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The Evolution of Theory, Method and Technique in Southern African Rock Art Research

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Southern African rock art research has progressed from an essentially denigrating social and political milieu, through an empiricist period, to contemporary social and historical approaches. Empiricism, once thought to be the salvation of southern African rock art research, was a theoretically and methodologically flawed enterprise. Attempts to see the art through an emic perspective facilitated by copious nineteenth- and twentieth-century San ethnography is a more useful approach. It began briefly, but was then abandoned, in the nineteenth century. Today, diverse theoretical and methodological approaches are being constructed on an ethnographic foundation. The centrality of the San in South African national identity has been recognized.

KEY WORDS: rock art; southern Africa; theory; methodology; technique.

INTRODUCTION

If, in 1970 (as we shall see, not a randomly chosen date), a writer had drawn a graph to represent the evolution and successes of southern African rock art research, it would have been markedly different from one that would be drawn today. Two divergences would be immediately noticeable. First, the criteria for identifying success that a 1970 researcher would have calibrated on the vertical axis would have differed in crucial ways from those that present-day researchers would select. Secondly, a 1970 writer would probably have started the horizontal time axis somewhere in the 1930s, whereas an early twenty-first-century researcher would begin well back in the nineteenth century. As a result, the conceived highs

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and the lows would be plotted at different times. How can these differences be explained?

No single factor can be identified as the 'prime mover' of research in any field. Those who wish to chart the course of advances in knowledge must consider social, political and personal forces along with unarticulated and often unconscious aims and values. In some ways, the evolution of research may be thought of as punctuated adaptation to changing, highly complex social, political and epistemological environments. Philosophical and historiographic issues of this general kind should always be borne in mind (Lewis-Williams, 1995).

I try to identify and explain some of the differences between the two hypothetical southern African graphs I have imagined and to place them in their historical contexts. In doing so, I consider changes in theory (overarching framework), method (mode of argument, e.g., induction, deduction) and technique (e.g., quantification, radiocarbon dating). These developments are of wider interest than to only southern African researchers because some have been adopted in other parts of the world and are the topic of general rather than parochial debate. Indeed, the theoretical, methodological and technical issues that I discuss are of worldwide relevance.

Southern African rock art comprises two modes of execution and three distinct traditions (Figs. 1a,b and 2). The traditions comprise images made by San hunter-gatherers (still sometimes referred to as Bushmen), images more recently identified as made by pastoralist Khoekhoen people (formerly known as Hottentots), and the so-called Late White paintings, made by Bantu-speaking agriculturalists. The autochthonous San made both rock paintings (pictograms) and rock engravings (petroglyphs; Fock and Fock, 1979, 1984, 1989; Dowson, 1992). The paintings are scattered in rock shelters throughout South Africa, though painted sites are most dense in the mountainous areas, such as the Drakensberg and the Cederberg, where rock shelters are common. San engravings are concentrated on the central plateau, where there are few rock shelters; they are found on open, exposed rocks. Painted and engraved portable San art, some of which was placed in graves, is rare and is found principally in cave deposits along the southern Cape coast (Lewis-Williams, 1984b). Especially in the western and northern parts of the subcontinent, Khoekhoen paintings are found in rock shelters; engravings occur on open rocks, often ancient glacial pavements now exposed along rivers. The Late White paintings occur in the northern and western parts, areas that Bantu-speakers began to occupy about the turn of the era. There are also some rock engravings that depict Bantu-speaking settlement patterns (Maggs, 1995). In recent times, these traditions interacted with one another in some parts of the subcontinent—a burgeoning field of research in itself.

In discussing some of the issues posed by these traditions, I concentrate on that made by the San because it is the most abundant, the best known worldwide, the longest studied, and the best understood of the three. The San tradition, in

one form or another, has enormous time-depth. It was being made up to the beginning of the twentieth century and is therefore close to the nineteenth- and twentieth-century San ethnography that I shall describe and that dovetails in detail with the images. *Art mobilier* paintings dated to 2000 years ago have distinctive features that show that this ethnography can be projected back, at least in specific contexts, that far (Lewis-Williams, 1984b). The oldest securely dated depictive images (on portable plaquettes) have been dated to approximately 27,000 years BP (Wendt, 1976). Recently discovered geometrically engraved pieces of ochre have been dated to approximately 77,000 years before the present; they are the oldest securely dated 'art' in the world (Henshilwood *et al.*, 2002). At that time-depth, it is doubtful if they can be said to be part of the 'San tradition' as it is known from ethnography.

I begin with a question concerning differences between the two temporal axes of the graph that I envisage: Why would a present-day graph charting the development of rock art research start far earlier than one drawn in 1970?

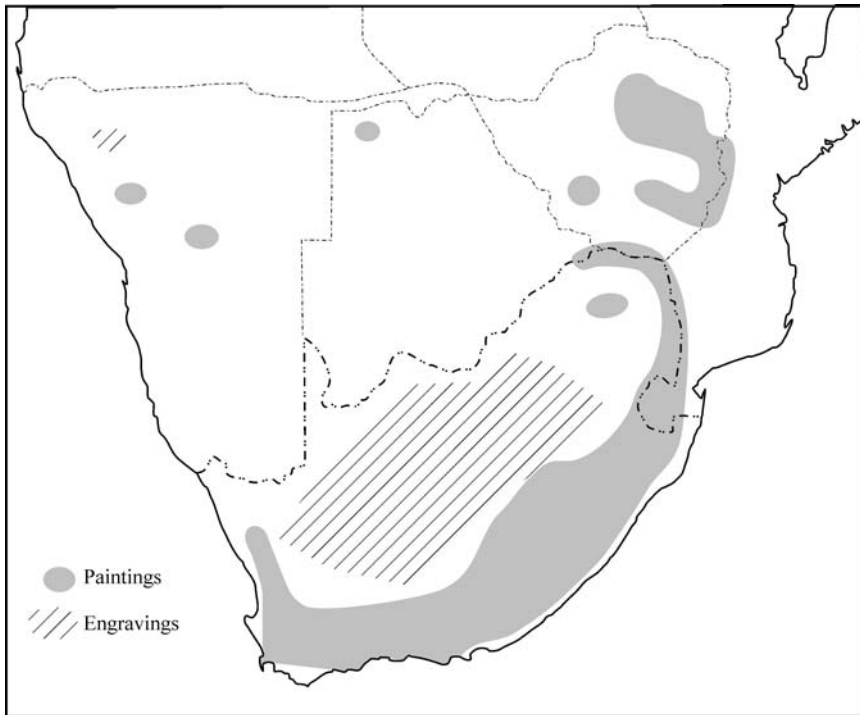


Fig. 1. (a, b) Maps of southern Africa showing places, concentrations of rock paintings and engravings, and San linguistic groups mentioned in the text.

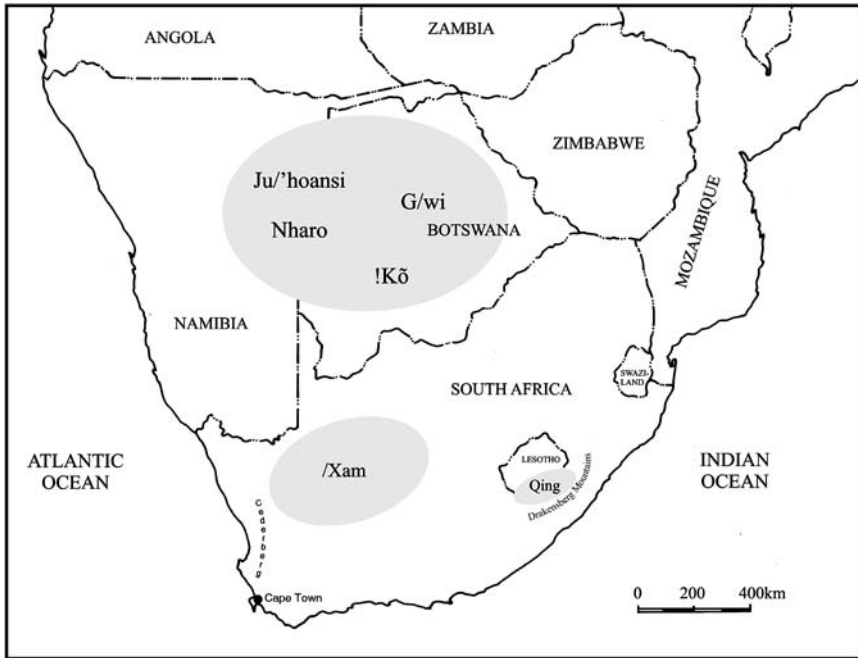


Fig. 1. Continued.

NINETEENTH-CENTURY GENESIS

Events and activities concerning San rock art that took place in the 1870s are today, in our post-1970 era, so consistently celebrated and discussed that it is difficult for younger researchers to imagine a time when they were virtually unknown, or, at any rate, considered marginal. Yet, even today, some writers still miss the seminal innovations of the second half of the nineteenth century.

The nineteenth-century background to these events was a climate of exploration and colonial expansion. Indigenous peoples found themselves up against powerful, well-armed militias that would not take no for an answer. Bantu-speaking communities that practised an agro-pastoral economy were somewhat better placed than the nomadic hunter-gatherer San and pastoral Khoekhoen. 'Of no fixed place of abode,' in the eyes of the colonists, debarred the Khoisan (Khoekhoen and San; both speak click languages) from any form of landownership, and their eradication appeared justified. This imperialist position was underwritten by the notion that the San (who proved more intractable than the Khoekhoen) were 'wild' and needed to be 'tamed,' converted to Christianity and forced to settle in 'useful' ways. They may have been 'savages,' but they were certainly not 'noble.' Peter

Kolben, a Dutch traveller who at the beginning of the eighteenth century recorded much information about Khoekhoe rituals and life, presented a dismal view of the San. He believed that they were degenerate ‘Hottentot Banditti, who finding the Laws and Customs of their Countries to be too great Restraints upon their Inclinations, repair to the Mountains, and there securing themselves in almost inaccessible fortresses, sally out from Time to Time into the fields to steal cattle for their Sustenance’ (Kolben, 1731(1):89–90).

This supposed lack of restraint on their ‘Inclinations’ led colonists to conclude that the San were virtually incapable of religion. One missionary, Henry Tindall, wrote: ‘He has no religion, no laws, no government, no recognised authority, no patrimony, no fixed abode . . . a soul, debased, it is true, and completely bound

(A)

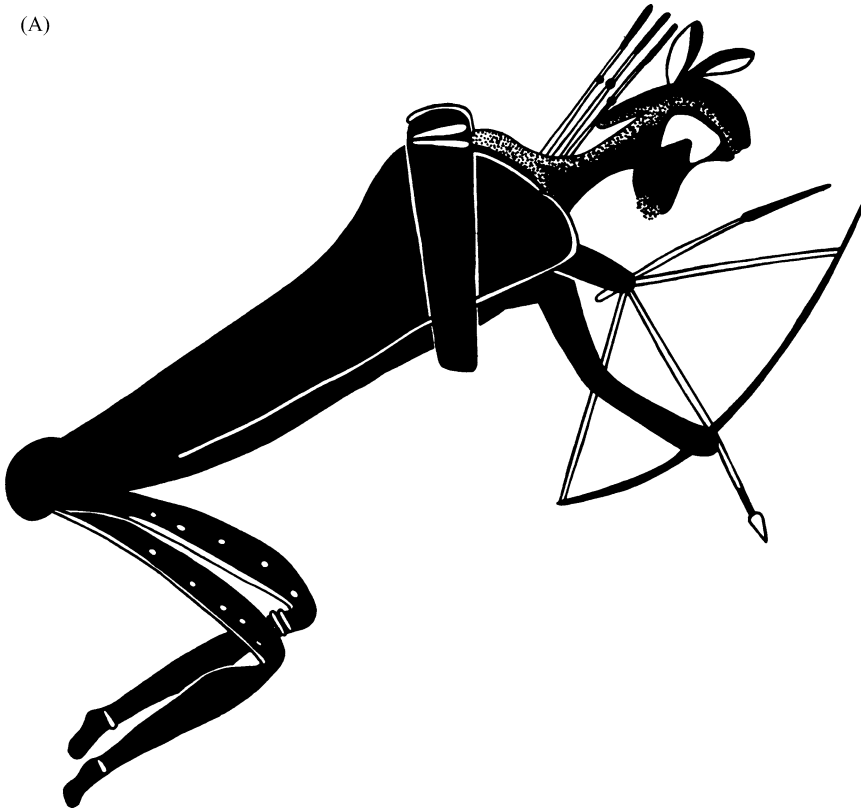
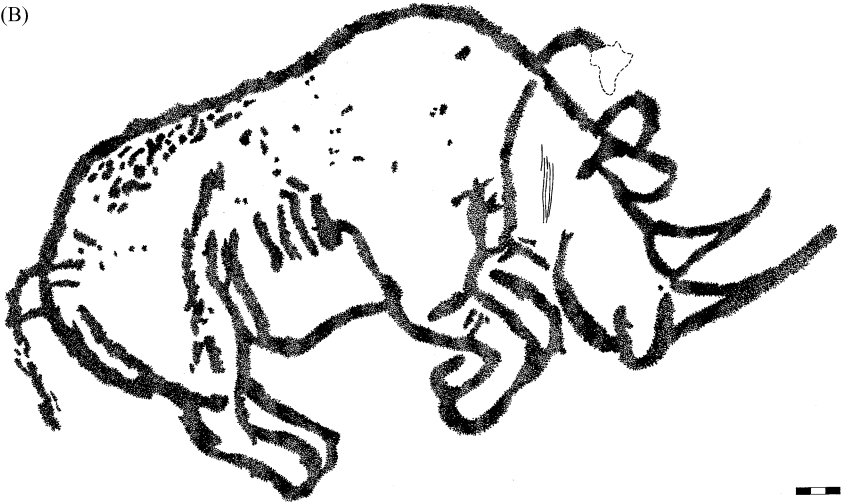


Fig. 2. Rock art traditions in southern Africa. (A) San rock painting. The eared cap worn by the bowman indicates that he is a ‘shaman of the game.’ (B) San pecked rock engraving of a rhinoceros. (C) Geometric Khoekhoe rock paintings contrast sharply with two San depictions of eland. (D) A Late White Bantu-speakers’ rock painting of a colonial settler.

(B)



(C)

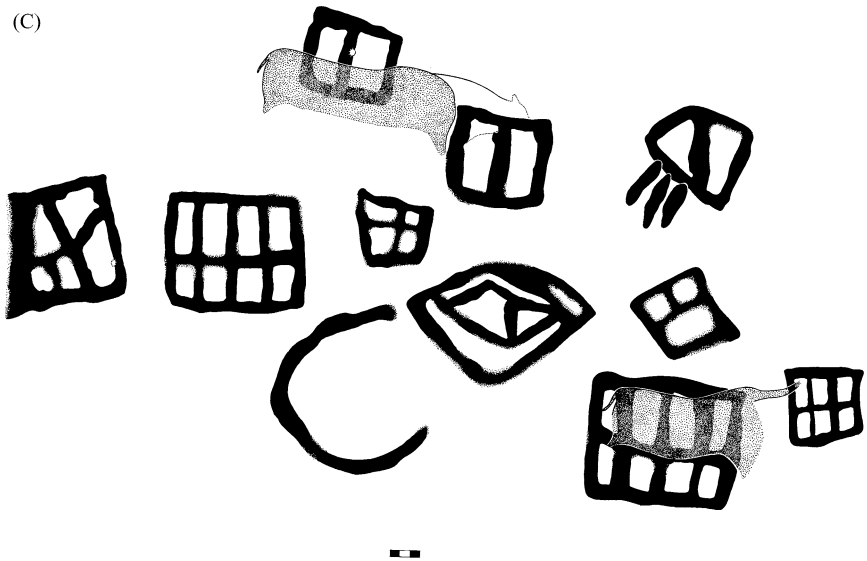


Fig. 2. Continued.

down and clogged by his animal nature' (Tindall, 1856:26). A fairly comprehensive denunciation that precluded any idea that the San could indulge in abstract thought.

There was, however, a component of San life that, at least for more sensitive Western travellers, did not seem to fit the general picture of depravity. Although he admitted that the San were 'justly entitled to the name of savage,' the British late

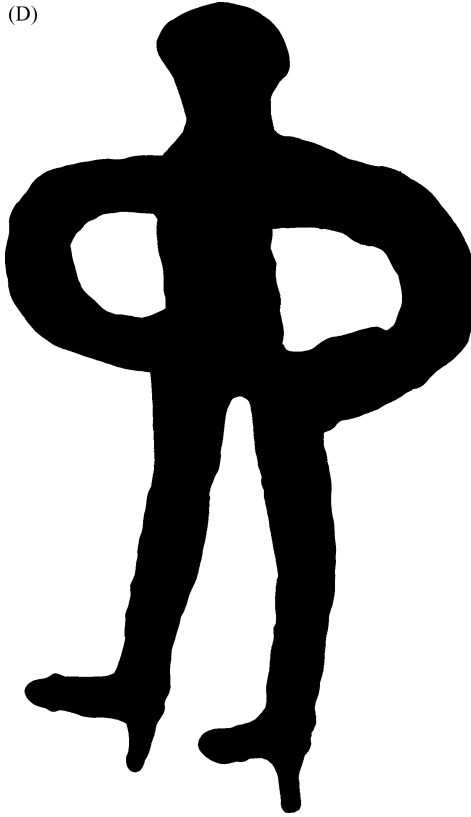


Fig. 2. Continued.

eighteenth-century explorer Sir John Barrow seems to have had second thoughts after coming across a painted rock shelter: 'The force and spirit of the drawings, given to them by bold touches judiciously applied and by the effect of light and shadow, could not be expected from savages' (Barrow, 1801(1):239).

