COHERENCE - A CONSTITUENT OF 'SCENES' IN ROCK ART

The transformation of linguistic analytical models for the study of rock paintings in Namibia

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Abstract. Generations of rock art scholars have been writing about 'scenes' and 'compositions' without a convenient, widely recognised definition of what these are. This article tries to determine the differences between scenes and compositions and to define a 'scene' in order to introduce it into standardised analysis of rock art. A concept of coherence is developed as a constituent of scenes which can be determined through a numerical rating system. Finally a structural model for the systematic analysis of information in scenes is proposed, using the categories theme, focus and setting.

Introduction

In recent years concern in rock art 1) studies has changed from an interpretive view to an analytical view that tries to reveal the meaning of the rock pictures from less extrinsic viewpoints. Greatest progress in this respect, it seems to me, was made in the study of southern African rock art through a correlation of rock paintings and ethnographic documents of San mythology. This ethnographic approach produced convincing results in understanding of historical, cultural and sociological background of the artists (see e.g. Vinnicombe 1976; Lewis-Williams' writings in the 1980s). However, it relates to a particularly advantageous situation where painting and oral tradition continued until modern times. Furthermore, this model for interpreting rock art as a historical source does not cover the whole wealth of themes in rock art. As such it is inadequate for the identification of a number of scenes present in southern African rock art.

It is the purpose of this paper to present a scheme to identify and analyse rock art entities that consist of more than one figure, namely scenes, and to address the risk of establishing a scheme that may contain systematic errors. Some sections of the scheme presented here are partly based on intuition, whereas others are built on elements which can also be found in language. A number of linguists suspect these elements to be of universal character. The scheme represents one aspect of a more encompassing approach currently being developed to analyse, with the help of a computer, the large corpus of Namibian rock art recorded by the late Harald Pager.

A number of valuable contributions to the study of rock art have been made by Pager. His book 'Ndedema' (1971) still sets a unique standard for the reproduction of rock paintings. With these outstanding reproductions he published an all-inclusive catalogue of the paintings of the Ndedema Gorge in the Drakensberg.

Harald Pager was working on the wealth of rock paintings in the Brandberg, Namibia, when he died unexpectedly in 1985. He had then documented more than 43,000 figures on several kilometres of tracing foil, and had produced almost 900 plan and elevation-drawings of all painted sites. Funded by the German Research Council DFG, part of this invaluable material was published in 1989 (Pager 1989). This first analytical catalogue is to be followed by approximately seven further ones over the next years.

The terminological problem: 'composition' vs 'scene'

Ever since rock art was studied there was a recognised problem for which hardly any solution was attempted. This problem relates to the term 'scene', attributed to groups of figures the beholder presumes belong together. However, so far there has not been a clear definition of what constitutes a 'scene' and how to include or exclude figures of a 'scene'. When Beltrán says about rock art of the Spanish Levant that it was easy to classify scenes methodologically (Beltrán 1982: 40) he perceives a clarity that does not exist. He may have generally valid concepts for the classification of scenes, but he is not explicit about how to delimit a group of figures as one scene in a panel with dozens of other figures. Moreover, his classification is more interpretive than analytical. J. D. Lewis-Williams is more aware of this problem by conceding that 'in a crowded panel it is often difficult to distinguish the limits of groups', but he continues: 'if, indeed, limits were intended by the artists' (1981: 20). This latter problem seems to be already answered by the artists: of course a limit was intended which lies exactly where an artist chose to stop painting. If an artist finishes work on a painting this does not necessarily imply that he or she expects anyone to proceed with this very work later on. Therefore one has to consider a painting on the wall to be the completed product which the artist really intended to produce and that it needs no further comment or addition to attain its intrinsic meaning.

1) I use the term 'art' expressly to distinguish it as a special class of artefacts although it must not be understood in the sense and connotations of Western art production. Art, as I would define it, is a product of perception, interpretation and shaping of the spiritual and material surroundings of man - a shaped physical utterance furnished with meaning. It is functional only in a metaphysical way and its functional effect cannot be counted or measured.
Elsewhere, Lewis-Williams deals explicitly with scenes:

It is possible that no fixed relations, as understood by Westerners, are intended in San ‘scenes’: the ‘scenes’ may portray figures individually and even in different temporal dimensions and therefore not capture an instant in the manner of a photograph, a peculiarly Western concept. Many of the relationships which Westerners see in San rock art may be no more than optical illusions (Lewis-Williams 1986: 176).

The term scene is placed in inverted commas by Lewis-Williams because this is presumed to be a Western concept.

Notwithstanding the validity of this statement, Lewis-Williams cannot evade working with entities which one might well call scenes and the composition of which seems to follow the habits of seeing things like a ