to re-examine old problems with the help of new documents, or to test new approaches (see below) by breaking away from a tendency to focus far too exclusively on better-known regions like the Drakensberg or the Cederberg.

### The hermeneutics approach

This involves seeking the meaning that images could have had for their authors (Le Quellec 1993; Blundell 2004: 54), and, apart from those readings that evoke male and female initiation rituals (Solomon 2001b; Parkington and Rusch 2003), it is essentially based on two main reading keys: the mythological key (Solomon 2000a, 2000b, 2001a; Prins 2001b) and the ritualistic (and more particularly shamanic) key (Lewis-Williams 2001a, 2001d, 2002a, 2002b, 2003a, 2003b, 2004; Lewis-Williams and Pearce 2004; Mitchell 2002: 199–204).

Very few people – among them Helmut Tributsch (Tributsch 2000) - have presented a totally new key to reading the pictorial tradition of the San and of their mythology. Building on an earlier work (Tributsch 1996), this essayist proposes that the whole of San art actually had a naturalistic foundation, especially linked to the so-called "upper" mirages which consist of aerial reflections. These mirages, which mostly occur at dawn or in the calm before storms, certainly causes several illusions that do recall San traditions: people who seem excessively elongated, beings or objects that seem to float in the air, the horizon can be reflected at a height and resemble a celestial snake, pools give the impression of stretching into the sky, and parts of the landscape seem to float like clouds, but joined to the ground by "sky ropes". Therefore, for the author, a number of details that are usually interpreted as proof of the art's shamanic roots are better explained by the mythical interpretation of perfectly natural mirages – hence, in the paintings, all these immensely elongated people, those flying animals called "flying bucks", and those double figures, celestial ropes, zigzag lines and other floating objects. The whole thing seems quite attractive in some regards, and in particular could elucidate the presence of upside-down animals in the rock paintings, or could explain the apparently "aquatic" nature of species which are not so in nature, like for example the elands in Oing's famous testimony (Orpen 1874). Unfortunately, the systematization of this reading by its author weakens it rather than strengthens it, and he falls back into the very exaggeration that he criticises in the case of the shamanic interpretation, that is, the use of a single reading key. Moreover, he cites a passage by S. S. Dornan which states that "Bushmen often point to curious shapes the clouds assume and look upon them as living" (Dornan 1925: 148). If one confines oneself to naturalistic justifications, it makes one think that many mythical images (especially the celestial snakes) could be better explained by the interpretation of clouds than by that of mirages, because this phenomenon is much too rare to constitute the basis of all San traditions and art. In addition, it is known that the alternation of rays of sunshine and of

trails of rain, under storm clouds, was considered by the San to be the "legs" of the rain animals.

Within the framework of a study of the "dynamic figures" of Arnhem Land in Australia, typical of an art that is about 10,000 years old, a methodological comparison was attempted with the work of the South-African hermeneutics school, based particularly on the fact that, in both cases, it is a hunter-gatherer art (Chippindale et al. 2000). Unfortunately, this laudable attempt commits the double error of only basing itself on the Eliadian definition of shamanism, and associating it with altered states of consciousness: "The great number of forager spirit-doctors, medicinal healers and clairvoyants who use ASCs have been grouped under the broad umbrella term 'shaman'; the shaman defined as the 'great master of ecstasy' (Chippindale et al. 2000: 72). However, it has been demonstrated that neither trance nor any particular state of consciousness can be taken as a touchstone for recognizing shamanism (see refs in Le Quellec 2006). Nor can one define shamanism only as "the form of belief [...] where altered states of consciousness and experiences of visual and somatic hallucinations constitute the central truths of religion" (Chippindale et al. 2000: 71) because this would risk mixing it up with all trance rituals which are so numerous in Africa and so different from shamanism stricto sensu (De Heusch 1965, 1981). When diluted in such a way, this notion become so general that it permits the kinds of amalgamations that certain interpreters have been unable to resist. The authors also consider that "the presence of therianthropic figures is a strong indicator of a link to altered states of consciousness" (Chippindale et al. 2000: 73) – which, at this level of generalisation, is absolutely false, since throughout the world there are numerous examples of therianthropes which are not linked to such states (see, for example, for the Christian world, Egypt, the Near East and India: Ameisenowa 1949; Fleming 2000). In support of a shamanic reading of San art, a whole series of figures is summoned up by the authors: lines of dancers bent forwards, sweating, bleeding from the nose, with hair on end; therianthropes, sometimes flying; aquatic metaphors ("eels and fish-like creatures"); elongation of some people; bees implying the buzzing of trance, arrows symbolizing the associated pain, or used as metaphors for death, zigzag and often dotted lines, symbolizing n/um power; geometric figures ("lines, grids, U-shapes and filigrees"). Quite apart from the fact that some of the metaphorical interpretations associated with these images are debatable, it is certainly excessive to claim that they "derive directly from the neuropsychological experience of 'entoptic' forms sensed in the early stages of trance" (Chippindale et al. 2000: 74-75).

These criticisms aside, one can only fully approve the following recommendation by the same authors: "much within San art has nothing to suggest connection to ASC [...] One can expect a trance related explanation where figures are surrounded by recognizable dancing figures,

dancing paraphernalia and ASC metaphors – but one cannot be certain; and one is more uncertain where there are no such associations." (Chippindale et al. 2000: 71) - except that I would add that neither depictions of dancers or their paraphernalia, nor these metaphors, which remain hypothetical, enable us to claim an association of this kind. Moreover, one cannot support the method followed in this work, since it consists of looking "for those features that provide strong indications of the depiction of an envisioned world such as flying humans and therianthropes" (Chippindale et al. 2000: 78) – whereas, on the contrary, it is obvious, that therianthropes are in no way systematically associated with an "envisioned world", any more than are flying men (the fact that the winged man is often found in the shamanic domain does not imply that it is exclusive to it, as is shown in Africa by Shilluk, Habbe, or Temi examples). This is not the place to take a detailed look at the parts of this work that specifically concern Australia, but it is surprising to see that Kim Sales is considered to be "an important precursor", when her interpretation of the "Climbing men panel" of Burrup (Sales 1992) is not based on any fieldwork nor the result of any ethnographic investigation. As for Elkin's work on the "men of the highest degree" (Elkin 1946) used by the authors in support of their theory, they concern a very different phenomenon from shamanism – and, moreover, this term is never used by Elkin. Far from demonstrating the slightest shamanic value in the "dynamic' art of Arnhem Land, this article thus confirms indirectly that the whole of Australia's rock art is non-shamanic – whereas this continent is among the richest in depictions that could evoke phosphene forms (Bednarik 1990: 79).

The so-called shamanic hermeneutics have been the subject of some vigorous critiques, mostly concerning the use of the term "shaman" (which has too many extra-African connotations), an excessively ritualist interpretation (Solomon 1997, 2000b), and a neuro-psychological argument that is too questionable (Helvenston and Bahn 2002) to really confirm this reading. In any case, "whether a particular cluster of dots, parallel lines or zigzags is entoptic or not is, at the end of the day, not particularly interesting" (Blundell 2004: 60). Henceforth the dialogue between the most eminent representatives of the different positions seems difficult –to say the least – but one can see a positive evolution in the writings of several researchers whose contribution to this debate seems important and promising, although they do not tackle the subject headon. For example, consider the fact that instead of the word "shaman", Jeremy Hollman deliberately chooses to use San terms like !gi:xa (pl. !gi:ten) which etymologically means "full of !gi:", that is, of "magic power", or n/omkxao (pl. n/ omkxoasi, possessors of n/om) for its Ju/'hoansi equivalent (Hollman 2001: 62) – all terms which it is preferable to translate as close as possible to the original expressions by "potency-owners" (Blundell 2004: 97) rather than by the exotic "shamans". Another significant piece of evidence

is the fact that Joané Swart and Boyd Escott follow Anne Solomon's (Solomon 1999) reading of Qing's testimony by placing it within the framework of a mythology of "double creation". They also accept her interpretation of the term "spoilt" which has already caused a lot of ink to flow: "The word 'spoilt' in this story is used in reference to actions that disturb the social cosmos of Qing's world - cross-gender tool use and preying on a family member. Coti spoilt Cagn's knife by using it to sharpen a digging stick and Cagn's sons spoilt the eland by killing their sibling" (Swart and Escott 2003: 83-84). Even some authors that one would not really expect to find doing so are now tending to speak of "ritual specialists" (Hall and Smith 2000: 40; Blundell 2004: 55, 101), of "ritual functionaries" or of "religious specialists" (Smith and Blundell 2004: 256) rather than of "shamans", or they use several of these terms jointly with "shamans" (Prins 2001b: 116; Lewis-Williams and Pearce 2004: 206; Lewis-Williams 2001e: 78; Blundell 2004: 56), or they believe that "researchers now broadly agree that the [San] art is specifically focused on the observations and experiences of San religious specialists in their negotiations with the other world – the realm of god, the spirits and the mythical creatures" - that is (if words have any meaning) with the world of mythology. Nevertheless, far too many links are still being made between African and Eurasian ethnographic data. Hence, the behaviour of the San in trance and imitating animals has several times been compared to the so-called "trance" of Siberian shamans (Jolly 2002: 93), on the pretext of "highly fundamental similarities" (Lewis-Williams and Pearce 2004: 207), and I cannot imagine how one can explain such a forced parallel except by insufficient information. For example, as far as I am aware, the works of the South African shamanic hermeneutics school have never cited the indispensable "introduction" (of 879 pages!) to a "theory of Siberian shamanism", by Roberte Hamayon, nor any of her other works demonstrating that the so-called "trance" of Siberian shamans is nothing of the kind, and that this phenomenon can readily be explained in a very different way than through neuropsychological processes. Since only one of her articles, translated into English, has been cited (to my knowledge) in South Africa (where, in contrast, it is regrettable to see Eliade's excessively mystical book cited far too often), I conclude that there is a language problem, and that, as incredible as it may seem, most of the Anglophone authors who speak of shamanism here have not read this opus magnum. What would these same authors say of an analyst who, conversely, claimed expertise in San rock art without even having read David Lewis-Williams' thesis (Lewis-Williams 1981)?

Pieter Jolly took up the dossier of the therianthropes, which constitute a maximum of 3% or 4% of the painted subjects in southern Africa (South Africa, Lesotho, Namibia, Zimbabwe), and he recognizes that some of the images with this name definitely represent men wearing masks or entire animal skins: so these are "San ritual functionaries" (Jolly 2002: 89). Beyond the diverse (and

sometimes contradictory) interpretations suggested by these figures, Pieter Jolly seeks their common characteristics, and summarises them by bringing together in a single person (real or imaginary, it doesn't matter here) the characteristics of different beings. Consequently, what distinguishes these therianthropes is their liminality which joins them, by "conceptual links", both to those officiating at rituals (which the author sometimes calls "shamans" and sometimes "ritual functionaries") and to the initiands participating in the ceremonies. As for the hermeneutics of these images, although it combines erudition with imagination, it is far from always convincing. Hence, for the author, snakes with antelope ears or heads "may represent the transformation of a San shaman first into the more common human-antelope form, then, in a further transformation of this being, into an antelope-snake" (Jolly 2002: 99). This is very imaginative, but nothing really proves that this genre alludes to any kind of transformation - and even less to some kind of "trance-formation" (Parkington 2003). So the use of Occam's razor makes it preferable to link these beings with a well attested belief in real eared snakes (Blundell 2002; Le Quellec 2004: 185–186), rather than imagine a two-stage transformation which is not attested at all. Finally, it is not because these beings are imaginary or linked to trances that it is necessary systematically to place them beyond all reason. Pieter Jolly believes that, through them, "fundamental human cognitive constructs are disassembled and re-formed, freed from the constraint of reason and logical thought" (Jolly 2002: 95). These beings are "transrational, belonging to a realm beyond reason, and governed by the logic of the dream or trance" (Jolly 2002: 96). But here again, there is nothing to stop one seeing things very differently, and considering that therianthropes were doubtless, for their authors, very "good to think" in the framework of logics that manipulate elements of naturalism and identity, for example to think logically about nature's relations with culture and supernature (Parkington 2003).

John Parkington, who has also sought to theorise the notion of therianthropy, also stresses the liminal aspects of these beings, pointing out, following Cartmill (Cartmill 1993: 31), that hunting occurs at the frontier of the human world and the animal world, which makes the hunter, even when not disguised, a kind of unaware therianthrope. Moreover, the limit between human and animal being in perpetual negotiation, the result is that painted or engraved therianthropes could play a role in the graphic world that is comparable to that played by animal metaphors in the world of language (Parkington 2003: 142; Parkington and Rusch 2003: 79–83, 94–96) – and this links up with an avenue of research initiated by Francis Thackeray (Thackeray 2002).

One current trend that is arousing a lot of interest is that which, in various regions of the world, tries to place rock art in the landscape, but it has rightly been severely criticized by Benjamin Smith and Geoffrey Blundell, who denounce its ethnocentrist presuppositions (Smith and Blundell 2004). Certainly, the very notion of "landscape" is a cultural construct: being relatively recent, and of western origin, this is in no way a universal, and it cannot be transposed without precaution to other cultures of the past. In particular, the notion of "rock art markers" or "territorial markers" which were meant to mark territorial limits is generally used as a non-demonstrated apriori, whereas ethnology teaches us that hunter-pastoralists or pastoralists, for example, certainly have no need of such markers to distinguish their territories from those of their neighbours. The result is that even if the interpreter is conscious of the fact that his reading of the landscape is controlled by his own culture, and even if he knows that the painters must have had a different perception, and "no matter how willing we are to look for this other perception, we cannot observe or reconstruct their perceptions from archaeological sources and our own subjective knowledge of the landscape. At best, we shall be able to see a possible link between rock art sites and features of the northern South African landscape that we perceive" (Smith and Blundell 2004: 254, emphasis by the authors). Could not this salutary *caveat* also be applied to the walls and images, and not just to the "landscapes" in which they are located? Our way of understanding them is a social construct in all three cases (Lewis-Williams 2001b) and one can also think that the interpretations that we give of rock images are equally doomed to remain in the realm of the *possible*, even if, through measured use of ethnography, we try to escape as best we can from our presuppositions in order to try and reconstruct the type of reading that could have been carried out by the contemporaries of the painters and engravers.

#### New approaches, new trends?

The approaches that we shall examine now come from researchers who may not agree in all their points of view about aspects of rock art studies in southern Africa, but one can imagine that they would all willingly sign a declaration that "rock art evidence needs to be combined with [...] other pathways (archaeological, ethnographic, toponymic, and so on) in order to understand something of the complex and fluid (but not endlessly so) human identities that have been present in southern Africa" (Smith and Ouzman 2004: 522). So, while still interested in the meaning of rock images, these observers now tend to use them like any other archaeological object, which requires that their style, chronology, archaeological context and distribution must be studied. In this way, Simon Hall and Benjamin Smith have tried to "combine excavated and rock art sequences" at two sites in the zone of the Soutpansberg and Shashe / Limpopo area, in order to achieve the best reconstruction of the regional history of the population (Hall and Smith 2000). First they remind us how excavations in the two shelters, at Salt Pan and Little Muck, demonstrated an

intensification of occupation by "foragers" during the first millennium CE, then a decline in population during the second, with a major period of contemporaneity between foragers and farmers between about CE 350 and 600. All the excavations testify to the process of gradual marginalisation of foragers in a landscape that is increasingly occupied and domesticated by farmers. The shelters studied are decorated, with that of Salt Pan containing more than a thousand images including numerous superimpositions, with three styles of painting that are so different in form and content that they can only correspond to three very different traditions. The first is the tradition of San painters, characterized by fine brush-strokes, especially in red, but sometimes displaying details in white and black. It depicts, in decreasing order of importance, anthropomorphs of uncertain type, women, then men and zoomorphs: kudu, giraffe, elephant, various antelopes, big predators. In the Basin of the Limpopo, this school follows the Zimbabwean tradition which accords a major role to the kudu and giraffe, but differs from it through a greater proportion of women than of men. The second tradition, newly recognized, is represented by geometric figures drawn with the fingers, in colours ranging from red to orange and white. It presents what look like unrecognizable objects or beings, and it is generally superimposed on the previous tradition. The third is the Bantu tradition of white or whitish paintings, already known and which, in the region, has to be associated with the ancestors of present-day Sotho-Tswana groups; it is superimposed on the two others. From the chronological point of view, it appears that the second tradition lies between the San tradition and that of the ancestors of the Northern Sotho, whose arrival occurred around CE 1300, and it can only have been made by two groups: "either the early herder or the early farmer peoples". Its appearance is evidence of a change in the social control of the shelters, at a date probably located between CE 100 and 600. Since the geometric art is either superimposed on or below the San tradition, but never both, this suggests that the San were in competition with another population for the occupation of the shelters (or at least for painting in them), during the whole period of the herders. In fact, the archaeological data prove that the San were always present, but that they no longer had access to the shelters, except in the case of a small number of San paintings superimposed on geometric figures of the second style, which could indicate an episode of re-occupation which may have taken place around the second half of the first millennium CE. Moreover, since the characteristics of this geometric art (which is big - often more than a metre - in bright and gaudy colours, hermetic and non-figurative) are practically the opposite of those of the San art it supplants (which is small - in centimetres – in ochre, partly interpretable and figurative), the passage from one tradition to the other is evidence for a major change, which the authors interpret as follows: "the rock surface of the shelter, previously the vehicle for the questing for spiritual power, was transformed into an

arena for the negotiation of social power and, through social power, also control over the residual spiritual power of the place" (Hall and Smith 2000: 42). One can even estimate that there may have been, at that time, a deliberate action by the authors of the geometric tradition against the San tradition, because, to use an expression of Ben Smith and Geoff Blundell, both of them seem "to vie for visual primacy" (Smith and Blundell 2004: 257). Besides, several characteristics of the regional San tradition show that this is a contact art, developed in reaction to the arrival of a foreign new element. Certainly some fat-tailed sheep are depicted, whereas they were the property of the herders; and, according to an attractive hypothesis, it is highly possible that the San considered these animals to be filled with "power" because of the enormous quantity of fat they contained. The art of the last tradition recognized in situ, that of the late farmers (necessarily after CE 1300), is also evidence for contact because, although it is very similar to what is found elsewhere in southern and central Africa, here it shows signs of borrowing, since the "spread-eagled designs" are found alongside images of giraffes, the animal that was second in importance for the regional San.

In this research, the distribution of images is also turned to good account: the San paintings of Salt Pan are very faded, although their conditions of conservation are rather good, which leads one to think that they were produced long before the disappearance of the last San of the region (about 300 years ago). On the other hand, San art is better preserved in the shelters located close to the Limpopo, as at Little Muck, where the conservation conditions are less good: so it is probably the work of the last San in this area.

Other details are taken into account by the authors of this remarkable study. In particular, a shelter at Salt Pan has yielded a pit filled with ashes, bones and plaquettes; it has been possible to prove that some of the latter had been detached from a wall of the shelter. This can be linked to present-day rites of passage, which include hunting activities (antelope for meat, felines for skins), at the end of which the remains are destroyed and/or hidden. As for the engravings of games of mankala which are found at the entrance of the shelter of Little Muck, they indicate a use of this place by men (since everywhere in Africa they are the only ones who play this), which suggests a possible ritual usage of this shelter by farmers. Finally, the confrontation of the data extracted from the excavation and deduced from the rock art makes it possible to develop the hypothesis of a strategy by foragers to occupy free spaces that were marginal or less used by the first farmers, and to imagine the possibility of a seasonal exploitation of certain areas by both groups, in a way that was useful to both. The former could have provided the latter with meat, skins and beads (or their raw material: shells of *Achatina*, ostrich eggshells) in exchange for foods from domesticated plants, using a kind of exchange that ethnography still attests today.

A more particularly distributional approach was taken

up by Jamie Hampson, William Challis, Geoffrey Blundell and Conraad de Rosner during a preliminary study of the paintings of the Bongani Mountain Lodge Game Reserve and its environs, whose discovery was mentioned above. The fact that most of this area's archaeological sites have been pillaged by treasure-hunters means that there is little chance of establishing relations between the rock art and the data from the excavations, in contrast to what was achieved by Simon Hall and Ben Smith in the province of the Limpopo (Hall and Smith 2000). So the fall-back solution chosen by the authors was to attempt a distribution of the recognizable motifs in the paintings (Hampson et al. 2002). First of all they criticize – quite rightly – the work of their predecessors in this domain: their distributional analysis was not reliable, either because it used nonhomogeneous criteria (style, subject), or because it was based on preconceived regions, like the Drakensberg or the Western Cape. In addition, in order to avoid these pitfalls, one needs to take into account the existence of traditions as different as those of the San, the Bantu-speaking agriculturalists, the Khoekhoen herders, and now, of Khoespeaking hunter-gatherers whose art was recently identified, traditions whose distribution is determined by historical an ecological factors. To do this, the authors refuse to rely on style, preferring the study of motifs, because they consider that knowledge of the meaning of these is an indispensable prerequisite. They distinguish three types: 1- Widely distributed southern African motifs; 2 – Regional motifs; 3 – Extremely rare, idiosyncratic or unique motifs. Each of these categories is then divided into A: "Intelligible" and B: "Unintelligible". By "intelligible", the authors mean the motifs of which one knows - in their opinion - more or less into which cosmological category to place them. The result of this work is that the area studied is characterized by the following motifs:

"1A: "red meat" antelope;

1B: files of human figures;

2A: human figures holding arrows, formlings, the Linton (supine) posture, rain-animals, "palettes";

2B: infibulation of the penis, animal skin aprons, T-shaped equipment;

3A: none:

3B: hare/rabbits, "curved trails", shoulder "spines"."

Obviously, for this first result to have any value, it needs to be compared with others, obtained following similar research in other regions, which will make it possible to fine-tune the characterisation of the various rock-art provinces already recognised, and perhaps add more. It was already known that in southern Africa each rock-art region has an emphasis on a particular animal: eland in the Drakensberg, kudu in Zimbabwe and in LSCA, springbok in the Brandberg – which is evidence for a cultural filter, because such a distribution cannot be explained by ecology. This distributional approach is certainly extremely promising, and will be of a great help in avoiding the

shortcomings that are rightly denounced by the authors in their conclusion: "It is important to guard against interpreting the art of unexplored regions purely in terms of what is already known about well-researched ones. There is a danger that new themes and nuances will be reduced to what has already been argued or suggested" (Hampson et al. 2002: 28). One can only agree with them also when they declare that "researchers need to seek differences and not just similarities" (ibid.) since this precaution rightly constitutes the essential basis of all comparative methods, as has been demonstrated by Claude Lévi-Strauss and Georges Dumézil. Less convincing is the choice of not using stylistic criteria, especially since Simon Hall and Ben Smith have shown how they can be used to advantage (Hall and Smith 2000) – as long as each style can be defined by a series of well recognizable criteria. As for the claim that the intelligibility of the motifs constitutes an indispensable criterion, it seems to call on reserves that are all the more important because this intelligibility only measures our own capacity for understanding the images – or our pretension to believe ourselves capable of it. Moreover, with time, and as research progresses, some motifs will pass from category to another; some motif that appears obscure today could well become comprehensible one day following new discoveries, and another which was thought to be understood could become obscure again if one notices that the explanations given were wrong – and in the history of rock art research examples of such evolutions abound.

A good example appeared recently with a motif which, although originally obscure, seemed intelligible in the 1970s, but it has only just been noticed that its so-called intelligibility was caused by a faulty reading. Geoffrey Blundell and Edward B. Eastwood have solved the question of the meaning of the Y-shapes which constitute at least 60% of the rock images of the Confluence Area of the Limpopo and Shashi rivers (LSCA), where they are all painted (Blundell and Eastwood 2001). The only interpretation accepted hitherto was that of Pager who, because one of these images seemed to him to be associated with a fish, saw it as a trap (Pager 1975). A new examination of the same image has shown that Pager's tracing was wrong, perhaps because it was made too quickly, since it is known that this extremely meticulous observer (Lenssen-Erz 2001, 2002, 2004; Lenssen-Erz and Erz 2000) only spent a very short time at the site. In reality, the supposed fish is exactly similar to the U-shapes which have been identified as zebra prints at the site of Bumbuzi in nearby Zimbabwe (Summers 1950). And yet, Pager had suggested that the Y-shapes could have represented other elements of material culture, such as loincloths or bags. Comparisons made either with a painting on the plateau of Makgabeng (Northern Province, SA) showing two women wearing skin aprons, or with San aprons preserved in museum ethnographic collections, with other women wearing similar aprons in Zimbabwe (Garlake 1987) and with the paintings known as "spread-eagled motifs", enable the authors to demonstrate

very convincingly that the Y-shapes are a schematisation of such aprons. The study of the context of the images makes it possible to add that these motifs denote a type of male loincloth, while the spread-eagled motif represents a type of female apron.

This interpretation enabled Edward Eastwood to take up afresh the study of the numerous sites where this type of image is present (Eastwood 2003). Among the paintings in the 600 rock art sites identified in the area of the Central Limpopo Basin there is a continuum between these Y-shapes and other cordiform, triangular and semiovoid forms, resembling spread-out animal hides. In this area, this type of figure is common to the three regional pictorial traditions, attributed to the San, the Khoekhoen and the Northern Sotho (which are Bantuphone) (Eastwood et al. 2002). If, in the San paintings, the Y-shapes represent male loincloths, ethnographic documentation makes it possible to show that the semi-ovoid shapes represent female aprons. Since the latter are generally made of the entire hide of a steenbok (Raphicerus campestris), some images of animal hides could also represent such aprons, spread out. The recognition of these two types of garment in San paintings then suggested to Edward Eastwood that he should extend his research to Khoekhoen paintings. It then appeared that in the Tsodilo Hills of Botswana, aprons are also found both in the flatwash paintings of the Eastern Khoe-speaking San and in the finger-paintings of the Khoekhoen. In the central basin of the Limpopo, the paintings of the Khoekhoen tradition also include both finger-painted aprons and Y-shapes.

Since ethnographic documentation (Schapera 1930: 30) indicates that Khoekhoen male loincloths are triangular with the point upwards, the Khoekhoen paintings that depict loincloths with the point downwards must represent female aprons, because Khoekhoen women generally wear a broad triangular apron at the back and a shorter apron at the front, with a fringed base decorated with beads and shells. Most of the painted aprons are fringed or decorated with dots and dashes, which confirms that these are doubtless front aprons. In Khoekhoen paintings in the area studied, they form 15.5% of the subjects. The above observations finally led to the identification of a similar iconography in the paintings of the Northern Sotho, and the investigations carried out by Edward Eastwood in the Hananwa and Koni groups have shown that similar motifs are currently designated by a typically Northern Sotho vocabulary, and that their meaning is known to women in these groups, where the symbolism of the aprons plays an important role in cosmology. The same must have been true for those who produced the rock paintings where this motif is associated with the same geometric figures that are found today on the aprons themselves or in wall paintings. Whatever its meaning, the motif of the loincloth or apron clearly had great importance for the San, Khoekhoen and Northern Sotho painters in the region studied, and this commonality makes it possible to suppose that there must have been close

links between these three groups. Finally, the distribution of these images, the study of their superimpositions and relations, the linguistic and human history of the region, allow one to think that originally this motif of the apron/ loincloth was peculiar to the Khoekhoen, from whom it was borrowed both by the San and by the Northern Sotho. The author of this masterly study concludes very prudently by remarking that, even if new loincloths (for boys) and aprons (for girls) are given to new initiates among the Khoekhoen, as well as among the Pedi, Koni and Hananwa (who are Northern Sotho), this does not necessarily imply that the meaning of these motifs was the same in all three regional painting traditions. And he suggests, very correctly, that he will continue his work by specifying the chronology of the images and of human occupation, both by excavations in the shelters and by study of superimpositions.

Some motifs may not have been recognized simply through the interpreter's lack of experience in certain domains, and especially that of observation of nature, in which the painters excelled, particularly in the case of the San: observation of animal behaviour is, for the hunter, a precondition of success. In the paintings, the naturalist references may, to our eyes, be very discreet, or even nonrecognisable at first glance, whereas in the painters' society they doubtless spoke volumes. Thanks to the perspicacity of Siyakha Mguni, what Leo Frobenius called "Formlings", without having the slightest idea of what they could be, can now be recognized by researchers as termite mounds - something which must always have been obvious to the San (Mguni 2001, 2002, 2004). Another excellent example of this situation was provided by Jeremy Hollman, in the framework of an analysis of the paintings of Long March Shelter, a site of the Klein Swartberg, Western Cape Province (Hollman 2001, 2003). It contains a row of 22 exceptionally large anthropomorphs (50 to 70 cm high) which are very detailed and painted in red, yellow and white; some of them carry a bow and quiver, and so at first glance they resemble a group of hunters walking. But several details are astonishing, because they seem to depart from might be expected from a realistic depiction of ordinary men. Jeremy Hollman then shows that all these particularities correspond better to the anatomy of ostriches than with that of humans: the white pointed protuberances located on the back of these walkers have the shape of the wings of male ostriches just before combat or copulation; their white buttocks located below the junction of the legs recalls the shape of the ostrich paintings of the Brandberg which evoke the males' display posture; the bottom of their kaross is painted in an unusual manner that recalls the limit between black plumage and white feathers in the ostrich; the unrealistic profile of their torso is the same as that of the ostrich's chest; their legs are articulated like birdlegs, and the red stripes visible on some of them recall the similar colouring that can be seen on the legs of male ostriches in a state of sexual excitement; finally, red patches on their body may recall the highly vascularised areas of bare

skin that permit a close contact with the eggs to facilitate incubation in this bird. In short: all these characteristics are those of male ostriches in a state of sexual excitement, and, the author concludes, "people and ostriches come together therianthropically to make complex, resonant statements" (Hollman 2001: 73). Only a good knowledge of ostrich anatomy and behaviour made it possible to recognize these "struthianthropes"; one of the important lessons to be learned from this is the demonstration that in certain sites the human-animal association may be very different from that which can be seen, for example, in the Drakensberg. In consequence, it would be wise to review a number of rock art sites with this observation in mind.

Another example of a naturalist detail whose importance would easily escape the unwary observer is provided, in the Bergville District, by the painting of two confronted elands, displaying an agonistic behaviour that is common among males of this species. Both of them have a raised mane, whereas in reality their hairs do not stand on end in aggressive situations. The one on the right has a feline tail; that on the left does not, but it as a particularly long raised mane. The observation of these details makes it possible to suppose that the painter thus endowed each of these adversaries with leonine characteristics, thus making them hybrid beings, and that leads one to interpret this painting differently than as the simple description of a scene that was really observed in nature (Hollman 2002).

Sometimes, the details to be recognized are mythical, and linked to San cosmology, like the "threads of light" that zigzag in certain paintings (Lewis-Williams *et al.* 2000) – or technical, as has been noted with regard to a depiction of a yacht, drawn in charcoal, in the region of Ruitersbos to the north of Mossel Bay in the Western Cape (Legatt 2004a). Whereas several specialists think that this image fits the local rock art tradition rather well, Nick Legatt, who is a professional sailor, believes that the artist could only be a 17th-century Dutch seaman. Certain details of the fittings are unlikely to be noticed by anyone other than a sailor, especially as, in his work, the artist took care to include the Dutch flag, which is very recognisable (Legatt 2004b).

The intelligibility of certain images is sometimes debatable, as seems to be the case of a series of depictions that evoke the mermaids of western mythology. Those of the site of Ezeljagdspoort were first linked to a San story which speaks of water maidens living underwater, and then the interpreters of the shamanic school saw them as shamans in transformation and endowed with swallow tails (birds which announce rain). That was the situation when Frans Prins pointed out that extremely comparable figures, recorded by Stephen Townley-Bassett in a site of the Lower Huis River had their breast covered in a way that recalled a kind of garment of Boer women of the 18th and 19th centuries, which could indicate the adoption and adaptation, in a San conceptual framework, of a Melusinian legend of "watermeide" (Prins 2001a: 69). This seems

highly *possible*, and even probable, but how to prove it? Similarly, how to prove that the series of antelope prints at Strydkloof, in the Eastern Cape, represent "a pathway that guides people safely through the sacred landscape"? or that they formed "a route that people could follow as part of a quest" (Ouzman 2001c)? or again that they marked "a pathway from the outer ordinary world to the inner spirit world of the San" (Townley-Bassett 2001: 86)? This type of interpretation, no matter how "ethnographically informed" it may be, remains once again possible, but unprovable.