Kolben, Tindall and Barrow together sum up the sometimes puzzled nineteenth-century Western view of the San: savages, but none the less makers of intriguing, if trivial, pictures. Under these circumstances, any serious study of their art was unthinkable, and travellers contented themselves with sometimes amusing interpretations of what they discovered in the rock shelters. Sir James Alexander, for instance, thought that one of the paintings he found depicted 'an embassy of females suing for peace; or what may be a dance of females.' Favouring the diplomatic interpretation above the terpsichorean, he continued: 'No one can deny that their reception is a gracious one, to judge by the polite attitudes

of the male figures, perhaps chiefs' (Alexander, 1837; Lewis-Williams, 2000:5–8). Today this sort of writing seems absurd, but, as we shall see, Alexander was unwittingly pioneering a resilient approach to San rock art that would flourish, especially, in the second half of the twentieth century.

After the British occupied the Dutch settlement and established the Colony of the Cape of Good Hope early in the nineteenth-century, the appalling plight of the San received some attention (e.g., Anthing, 1863), but little was actually done to arrest their destruction. Their demise was considered inevitable. What later became known as social Darwinism provided an excuse: less 'fit' peoples must give way to more advanced civilizations.

Rather than dwell on the genocidal horrors of the eighteenth and nineteenth centuries (see, for example, Wright, 1971; Gordon, 1992; Blundell, 2004; Wright and Mazel, 2006), we need to attend to a research project that stood in stark contrast to the tenor of the times. It could legitimately be termed the most important breakthrough in the evolution of southern African rock art research. It recalls but far exceeds in extent and value Alfred Kroeber's encounter with the Yahi-Yana man, Ishi (Kroeber, 1961). Yet its immense significance was hardly noticed prior to 1970.

As is now well known, the German philologist, Wilhelm Bleek, worked in Cape Town in the first half of the 1870s with/Xam San informants who came from the central parts of the Cape Colony.² He developed a phonetic script for transcribing their language. He and his sister-in-law, Lucy Lloyd, recorded over 12,000 manuscript pages of/Xam texts with English transliterations. When Bleek died in 1875, Lloyd continued the work and, in 1911, eventually published some of the material they recorded (Bleek and Lloyd, 1911). Subsequently, Bleek's daughter, Dorothea, published a slim volume of/Xam myths (Bleek, 1924) and then a series of substantial extracts in the journal *Bantu Studies* (reprinted in Hollmann, 2004). Most of the material remained in manuscript. Now electronically scanned, it is available on the internet (<http://www.lloydbleekcollection.uct.ac.za/index.jsp>).

Bleek was remarkably prescient. When he first saw copies of San rock paintings, he at once realized that he had a new source of information that was complementary to the oral material that he and Lloyd were amassing. The narratives had given Bleek more than an inkling of the complexity of San mythology. Then, when he showed his informants copies of rock paintings that had been made by Joseph Orpen, the British representative in the Eastern Cape, and George William Stow, a self-educated geologist who was interested in southern Africa's earliest

²The work of the Bleek family and the San in general have turned into an academic industry. Amongst many others, see: (Lewis-Williams and Bieseke, 1978; Lewis-Williams, 1980, 1981, 2002b; Katz, 1982; Deacon, 1986; Hewitt, 1986; Marshall Thomas, 1988; Guenther, 1989, 1999; Schmidt, 1989; Bieseke and Weinberg, 1990; Bieseke, 1993; Deacon and Dowson, 1996; Skotnes, 1996; Katz *et al.*, 1997; Marshall, 1999; Townley Bassett, 2001; Schadeberg, 2002; Szalay, 2002; Keeney, 2003; Le Roux and White, 2004; Bennun, 2004; Deacon and Foster, 2005).

inhabitants, they began to speak about areas of /Xam belief and ritual that might otherwise have remained unknown:

The fact of Bushman paintings, illustrating Bushman mythology, has first been publicly demonstrated by this paper of Mr. Orpen's; and to me, at all events, it was previously quite unknown, although I had hoped that such paintings might be found (Bleek, 1874:13).

Orpen made his copies in what is now south-eastern Lesotho. In his official capacity, he was ordered to set out on an (ultimately failed) expedition into the vast Drakensberg mountain range. He acquired the services of a young San guide named Qing, who took him to painted rock shelters and there explained the images to him (Lewis-Williams, 2003). Orpen recorded Qing's accounts together with a series of myths that he related. Unlike Bleek's work, Orpen's report does not record Qing's words in phonetic script. Almost immediately, Orpen sent his copies and text to the editor of the *Cape Monthly Magazine* (Orpen, 1874), and he, in turn, passed them on to Bleek who compared them with his own collection of San folklore:

But if Mr. Orpen's contributions to our knowledge of the Bushman folklore and mythology are important,—the Bushman paintings copied by him are no less valuable. They are in fact the most interesting Bushman paintings I remember to have seen, and they fill us with great longing to see that splendid collection of Bushman paintings which Mr. C. G. Stowe (*sic*) is said to have made. They are evidently either of a mythological character, or illustrative of Bushman customs and superstitions (Bleek, 1874:12).

Bleek is here going well beyond Alexander's and Barrow's assumption that the San painted events in their lives and the animals around them. He sees beyond that superficiality and, with his words 'mythological,' and 'customs and superstitions,' goes to the heart of the matter. (Today we may not care for a term like 'superstitions'; perhaps we should remember that Bleek himself was not a practising Christian or believer of any sort.) On the other hand, we should note that Bleek's use of 'illustrative,' so obvious a concept to describe relationships between paintings and folklore, actually made the work of establishing links between specific paintings and specific folk tales difficult, if not impossible. This is the origin of a major problem that, as we shall see, bedevilled southern African rock art research throughout the twentieth century.

The 'great longing' of which Bleek wrote was fulfilled within a few months when Stow sent a substantial number of copies to him. Despite the faults they undoubtedly have (his most famous copy is actually a fake; Dowson *et al.*, 1994), Stow's copies are indeed magnificent, and researchers still consult them today. What, then, were Bleek's contributions to theory, method and technique in southern African rock art research?

From a theoretical point of view, he introduced a complete about-turn. Today, his phrases 'curious mental development' and 'most remarkable race' may, out of context, seem racist and not much different from the general nineteenth-century colonial view. We must, however, recall that, choosing his words carefully, he

declared that the painted images constituted ‘a truly artistic conception of the ideas which most deeply moved the Bushman mind and filled it with religious feelings’ (Bleek, 1874:13). Tindall, the fervent missionary, would have been outraged. Openly and trenchantly, Bleek was directly challenging the colonial opinion that the San were incapable of religion. Nor did he hesitate to use the word ‘art’ to denote what Barrow saw only as ‘drawings’ and what the missionaries Thomas Arbousset and François Daumas, in a ripost to more sinister evaluations then current, described as ‘innocent playthings’ (Arbousset and Daumas, 1846:252). Further copies of rock paintings would, Bleek believed, ‘effect a radical change in the ideas generally entertained with regard to the Bushmen’ (Bleek, 1875:20). In the 1870s, these were startling challenges to popular opinion.

Bleek’s accompanying methodological shift was no less marked. He called for ‘[a] collection of faithful copies of Bushman paintings’ and ‘a collection of their folklore in their own language.’ These two sources, he argued, ‘will serve to illustrate each other, and to contribute jointly towards showing us in its true light the curious mental development of this most remarkable race’ (Bleek, 1874:13). Bleek realized that understanding of the art would be furthered by knowledge of San beliefs, not by simply gazing at the images and guessing what they depicted, as Alexander and others had done. Rock paintings and folklore were mutually illuminating, though not in a directly illustrative manner.

Bleek also advocated advances in technique. Not only did he call for ‘faithful copies’ of San rock art, he also anticipated by a century what was (for, as we shall see, both good and ill) to become the principal technique for recording the images: ‘Where photography is available, its help would be very desirable, as the general public is sceptical, and not unfrequently (*sic*) believes that the drawings are too good not to have been vastly improved in copying, thereby doing scant justice to Bushman art’ (Bleek, 1875:13).

In sum, and from an essentially practical perspective, Bleek advocated two complementary, converging avenues:

- accurate recording and
- understanding in terms of San beliefs.

So innovative is this dual contribution that it sometimes seems as if he were writing in the 1970s or 1980s. Indeed, taken together, his methodological, theoretical and technical innovations appear to suggest that the study of San rock art was on the threshold of something like Thomas Kuhn’s notion of a paradigmatic change.

As it turned out, his work had little or no impact. The ‘radical change in the ideas generally entertained with regard to the Bushmen’ for which Bleek hoped was not to be (Lewis-Williams and Loubser, 1986; Mitchell, 2002:197). The Bleek and Lloyd manuscript collection lay largely unconsulted in the Jagger Library, University of Cape Town, while the few published extracts seemed to researchers impenetrable and largely irrelevant to the art. They could not understand *how* the

images ‘illustrated’ mythology. Ultimately, the inertia of colonial opinion proved unshakeable.

TOWARDS EMPIRICISM

Perhaps we should not envisage too desolate a post-Bleek research landscape. Noticing the deterioration of San rock paintings, a few researchers, fascinated by the images, did what they could to record them, though not as meticulously as Bleek would have wished. He had insisted on ‘faithful copies’ that gave ‘a statement of actual size’ and ‘the true colour of the originals’ (Bleek, 1874:13). But the copies that many researchers made were generally poor by today’s standards. Complex panels of many images were broken up into what the researchers considered intelligible, narrative segments or striking depictions of animals.

For instance, with Lucy Lloyd’s and Dorothea Bleek’s encouragement, Helen Tongue, a schoolmistress, recorded rock paintings in the Eastern Cape, Eastern Orange Free State and what is today Lesotho. Her copies were exhibited in the Public Library, Cape Town, and at the Royal Anthropological Institute, London, and then, in 1909, published in a handsome portfolio of 54 plates and an accompanying book with two collotype plates and eight black-and-white photographs (Tongue, 1909).

In his introduction to the book, Henry Balfour, curator at the Pitt Rivers Museum, Oxford, accepted the ‘Natural Law’ that ‘the weaker, less cultured races shall succumb to the domination of the more advanced, and be doomed to absorption or to extermination’ (Balfour, 1909:2). Although there is an excitement in some of his writing that recalls Barrow’s surprise at finding images of such perfection, Balfour saw the art as principally a record of daily events but with some ‘religious and symbolic performances’ among them (*ibid.*:8). He is worth quoting on this point because his view assumed growing prominence through the twentieth century; it became the loadstar for research:

The representations of scenes and events in Bushman life-history, painted by the native artists upon the walls of caves and rock-shelters, or engraved upon outstanding rocks, are invaluable as a record of the conditions under which these primitive savages lived, and they both illustrate and supplement the descriptions given to us by Europeans who came into direct contact with these natives (*ibid.*:4).

‘[S]cenes and events’ and ‘illustrate and supplement’ are the key phrases here. Animal-headed human figures, for example, were taken to be exclusively illustrations of people wearing masks for hunting. The art was a ‘record’ of daily life that could be ‘read’ as easily as the reports of early travellers. The stage was set for the popularization of a disastrous underestimation of San rock art.

For the modern reader, however, the most interesting section of the book that accompanied Tongue's copies is not Balfour's introduction, but rather a memoir by Edith Bleek and her sister Dorothea in which they recall the wonderful times in the 1870s when /Xam San people were living with the Bleek family in Cape Town. Often touching, Edith and Dorothea's anecdotes give the flavour of the affectionate relationships that developed between the Bleek family and the San people. On the other hand, what is conspicuously and remarkably absent from the sisters' account is any sustained attempt to show, in their father's words, that the art and the folklore 'illustrate each other.' Plate VIII (23), is said to show 'Transformation of man into frog, illustrating a Bushman folk tale,' while Plate XL (71) is said to show 'Rain falling into pool, frog figure and human figures, rain-making), and Plate XLIII (74) 'Tall men in animal disguises; possibly sorcerers. Men with animals' heads with noses bleeding from dancing.' A connection between rain, people and frogs does appear in a folktale that the Bleeks' informants provided in response to two of Stow's copies (they were not published until 1930; Stow and Bleek, 1930: pls 45 and 58). But it has to be said that none of the images in Tongue's copies is convincingly frog-like. Plate VIII (23) is today recognizable as a number of clapping figures seated within a curved line that probably represents a rock shelter. Many years later, Plate XLIII (74) was sensationally re-interpreted by James Walton, in Alexander's gaze-and-guess manner, as 'a medicine man, with the murderer, preparing to remove or removing blood, and probably flesh, from the victim' (Walton, 1957:279, pl. IV).

Tongue, not Walton, was correct: the images depict therianthrope San shamans with the blood of trance experience falling from their noses (see below). For the rest of the copies, both Tongue and the Bleek sisters seem to be thinking in terms of 'illustrations' of 'scenes' and 'events.' They linked nothing else in the 105 copies (on the 54 plates) to folklore. It seemed easier to find images that appeared to 'illustrate' daily life than ones that 'illustrated' mythology. This is a deceptive trap that has sometimes misled rock art researchers in other parts of the world as well. 'Daily life' is an attractive concept that can become a 'bottom line' to be accepted without any argument if features or distortions of the images do not point distinctly to supernatural elements. Researchers overlook the need to demonstrate the 'daily life' status of images as much as they have to demonstrate supernatural contexts.

In southern Africa, the names of numerous researchers could be adduced to show that Wilhelm Bleek's recommendation that copies and photographs of rock paintings be made was accepted, but not his important corollary that links between the images and San folklore be sought. The reasons for this omission are probably multiple.

One is that the persistent overall theoretical position that saw 'primitive' people as incapable of 'advanced' thinking kept drawing researchers back to the notion of literal records of daily life—'scenes and events.' Even Dorothea Bleek

seems largely to have succumbed to this view. In her introduction to her selection of narratives entitled *The Mantis and his friends* she wrote rather patronizingly: 'The Bushman . . . remains all his life a child, averse to work, fond of play, of painting, singing, dancing, dressing up and acting, above all things fond of hearing and telling stories' (Bleek, 1924: unnumbered page). The symbolically rich Mantis (/Kaggen) myths that she published were, for her, merely playful diversions devoid of any deeper significance.³ Scattered through her book are rock painting copies taken from Stow's collection (at that time she owned them), but she does not explicitly link any to the tales: their juxtaposition with the stories simply *implies* that they illustrate them in some vague way. As a result of this limiting 'illustrative' view, Dorothea and other researchers thought that the art was necessarily literal: even if some images did relate to myths, they did so merely by straightforward 'illustration.' Superficial, apparently narrative, resemblances took precedence over any more subtle links that may, for instances, have involved animal symbolism or social relations.

This early recording work, independent as it was of any interpretation of less-than-obvious narrative meanings, set rock art research on the road to empiricism. If the images were, as researchers believed, a transparent record of daily San life, then it should be possible to induce meanings and significances from what Bleek called 'faithful copies' of them. At that time (and later too), the act of 'reading' the images was thought to be a form of simple induction.

CONSOLIDATING EMPIRICISM

We come now to a series of crucial events that took place in the 1920s and 1930s. They were associated with a number of 'big men,' influential and, in some instances, arrogant personalities, who controlled research. This sort of situation can be detected in other parts of the world as well. In southern Africa, the work of these people led, cumulatively, to the empiricist impasse that researchers were finally forced to confront in the 1970s.

By the 1920s, archaeology as a discipline that aspired to be systematic and scientific had consolidated itself in Europe. At the beginning of the 1920s, John Goodwin, the first South African-born archaeologist, trained under Miles Burkitt at Cambridge. He returned to South Africa as a research assistant to the well-known social anthropologist A. R. Radcliffe-Brown at the University of Cape Town. He was determined to bring some sort of order not only to the increasingly large museum and private collections of stone artefacts but also to the ways in which researchers conceived of the evolution of lithic industries. Excavation techniques, too, in many instances lamentably destructive, urgently required greater rigour.

³On the significances of these and other /Xam myths see (Lewis-Williams, 1996, 1997; Guenther, 1989; Hewitt, 1986).

Goodwin became acquainted with Clarence van Riet Lowe, a civil engineer who, as a child in the country town Aliwal North, had developed an interest in stone artefacts and rock paintings. Together they produced the seminal book *The Stone Age cultures of South Africa* (Goodwin and van Riet Lowe, 1929; see also Deacon, 1990; Deacon and Deacon, 1999). Stone Age archaeology in South Africa now had systematic nomenclatures and sequences comparable in form if not detail to those in Europe. A less fortunate result of this book flowed from its focus on stone artefacts: rock art receives only passing remarks. In his chapter on the Later Stone Age Wilton Industry, Goodwin mentions rock-shelter art and also painted 'burial stones' (they were not all associated with burials) that came from excavations. His general attitude to the art (at least at that time), though, seems to be summed up by a passage he quotes from John Hewitt, director of the Albany Museum in nearby Grahamstown: 'On that site [the Wilton name site], ornamented with numerous rock paintings, Mr. Wilmot found in the ash and debris of the floor a large quantity of small scrapers and ostrich egg-shell beads, and together with them a dozen or more crescents . . .' (Goodwin and van Riet Lowe, 1929:251; parenthesis added). The floor and the strata beneath it were of more interest than the 'ornamented' walls of the shelter. Lithics became central to southern African archaeology, and rock art was marginalized.

The European influence on southern African archaeology was consolidated by Burkitt's 1928 visit to South Africa and his swift publication of *South Africa's past in stone and paint* (Burkitt, 1928). He continued the drive towards systemization and empiricism in rock art research by urging that 'all four methods of investigation that have been employed in studying the [stone] industries' be used in the study of rock art; of these techniques 'stratigraphy and typology are the most important' (Burkitt, 1928:111; parenthesis added). In rock art studies, stratigraphy would concern superpositioning of images, and typology would become 'styles.' This is a pivotal point: rock art researchers were challenged to emulate lithic researchers and to produce 'objective' sequences if they wished to be accepted into the professional archaeological fold. As far as Burkitt was concerned, Bleek's notion of mutually illuminating folklore and art was inadmissible: 'As regards the motives which prompted the execution of the art, little can be said.' So much for 'motives.' He did not mention the 'meanings' of the art because he thought them obviously illustrative.