One approach that is particularly original is that of Sven Ouzman, when he proposes paradoxically that one should forget for a while the visual aspect of the rock art, to "see" whether certain graphic manifestations are the result of activities that are linked to the world of sound. Out of a sample of 762 engraved sites which he has studied, there are 11% that contain natural gong rocks which, in six cases, bear percussion marks, and were therefore used to produce sounds. This observation enables him to abandon the interpretation of certain assemblages of hammer marks in groups or lines as depictions of entoptic light, according to a hackneyed theory, because a number of them could constitute the visual residue of an activity that in reality involved sound. Certainly the well-established examples of sound manipulation are not numerous, but a rhinoceros at the top of a hill of the Vaal River provides a pretty convincing case. This animal which, it is known, could have been seen as a rain-animal, is associated there with percussion marks and grooves, of which the former could have been produced to imitate the noise of the rainanimal running (called "galloper" by the /Xam), while the latter could be evidence of the ritual which the San called "cutting the rain", during which the animal's ribs were symbolically broken to provoke rain (Ouzman 2001b). This very attractive reading can doubtless not be generalized, but it would be good to keep it in mind on other sites, so as to avoid missing eloquent details.

Another essentially distributional approach was followed by Sven Ouzman and Ben Smith to identify the Khoekhoen graphic tradition (Ouzman and Smith 2004). The procedure is simple, but they had to take the time to put it into practice. In about ten years these authors visited 3755 rock art sites in southern Africa, of which 345 had finger-paintings and crudely pecked engravings, 2921 with paintings done with fine brush-strokes and finely pecked engravings, and 489 containing both types of technique. They took into account the iconography, the dating and the distribution of the sites, in order to better determine the identity of the authors of the first of these artistic groups. First they reject the easy path which consists of giving a shamanic explanation to this type of image: "Unfortunately, some rock art research unproblematically assumes geometric imagery invariably represents entoptic phenomena. But non-entoptic geometrics are found in many rock arts across Africa" (Ouzman and Smith 2004: 2); and later: "we consider it [...] dangerous to assume that just because an art is predominantly geometric

it will include entoptics." (Smith and Ouzman 2004: 522). From the chronological point of view, it is known henceforth that most of the geometric engravings of Driekopseiland have every chance of dating to between 700 BCE and CE 1600, for primarily geomorphological reasons (Morris 2002). In the Western Cape some more recent dates have been proposed, notably that of CE  $1550 \pm 140$  for a finger painting superimposed on an eland, and at !Garib Dam shelter, some rectangular grids were painted by finger on a fragment of wall that had fallen into a level dated to CE 1680-1720. So the few data show that these images are doubtless too early to have been made by Europeans, and too recent to correspond to a hunter-gatherer tradition: everything indicates that they belong in the first millennium CE. So they must be the work of either Bantu farmers or Khoekhoen pastoralists, or of a combination of the two. This is where their distribution is revealing, in that it has three important characteristics: (a) it seems to favour proximity to water courses, which is useful for herders; (b) these images are more abundant to the west of the 600 mm isohyet, a barrier beyond which the Bantuphone farmers of the Iron Age did not settle permanently, because the climatic conditions did not suit their millet and sorghum crops; and (c) they are almost completely absent from KwaZulu-Natal and Lesotho, regions that are known to have had a major Iron Age population with a small number of Khoekhoen pastoralists. Such a distribution makes it difficult to attribute this graphic tradition to Bantuphones, and so its authors were doubtless Khoekhoen. Moreover, it is interesting to note that, via the Tsodilo Hills in Botswana, the South-African tradition of geometric rock art is linked to the Central-African geometric tradition of hunter-gatherers who were going to become Khoekhoen pastoralists by acquiring livestock from the Bantuphone farmers (Ouzman and Smith 2004). Moreover, the distribution of this geometric art closely mirrors that proposed by linguists for the movement of the Khoe languages, and the authors' conclusion is that "the combination of linguistic, excavation, and rock art evidence shows that a distinctive way of life, material culture, and set of relationships, including Khoe languages, sheep, goats, geometric rock art, and perhaps pottery arrived in southern Africa 2000 years ago" (Smith and Ouzman 2004: 522). This work will doubtless require some adjustments in the future. in that the dates for engravings are really only estimates to be verified, and especially because the characterization of the geometric images is rather blurred (not to mention that between "entoptic" and "non-entoptic geometrics"). So one cannot totally rule out the risk that some of the elements studied may have belonged to different cultures, and that the procedure that consists of grouping them together to constitute an artistic group that is only based on categories as simple as the geometric nature of figures and their technique of production may lead to an excessive simplification of reality. But this is normal, in the initial stage of this type of research, and this innovative work will certainly give it an invigorating impulse. Moreover, since its appearance, 84 new sites with Khoekhoen paintings have been found in

the district of Willston (Northern Cape). They are almost all located less than 100 m from a perennial water source, and will be the subject of Martin Hykkerud's masters thesis (Hollman and Hykkerud 2004).

#### Techniques, chronology and history

Interpretative approaches have often been reproached for an insufficient preoccupation with chronology and for a highly debatable assumption of "the probable general unity of the art" (Lewis-Williams 1981: 4), at the risk of coming very close to anhistoricism and finding itself in an anti-archaeological position. Following the already old attempts by Mason (Mason 1933), Pager (Pager et al. 1971) and Vinnicombe (Vinnicombe 1976), several authors (Russell 2000; Pearce 2001; Swart 2004) have again tried to construct chronological sequences from observable superimpositions in various sites of the Drakensberg, essentially through the application to the rock art of Harris matrices that were initially conceived for analyzing stratigraphies (Harris 1989). Thembi Russell (Russell 2000), and then David Pearce (Pearce 2001), showed that, where art is concerned, a necessary prerequisite to the use of this method is the identification of well differentiated artistic schools, traditions or styles.