This position was later reinforced by Goodwin's handbook *Method in pre-history* (Goodwin, 1953). It accorded rock art far less attention than stone-tool typology and techniques for establishing sequences. For him, the images were the result of 'wish-fulfilment' and so related to daily life. He reiterated a popular notion concerning European Upper Palaeolithic cave art: 'Primitive art expressed man's most insistent need; to the hunter this meant fresh, tender meat' (Goodwin, 1953:128). In addition, a 'pictorial stem led to the perpetuation of historical events, memorable battles between tribes, classic hunts, raids on enemies,

the fun of the dance; the desire to commemorate satisfaction or disappointment' (Goodwin, 1953:127). The 'scenes-and-events' approach, together with what Goodwin rather daringly termed 'much-overworked "sympathetic magic"' (*ibid.*), was thus entrenched as late as the 1950s.

Another powerful European influence in the 1930s and 1940s was that of the Abbé Henri Breuil, an assiduous, if not especially accurate, copier of San rock art and advocate of 'sympathetic magic.' It was he who also popularized the belief that some images depicted foreigners from the ancient Mediterranean. The so-called 'White Lady of the Brandberg' is the most notorious instance (Breuil, 1948, 1955; Lewis-Williams, 2000:69–71). Although he tended to support the racist view of southern African history then current by claiming evidence for Phoenician and Minoan influences in San rock art, he more usefully threw his weight behind van Riet Lowe's and Goodwin's moves to establish a government sponsored Bureau of Archaeology (later the Archaeological Survey). Both he and van Riet Lowe had the ear of the South African Premier and international statesman, Jan Smuts. (Smuts brought Breuil to South Africa during World War II; Schlanger, 2002.) The Bureau was eventually established in 1935 at the University of the Witwatersrand, Johannesburg, under, not surprisingly, van Riet Lowe's direction. The most ambitious project that van Riet Lowe undertook in this capacity was the compiling of a register of rock art sites in what was then the Union of South Africa. When the list was published in 1941 (Van Riet Lowe, 1941), 1766 localities were noted; by 1952 (Van Riet Lowe, 1952) the total had risen to 1938. Today, approximately 15,000 sites are listed. 'Recording' was the order of the day, but the concept itself was not considered problematic.

Much recording was done by means of photography, as Bleek had recommended so many decades before. After the end of World War II, colour photography was cheaper and easier than it had formerly been, and the compiling of colour-slide collections on various topics, ranging from flowers to waterfalls to animals, became a popular hobby. Some hobbyists turned to rock art. After all, Goodwin had, rather dismissively, described rock art as 'a rich field for the amateur' (Goodwin, 1953:127). Alex Willcox, a quantity surveyor, was a pioneer in this field. His revelatory *Rock paintings of the Drakensberg* (1956) was followed by photographic books by two businessmen, Neil Lee and Bert Woodhouse (e.g., Lee and Woodhouse, 1970; Woodhouse, 1979).

No one would wish to question the value of the vast collections that these researchers amassed, but photography was a double edged sword. Certainly, it made recording (however that word may be understood) much quicker and cheaper; it also revealed hitherto unnoticed beauties and small details in the art. San rock art is the most delicate, meticulous and varied in the world; many detailed paintings are only two or three centimetres in size. But photographs demand captions. Books built around colour-slide collections (rather than explanatory concepts) necessarily comprised, principally, photographs with descriptive commentaries. In the

nature of the task of composing these captions, writers took a narrative view. They saw the images as illustrative of daily life, material culture and animals. Only a small number were said to relate to 'mythology' or to depict 'buck-headed figures': the rest were all quotidian. Inevitably, too, the camera focuses on what makes a good, framed picture (rock art images are, of course, not framed). It avoids what the photographer sees as confusion and goes for the clear and the intelligible. Badly faded, though by no means invisible, paintings do not make good photographs. Images ignored for this reason often contain much that is crucial to an understanding of the art in general. In addition, when photographers have a book in mind, they naturally enough think in terms of chapter topics and begin to categorize images in terms of those topics: inevitably, their books overall promote the idea that San rock art illustrates activities and things in the material world. The technique of photographic recording is therefore necessarily selective (though some researchers have attempted comprehensive photographic coverage; e.g., Pager, 1971); in southern Africa, it has encouraged literal, narrative understandings of San rock art.

Photography is, moreover, fallible in another way. It is often impossible to tell whether a colour in a photograph is faded paint or a natural discolouration of the rock (Vinnicombe, 1960:12). Harald Pager recognized the difficulties in the way of using only photography:

Colour photography is, unfortunately, a less accurate method of reproduction than is generally believed. Inevitably the human eye will see more details than the camera can capture and many of the barely visible rock paintings can still be seen and recognized from various oblique angles but are literally invisible from right angle camera position (Pager, 1971:81).

In any event, changes in theory and method are not triggered by the invention of new techniques. Rather, a new technique tends to be harnessed to serve existing research paradigms. Photography entrenched empiricism; those with an empiricist mind-set seized on photography as a means of expanding the number of paintings to which they could apply their ideas. More recently, developments in photographic techniques, such as infrared and ultraviolet photography and digital manipulation of images, have opened up new avenues of research into specific questions, though I doubt that they will have any far-reaching impact on researchers' understandings of rock art images.

QUANTIFICATION TAKES OVER

By the 1960s, mainstream archaeology (excavation, typology, categorization, seriation, ancient climates, ecological adaptation) had left rock art research in South Africa and elsewhere far behind, entangled, as it was, in racist stereotypes of the San, methodological confusions and naïve explanations of the gaze-and-guess variety (Deacon, 1990; Davis, 1990; Lewis-Williams, 1995). As a result, published

rock art papers looked rather feeble next to the graphs, histograms, statistics and talk of cultural systems and hypothesis testing that mainstream archaeologists deployed (Deacon, 1990; Mitchell, 2002). It was therefore understandable that researchers would feel that they had to make rock art recording less selective and more 'scientific': if there were to be any hypotheses about the meanings of the art, they would have to be founded on large-scale, inclusive, 'objective' recording of 'data.' But the conceptual snares hidden in the word 'recording' remained unsuspected.

In 1967 new possibilities opened up. In that year, Patricia Vinnicombe (1967a,b) published a detailed account of the quantitative system she was using to analyze the rock art of a selected area in the southern Drakensberg, and preliminary results of her survey. In the same year, Tim Maggs, a trained archaeologist, who had followed the methods and techniques of the New Archaeology and had completed a quantitative analysis of images in the Western Cape, published his findings (Maggs, 1967). Empiricism was heading for its apogee—numerical analyses, the supposedly 'objective' foundation for reliable statements about the art.

Vinnicombe was explicit about her desire to make rock art research acceptable to professional archaeology, which it was not at that time: 'If . . . the study of rock art is to make a meaningful contribution to the field of archaeology where quantitative techniques and statistical methods are becoming increasingly important, an analytical approach is essential' (Vinnicombe, 1967b:141). She therefore suggested that quantitative rock art records 'might indicate separate clan areas,' 'reflect the ecological zones formerly occupied by specific animals or peoples' and help in the reconstruction of 'the behaviour of the peoples responsible for the paintings' (Vinnicombe, 1967b:141). In this way, rock art research would enticingly assist mainstream archaeologists in their current interests, rather than open up new avenues of understanding, though she later turned to areas of understanding that were impossible to derive from excavations.

Briefly, she worked in the southern Drakensberg and noted 20 categories of features for each of the 8478 individual images in her sample. Others who took up quantitative work included Pager (1971, 1975), who worked in the Ndedema Gorge, KwaZulu-Natal Drakensberg, Gerhard and Dora Fock (Fock 1979, 1984, 1989), who worked in the semi-arid northern parts of South Africa, and Lucas Smits (1971), who worked in Lesotho. I completed two studies, one in the Giant's Castle area (Lewis-Williams, 1972) and another in the Barkly East district (1974). We all believed we were laying the empirical foundations for reliable inductions of various kinds; we would avoid the selectivity of Tongue, Stow and the numerous photographers of our own time (Vinnicombe, 1972).

We spent some five or six years compiling these inventories. If at this time—around 1970—researchers had been invited to draw a graph of rock art research achievements and expectations, they would have plotted a sharp rise beginning in

1967 with Vinnicombe's and Maggs's publications: suddenly, new vistas opened up. This acclivity would be seen to continue into the early 1970s with the publication of the first quantitative results. Hopes were high: quantification seemed to be providing a decisive break with the past, and encouraging results were coming in from various parts of southern Africa.

There was, however, a less encouraging side to the quantitative turn that research had taken. I found the years of intensive fieldwork to be ones of growing frustration—tempered, it must be added, by my rapidly increasing appreciation of the detail and variety of the art that evaluating and measuring each and every image of the thousands in my samples forced on me. It sounds *passé* today to say that the numbers did not speak to us, that they did not automatically (or logically) provide explanations. A simple example: quantification confirmed that there was a numerical emphasis on eland antelope in the art of the south-eastern mountains (something that was in fact evident upon inspection and had long been noted: Werner, 1908:61; Battiss *et al.*, 1958:61), but the tables and graphs did not say why this was so. Because they were working in an academic climate of impressive anthropological studies of symbolism, some 1970s researchers inferred from the numbers that the eland was an important animal symbolically. On the other hand, one could equally argue that it was *unimportant* to the San because anyone could and did paint it, whereas the wildebeest, an antelope seldom depicted, was so supreme that few people were permitted to paint it. Numbers do not speak unambiguously. As it turned out in this case, it was San ethnography, not the number of times it was painted, that showed the eland to be a polysemic symbol (Lewis-Williams, 1981).

Increasingly, it seemed that quantification was simply a tightening up of the arid empiricist research programme: the new technique served the existing paradigm. To be sure, our numerical samples were larger and more inclusive than photographic collections, but our mode of understanding those samples had not changed. Like it or not, we were approaching a methodological crisis that would send us to the philosophy of science, which, by that time, had progressed beyond positivism and empiricism.

THE EMPIRICIST IMPASSE

One potential confusion must be cleared up at once. We need to distinguish between good *empirical research* and *empiricism*:

[T]he philosophers [of science] do not, of course decry careful observation and meticulous collection of data, but they insist that this is by no means a sufficient procedure for understanding a field of study. One may, in fact, be wholly committed to painstaking empirical research without being committed to the 'naïve empiricist' view point (Willer and Willer, 1973:2; Lewis-Williams and Loubser, 1986:254; see also Lewis-Williams, 2002b:167).

Empiricism is a supposed scientific method. It can be summarized thus:

1. observation and recording of all facts,
2. analysis and classification of these facts,
3. inductive derivation of generalizations from them, and
4. further testing of the generalizations (Hempel, 1966:11; Lewis-Williams and Loubser, 1986:254; lineation added).

Philosophers of science have rejected empiricism as a viable scientific research programme for so long now that any detailed discussion here is superfluous (see, among many others, Chalmers, 1999). Briefly, philosophers have shown

1. it is possible to record only observations that seem relevant to a hypothesis;
2. the classification of observations cannot be derived from the data alone;
3. reliable inductive reasoning from (necessarily) subjectively recorded observations is impossible;
4. further testing (seldom undertaken) is in danger of circularity because the data against which inferences are to be tested has (necessarily) been collected subjectively and in the same manner as the original data.

It follows that numerical recording and statistical analyses of rock art images by categories are unavoidably both subjective and tendentious: reliable explanatory inductions cannot be made from such inventories (Lewis-Williams, 1984a, 1990; Lewis-Williams and Loubser, 1986).

In practice, quantitative recording and inductions from necessarily *a priori* rock art categories led to many problems. They arose not just in the laboratory as researchers pondered possible explanations for the data before them, but more importantly in the field where it became apparent to me that the categories we were using were difficult to impose on many of the images and, further, were tendentious. One instance of tendentiousness will suffice.

What Vinnicombe called 'scene description' categories included: 'hunting,' 'fighting,' 'domestic activities,' 'dancing or acrobatics,' 'fighting,' 'ceremonial,' 'ritual,' and 'mythical.' In the empiricist research programme, categorization is supposed take place *after* unbiased collection of 'raw' data and to be a *prelude* to induction of explanations; but the examples of 'scene description' categories I have given show that each image has to be interpreted *before* it is allocated to a category. This conclusion leads us to a related question. Where did the categories come from? A glance at them shows that they derive from a notion about San rock art, the development of which I have traced: the paintings were believed to 'illustrate' quotidian, historical and (a few) mythical scenes and events.

When we try to make numerical statements about these rock art 'illustrations,' we encounter another disaster. Inevitably, because there are more prosaic categories than ones relating to beliefs or religious experiences, we shall find that supposed 'daily life' scenes far outnumber religious experiences or 'mythical

scenes.’ Because an underlying concept of the very nature of the art governs the definition of categories, it is impossible to induce any new interpretation from the categorization (quite apart from the logical problems of induction; e.g., Chalmers, 1999). Because theory governs the formation of categories, it cannot emerge from them. This is one of the reasons why empiricist rock art studies have made no interpretative advance since the time of Tongue and Stow. No matter how sophisticated or ingenious the techniques may be that researchers employ to handle their (supposedly theory-free) data (e.g., abstruse computer programmes), the problem of induction remains.

We must therefore remember that a depiction of an animal signifies certain meanings and associations because San people believed those things about it—*no matter how many times they painted it*. Numerical statements are irrelevant to understandings of meaning.

EMPIRICISM RESURGENT

Agreement on the problems inherent in empiricism is not unanimous (e.g., Lensen-Erz, 1989; Butzer, 1991; Lewis-Williams, 1990, 1991). This is true not only of southern African research but of research in other parts of the world as well: for some researchers, quantitative inventories remain attractive. After Pager completed his photographic and numerical work in the Ndedema Gorge, he moved to Namibia where he commenced a similar study in the arid mountain massif known as the Brandberg. He died before it was finished, but the University of Cologne fortunately saw to its completion. The copies have now been returned to Namibia. The principal architect of the completion of the project is Tilman Lensen-Erz, and the methodological reservations I express should not in any way be seen as denigration of the care, sheer hard work and value of what is surely one of the most monumental rock art undertakings ever completed—indeed, this is *empirical work* of the highest standard. The volumes published by the University of Cologne, especially the black-and-white traced copies that they contain, put us and future generations of researchers firmly in Pager’s and Lensen-Erz’s debt (Pager, 1989–2000).

In the first volume of the series, the general editor, Rudolf Kuper, writes of ‘complete and exact documentation’ that is a ‘prerequisite for any kind of interpretation’ (Kuper in Pager, 1989:13). He sees ‘documentation’ (‘recording’) in the empiricist mode as an impersonal, objective process that can capture all (relevant?) data: ‘It was Harald Pager’s belief in the importance of objective evidence that marked him as a scientist who felt rather more obliged to add to the body of data than to get involved in academic discourse on the basis of fragmentary evidence’ (*ibid.*). Can data collection be separated from attempts to explain? Today we know that complete, objective, impersonal documentation is impossible: inevitably, researchers collect only data that they believe may be

relevant to some (perhaps unformulated) hypothesis; they ignore data that they *a priori* consider irrelevant but may in fact be relevant to other hypotheses as yet unthought of.

All in all, I am inclined to think that the final test for the numerical inventories that researchers built up after 1967 and through into the early 1990s is their usefulness. Do other researchers jump at the opportunity of using them? Lensen-Erz (1989:370) wrote:

It is the aim of this book to provide readers who are occupied with rock art on whatever level—professionals as well as laymen—with a collection of rock paintings that allows for any kind of ‘processing’ of the art, from mere admiration through studies of metaphors to downright statistics and empiricism. . . . By means of this processing the paintings of the Brandberg are made accessible to all branches of rock art research, as completely and accurately as possible, without selecting whatever aspect certain approaches might prefer—including the one promoted in this book.

To this end, he presented, in addition to all the stunning copies, 125 pages of statistics and tables (Lensen-Erz, 1989). (Pager [1971] provided 103 pages of comparable quantified information.) As far as I am aware, no researcher has used these tables and statistics to demonstrate any explanation of the paintings. Lensen-Erz himself has tried to induce explanations from some of the numerical results, but, interestingly, in conjunction with ethnographic and ethological evidence (Lensen-Erz, 1994, 2004). Other researchers have not found ways to exploit the results of all the labour that went into compiling the tables. This is a depressing outcome for a well-intentioned project.

Is there, then, any place for quantitative rock art research? I am inclined to think that numerical studies are justified only when important, meaningful questions about specific features of images can be formulated in numerical terms *before recording commences*. Numerical inventories are therefore question-specific, not all-embracing.

BACK TO BLEEK

Vinnicombe’s important 1976 book *People of the eland* includes quantified data briefly at the beginnings of some chapters (and more extensively in an appendix), but, despite her initial hopes, she induced no unequivocal explanations from them. Instead, she turned to A. R. Radcliffe-Brown’s notion of social value to understand why the San chose the images that they painted. Similarly, at the end of the 1960s when I found that the numbers did not speak to me, no matter how much I arranged and re-arranged them in potential patterns, I cast around for theoretical frameworks that would make sense of the art. At first, I drew upon Noam Chomsky, Marshall McLuhan, and Claude Lévi-Strauss (Lewis-Williams, 1972). But, in the end, only one route seemed to offer any hope. Deliberately echoing Wilhelm Bleek, I ended my first quantitative paper thus:

The only possibility of clarifying the themes which most deeply moved the mind of the prehistoric Bushman lies in the, albeit fragmentary, mythology (Lewis-Williams, 1972:65).

My second quantitative essay dealt with superpositioning, a feature of the art I had not included in my first numerical inventory. It was as a result of extensive fieldwork that I started to suspect that there was a pattern in superimposed images: superpositions seemed to point to more than just temporal sequences of styles or subject matter. I therefore began again with a dedicated superpositioning numerical inventory in the Barkly East district (Lewis-Williams, 1974). A statistically valid 'syntactic' pattern emerged and was later broadly confirmed by Pager in the Ndedema Gorge (Pager, 1976). But to understand the pattern required recourse to San ethnography that included Bleek and Lloyd, as well as twentieth-century work that the Marshall family, Richard Lee, Megan Biesele, George Silberbauer, Ed Wilmsen and many others were undertaking in the Kalahari.