In the central Drakensberg, this technique was successfully applied by Thembi Russell at the site of Main Caves North. It was possible to identify seven sequences, which partly corroborate the old chronologies established by Patricia Vinnicombe and Harald Pager in the same large region. One new point is that, while monochrome paintings are found in all the sequences, the presence of shaded polychromes is more significant, because it only becomes apparent after the third phase (Russell 2000). At Eland Cave in the north of the same massif and at Ngwangwane 8 in the south, the same procedure, carried out by Joané Swart (Swart 2004), has revealed the existence of a first phase of paintings of monochrome paintings and unidentifiable bichrome animals. Elands only appear in a second phase, and then come the rhebuck and other animals, in a median sequence in which anthropomorphs become more complex, both in their posture and in their palette of colours, whereas the more recent images are simpler.

Joané Swart's most noteworthy conclusion is that the introduction of the eland among the motifs of the sites studied is late; no antelope of this species could be identified in the first phases, whereas they are clearly recognizable afterwards (Swart 2004: 31). In the Maclear District, on the other hand, David Pearce (Pearce 2002a) claims that the lack of change in eland depictions in this area through time indicates that San cosmology did not vary while the painters were operating, which does not necessarily contradict preceding claim. For if the first result cited indicates that the elands was not always present but that it was only painted by the hunter-gatherers of the Drakensberg after the first identifiable painting phase, and

if the paintings of the Maclear District, on the other hand, show no notable change during their sequence, it is perhaps because the latter are more recent than the former. Another remarkable result is that, both at Eland Cave and at Main Caves and Ngwangwnane 8, therianthropes only appear in the repertoire of motifs after the appearance of the eland. Moreover, in these three sites, the rhebuck seems to play a significant role from the median sequences onward, and especially in the final phases. One might think that this is evidence for visits to the same shelters by different hunter-gatherer group in different periods, each of them favouring a different subject; but as the same identical schema is found in all three sites, this more probably indicates a general variation over time in the belief system of the hunter-gatherers. These first results will have to be correlated with similar work carried out at other sites, in order to confirm their validity, but already they show that it is extremely risky to bet on very long-term invariability, whether in San cosmology or in the central role of the eland and therianthropes at its heart, regardless of the reading one proposes to make of it.

It is desirable that the sequences that have just been evoked should be correlated with absolute dates, like those recently obtained in the Drakensberg and which essentially consist of post and ante quem dates obtained on oxalate crusts (Mazel and Watchman 2003). These dates need to be used with caution, because they are still too few in number, and there are still many unknown factors. Hence, in the case of post quem dates, the time that has elapsed between the formation of a dated oxalate crust and the application of the paint that covers it is undetermined. Nevertheless, it is interesting to note that a red and white eland in the second sequence at Main Caves (Russell 2000) must be situated between 3130 BP and 2810 BP (at one sigma). Since the shelters of Eland Cave and Ngwangwane 8 also contain red and white elands in their second phase, as at Main Caves, the earliest art in these three sites could be of similar age, but one needs to take into account the fact that bichrome elands also exist in more recent phases.

In other sites of the central Drakensberg, Aron Mazel and Alan Watchman (Mazel and Watchman 2003) have also obtained *post quem* dates for another red and white eland (2930–2810 BP), a polychrome rhebuck (2410–2370 BP), a hartebeest (2390–2200 BP), as well as an *ante quem* date of 1940–1780 BP for a red anthropomorph (all dates at one sigma). Apart from the red anthropomorph, which may belong to various phases, all these dates agree well with the appearance of the same subjects in the sequence established by Joané Swart (Swart 2004).

Although these results remain very insufficient, and need confirmation (Jolly 2004), they do indicate a very promising approach. It is now important, on the one hand, to build

other sequences of superimpositions in neighbouring sites or panels, and, on the other, to obtain more dates per site, per pictorial tradition and per type of motif, in order to be able subsequently to correlate the two kinds of data more solidly.

Another avenue of research, which has still barely been attempted in South Africa, aims to rediscover the recipes used by the painters, because these may have varied from region to region, and in different periods. A preliminary study, carried out by Jeffrey Hughes and Anne Solomon, of the pigments du KwaZulu-Natal has shown that it is doubtless possible to identify rare elements that mark the composition of certain ochres, which could make it possible to pinpoint their provenance and, eventually, identify early exchange networks (Hughes and Solomon 2000). A series of analyses of 81 samples taken from Storm Shelter has shown that certain painting recipes used blood as a binder, while others did not, although it is not really possible to link these variations to significant differences in the subjects painted (Blundell 2004: 61).

In a related domain, Stephen Townley-Bassett, inheritor of a family "dynasty" of rock art enthusiasts, has published the result of a dozen years spent making facsimiles of paintings observed in numerous regions of South Africa. All were patiently produced with pigments found on the sites or in their immediate vicinity, with techniques that are probably very close to those used by the original painters. The purpose of this procedure was above all to rediscover empirically the ancient pictorial techniques, and all these replicas, painted with consummate art, are among the most beautiful reproductions of rock art ever produced. They were combined with a few experiments which showed most notably that the paints which best resist erosion are those using egg or gall as a binder (Townley-Bassett 2001: 29). It would certainly now be very fruitful to associate Stephen Townley-Bassett's exceptional experience with precise experimental protocols, based on analyses of the original paintings.

#### In memoriam

In closing, we should point out that the period under consideration has seen the departure of several great names in southern African rock art research – namely, Dorothea Marie-Louise Fock (1912–2003) (Morris 2003), Jalmar Rudner (1917–2003) (Avery 2003) and Patricia Vinnicombe (1932–2003) (Deacon 2003; Olofsson 2003). The recent developments mentioned above would never been possible without the exceptional contribution of these researchers, all of them pioneers in different ways, and to whom all contemporary researchers pay fervent homage, as I do myself.

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