At once another question arose: how relevant was the nineteenth-century southern ethnography and, even more problematic, the twentieth-century Kalahari work to the southern San rock art?

An evaluation of the nineteenth- and twentieth-century ethnography was therefore the next task to be explicitly tackled (Lewis-Williams and Biesele, 1978; Lewis-Williams, 1980, 1981, 1992). Today, two and more decades later, some researchers seem to have lost sight of this work. When the problem was addressed in the 1970s, it soon became evident that, despite whatever differences in belief there may be between geographically distant San linguistic communities, there were and still are specifiable rituals and beliefs that are pan-San (e.g., McCall, 1970; Lewis-Williams and Biesele, 1978; Lewis-Williams, 1981, 1992; Barnard, 1992). Moreover, empirical work showed that some of these pan-San beliefs are unequivocally represented in their rock art. This conclusion entailed a return to Wilhelm Bleek's early insight that 'folklore' and images 'illustrate' one another (Bleek, 1874:13). It was now a challenge to see in what ways and to what degree 'illustration' took place. As Bleek expected, the two sources do indeed illuminate one another. Whether 'illustrate' is an appropriate word is another matter.

The results of this two-way illumination need not be reiterated here. In short, I and others argue that the art was essentially associated with San religious experiences and beliefs.⁴ Many, but not all, the images were recreations of ritual specialists' visits to the spirit world (shamans: I believe that the controversial word is apt in southern Africa; Lewis-Williams, 1992, *in press*). Apparent 'illustrations' of healing dances often include elements that can be 'seen' only by ritual specialists in trance. For example, emanations from the tops of the heads

⁴For summaries of this work see, for example, (Lewis-Williams, 1981, 2003; Lewis-Williams and Dowson, 2000; Lewis-Williams and Pearce, 2004a,b; Vinnicombe, 1976. Among many others, see also Maggs and Sealy, 1983; Yates *et al.*, 199, 1990; Dowson, 1992; Hollmann, 2001, 2003; Deacon and Foster, 2005).



Fig. 3. San rock painting of a trance, or healing, dance. Distinctive body positions, nasal bleeding, dancing sticks and dancing rattles are shown. The white flecks among the dancers probably represent the supernatural potency that dancers harness. Southern Drakensberg.

of dancers depict supernatural potency, the spirit of the dancer or illness. These entities are invisible to ordinary people: ‘depictions’ of dances therefore include elements not seen in quotidian circumstances (Fig. 3). They present an ‘insider’s view.’ Moreover, the images (e.g., eland antelope) are not so much ‘illustrations’ as *recreations* of spiritual or supernaturally potent entities that could be touched and from which people could draw power (Lewis-Williams and Dowson, 1990; Yates and Manhire, 1991). The images did not merely ‘illustrate’ San folktales and myths, as if they were pictures in children’s books; rather, they were store-houses of spiritual power, *!gi* or *//ke:n* in the nineteenth-century /Xam language, and *n/om* in the Kalahari Ju’hoan language. They showed everyone living in the rock shelters what only specially gifted and trained ‘shamans’ could see. They brought the supernatural realm into daily life (e.g., Lewis-Williams, 1981, 2003; Lewis-Williams and Pearce, 2004a).

Many San images, for instance, the eland, were polysemic. They referred to rites of passage as well as movement to the spirit world (Lewis-Williams, 1981). But their context on the walls of rock shelters (‘veils’ between this world and the spirit realm; Lewis-Williams and Dowson, 1990) focussed on one segment of their semantic spectrum—potency—while referring more obliquely to a range of values, including those associated with rites of passage (Parkington, 1989; Eastwood, 2005; Eastwood and Smith, 2005; Lewis-Williams, 1981, 1998; Lewis-Williams and Pearce, 2004a). Some of these values were directly associated with rain-making images (Fig. 4; Lewis-Williams and Pearce, 2004b).

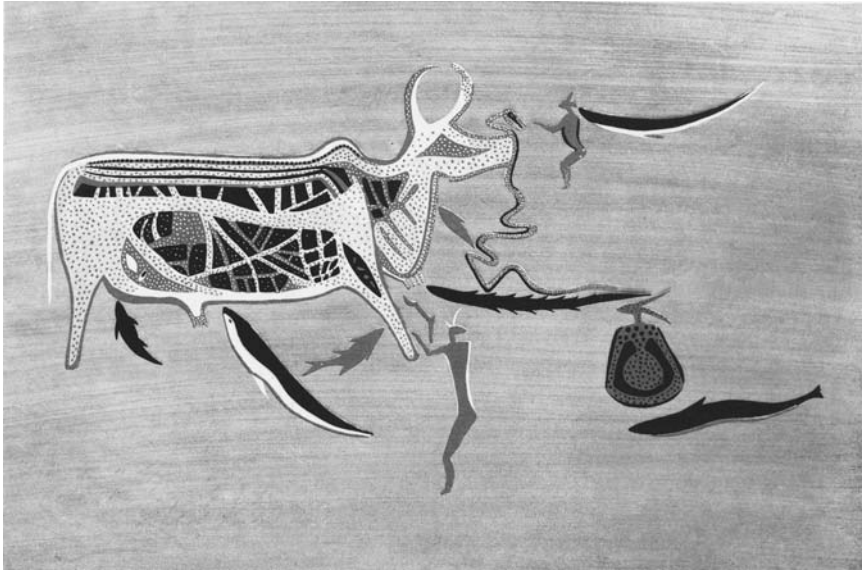


Fig. 4. San rock painting of 'shamans of the rain' (*!khwa:-ka xorro*) capturing an imaginary 'rain-animal.' When it was killed, the creature's blood and milk were believed to fall as rain. The fish and eels indicate that the 'trance-event' is taking place in an underwater spirit realm. Lesotho. After Stow 1930: pl. 67a. Copy made in the 1870s.

TWENTY-FIRST CENTURY WORK

Today, few, if any, researchers would deny this general assessment of San rock art, though they may disagree on specific points. Rather, they are exploring a range of theoretical positions, such as gender relations (e.g., Solomon, 1992, 1994; Stevenson, 2000; Hays-Gilpin, 2004), studies of the body and embodiment (Blundell, 2004), landscape perspectives (e.g., Smith and Blundell, 2004, Lensen-Erz, 2004; Taçon and Ouzman, 2004; Ouzman, 1998), and San ethno-ethology on the understanding that the San used animal behaviour as a source of natural models (Whitley, 1994) for ways of talking about social and religious issues (e.g., Lewis-Williams, 1981; Hollmann, 2001, 2002, 2003; Mazel, 1983; Mguni, 2002, 2004; Thackeray, 1983, 1994, 2005).

From a social perspective, and in an attempt to break away from what was, in the 1970s and 1980s, largely asocial Stone Age research, I advocated a Marxist analytical framework (Lewis-Williams, 1982). I argued that the symbolic labour of San ritual specialists was believed to ensure the reproduction of nature by working on the (imaginary) powers which gave or withheld game or rain; then these ritual practitioners maintained economic relations by curing sickness and reducing tensions within the camp; and, at a more important level, they reproduced the wider, long-term relations of production which are inter- rather than intracamp relations.

More recently, and partially disillusioned with my Marxist approach, I have explored structuration theory in an attempt to show how San individuals and groups of individuals manipulated social symbols in the creation and consolidation of personal power (e.g., Lewis-Williams and Pearce, 2004a; see also Dowson, 1994). The art played an active role in the establishment, reproduction and transformation of social relations.

There is today also a growing interest in historical perspectives. Although writers have explicitly discussed (and largely resolved) problems posed by using nineteenth- and twentieth-century San ethnography to interpret images made perhaps over a thousand years ago, commentators have repeatedly raised this issue and given the impression that students of San rock art have ignored it. On the contrary, dating rock art images has been and continues to be a focus of attention (Lewis-Williams, 2006). Today, new dating techniques are being applied to San rock art (Mazel and Watchman, 1997, 2003). Some of this work has shown that images in the Drakensberg are older than researchers (including me) had guessed, some being more than 2000 years old. Yet no stylistic sequences have been unequivocally established in this area, though Vinnicombe (1976) rightly noticed that there seems to have been an increasing numerical emphasis on human figures. To deal with this problem, some researchers are using the Harris Matrix technique to determine sequences of images within a panel (e.g., Loubser, 1993; Russell, 2000; Pearce, 2002; Swart, 2004; Pearce, 2002). But the transfer of this technique from geological contexts to rock art is highly problematic (Pearce, *in press*). Images are also being seen from the perspective of interaction between the San and other peoples (e.g., Dowson, 1994, 1995; Blundell, 2004; Loubser and Laurens, 1994; Jolly, 1986, 1996, 2002). For instance, Blundell (2004), using concepts of embodiment, shows that certain types of paintings do not conform to classic fine-line San paintings or to images made by Khoekhoen or Bantu-speakers. They should, he convincingly argues, be understood as the product of local historical process of creolization.

Much unnecessary confusion has arisen in southern Africa and elsewhere from misunderstandings about another line of contemporary research: the relevance of neuropsychology to the kind of experiences that San and other ritual specialists around the world report (Lewis-Williams, 2001). Whilst few researchers doubt that religious experiences, such as those at the heart of the San trance dance, come out of shifting mental states, some are reluctant to explore neuropsychological avenues to understanding. Referring to southern African San rock art and to west European Upper Palaeolithic cave art, they criticize the three-stage model of the spectrum of altered consciousness that Thomas Dowson and I first published in *Current Anthropology* (Lewis-Williams and Dowson, 1988).⁵ For instance, in

⁵For summaries of neuropsychological rock art research see: (Lewis-Williams and Dowson, 1988; see also Clottes and Lewis-Williams, 1996:14–19, 34–35; Lewis-Williams, 2002a:126–135; Lewis-Williams and Pearce, 2004a, 2005).

a recent book on African rock art Jean-Loïc Le Quellec writes: ‘This is an old theory which has been long obsolete and is now irreparably refuted; it is now only of historical interest’ (Le Quellec, 2004:203).

The uneasiness engendered by this sort of hyperbolic rhetoric (now not uncommon in rock art research) is confirmed when we notice that Le Quellec takes Patricia Helvenston and Paul Bahn’s rejection of neuropsychological evidence at face value (Helvenston and Bahn, 2002); he does not evaluate their criticisms in any way. Too often original research is (rightly) subjected to criticism, but the criticisms themselves tend to be taken at face value rather than rigorously examined.

Neuropsychological research has in fact *confirmed* the validity of the three-stage model (Lewis-Williams, 2004). Certainly, and contrary to what Helvenston and Bahn claim, all three stages are *not* dependent on the ingestion of psychotropic substances. The falsity of Helvenston and Bahn’s claims has been fully exposed by new neuropsychological research,⁶ as well as by older work (listed in Lewis-Williams, 2002a, 2004; Lewis-Williams and Dowson, 1988; Lewis-Williams and Pearce, 2005). It need not be repeated here. The neuropsychological evidence is unequivocal and directly relevant not only to an understanding of San religious experiences but also to west European Upper Palaeolithic cave art and North American rock art (e.g. Clottes and Lewis-Williams, 1996, 2001; Lewis-Williams, 2002a; Whitley, 2000). If image-makers in those three regions entered an altered state of consciousness they would have experienced the sorts of visual, auditory, olfactory, somatic, and gustatory hallucinations that laboratory research and widespread ethnographic reports have confirmed. These types of hallucination can be detected in some rock arts (not all; the southern African Late Whites are an example of rock art not associated with altered states).

Together with all these diverse perspectives has come increased awareness of southern African rock art traditions different in meaning and motivation from that of the San. As I have pointed out, Bantu-speaking agricultural communities and Khoekhoe pastoralists also made rock art. In the past these arts have been overshadowed by the sheer quantity and geographical spread of San rock art, but that imbalance is now being redressed (e.g., Smith and Ouzman, 2004; Hollmann and Hykkerud, 2004).

THE LONG VIEW

Today, a graph-maker would plot an isolated peak in the 1870s; the work of the Bleek family is now well recognized. He or she would probably not place a sharp rise in success from 1967 to 1970, during which time quantitative work was

⁶For relevant neuropsychological research (see Bressloff *et al.*, 2001; Burke, 2002; ffytche, 2002; ffytche and Howard, 1999; ffytche *et al.*, 1998; Santhouse *et al.*, 2000; Lewis-Williams and Pearce, 2005).

apparently offering researchers an exciting new beginning. Instead, there may be a moderate rise in the graph at this time because the techniques of empirical, quantitative fieldwork did so much to improve workers' knowledge of the images. A more marked rise in success would begin in the early 1970s, when an ethnographic approach, seasoned with social theory, began to be adopted and which, over the next three decades and more, produced results that constituted the foundation for new theory and method.

What of the Future?

I do not believe that San ethnography has been exhausted, as some researchers seem to fear. Certainly, the complexity of San rock art itself has not yet been fully plumbed: many sites remain to be discovered and hitherto unsuspected types of images and interrelationships will come to light. Good empirical work must continue. We have not reached a stage at which everything that can be said has been said. Work on European cathedral stained glass does not end when a researcher accepts that the iconography is Christian. Rather, that understanding merely sets the stage for explorations of puzzling images, the structure of complex windows, the social relevance of the imagery at various times during the Mediaeval and other periods, and other matters. So too with rock art research. The initiation of an ethnographic and social approach has provided a foundation for research, not an end to it.

As that work proceeds, we need to note a potential danger. At one time there was a dearth of theory in rock art research. Today there may be a surfeit. Researchers are rightly exploring the possibilities of each new social or other theory as it appears. But the danger is that existing knowledge will be recycled in new terminology (often abstruse and vague) without any real improvement in understanding. Perhaps excessive theory has taken researchers away from the walls of the southern African rock shelters, and they no longer come across the novel images that, in my experience, lurk in nearly every site. The real test of a new theoretical approach is to stand in rock shelter after rock shelter and to see if it reveals new insights into familiar images and draws attention to overlooked painted details and conceptual associations. Often that expectation is not realized.

When students are urged to apply theory, they are often applying interpretations. Christopher Tilley puts it like this: 'Merely borrowing theories from elsewhere and "applying" them to archaeological data does not result in a critical perspective but rather the reverse' (Tilley, 1989:111). James Whitley sounds the same warning. He writes: 'When students learn to "apply" theory, what they actually "apply" are . . . interpretations.' He goes on to point out that 'such all-purpose interpretations . . . circumvent the tedious business of undertaking contextual analysis, or testing specific models against the available evidence' (Whitley, 2002:120). Tilley and Whitley are right: the use of gender theory, for example, seems to blind

researchers to other meanings and thereby to reduce their critical faculties. Part of the reason for this unfortunate effect is the way in which gender theory is embroiled in ethics. To be seen to do the 'ethical' thing becomes paramount. But those who spend much time discussing ethics sometimes fail to remember that ethics is a social construct: they do not explain why they favour this rather than that ethical tradition.

Although we have come a long way from Alexander's, Kolben's and Barrow's views, we should not conclude that the stultifying view of the San as incorrigibly primitive ended with the close of the nineteenth century. Indeed, it has been a depressing (though variably so) background against which *all* southern African rock art research has been conducted—and in some limited respects unfortunately still is (Gordon, 1992, 1997). In 1973, a book about the Drakensberg claimed that the San are 'children in their simplicity, children in their gay, cheerful disposition, in their lack of inhibitions, and their irresponsibility . . . Man acts largely on pure reason: the animal world relies on blind instinct. The Bushman was midway between the two, often more animal than man (Pearse, 1973:5, 7).

Today the embarrassing notion of a carefree (actually poverty stricken) people almost indistinguishable from animals is unlikely to find a publisher in its explicit form. But it seems to have been transmuted into a respectable, spiritualized 'faith': the 'ignoble savages' have been transformed into 'noble conservationists' living in close harmony with Nature. Westerners of a romantic disposition claim to draw spiritual sustenance from them. This 're-invention' of the San, this sanitization of the explicitly racist view of them, was famously propagated by Laurens van der Post in books and television programmes (e.g., Van der Post, 1958; but see Jones, 2001). It has done little to help the San escape from the snare that history laid for them (Lewis-Williams and Pearce, 2004a,b).

Fortunately, that is not the end of the story. The political implications of southern African rock art should not be ignored. The most positive and encouraging aspect of the evolution of southern African rock art research is that the 'radical change in the ideas generally entertained with regard to the Bushmen,' which Bleek (1875:20) hoped would be effected by improved knowledge of San rock art, has been given powerful support. Since the demise of the apartheid regime at the 1994 fully democratic election, a sea-change has begun to take place in perceptions of the San and their art. I know of no parallel elsewhere in the world to this extraordinary situation: South African San rock art is playing a prominent role in the formation of a new national identity. The post-apartheid South African coat of arms has, in its centre, a San rock painting, duplicated by the designers to depict an act of greeting (Smith *et al.*, 2000; Barnard, 2003; Lewis-Williams and Pearce, 2004a: 231–234). When President Thabo Mbeki revealed the new coat of arms, he said:

Through this new coat of arms, we pay homage to our past . . . Those depicted, who were the very first inhabitants of our land, the Khoisan people, speak of our commitment to

celebrate humanity and to advance the cause of the fulfilment of all human beings in our country and throughout the world (www.gov.za/speeches/).

Southern African rock art research is now taking place in a climate altogether different from that in which Wilhelm Bleek and Lucy Lloyd worked. As they and their /Xam San teachers would have approved, rock art has become instrumental in effecting the change. To emphasize the new view of the San, President Mbeki asked that the new, highly appropriate, national motto be in the /Xam language:

!KE E: /XARRA //KE

(Diverse people unite)

President Mbeki explained:

We have chosen an ancient language of our people. This language is now extinct as no one lives who speaks it as his or her mother-tongue. This emphasises the tragedy of the millions of human beings who, through the ages, have perished and even ceased to exist as peoples, because of people's inhumanity to others (*ibid.*)

Those who doubt the importance of social context for the conduct of research and who question the social and moral relevance of research should take note. Archaeological research can and does matter.

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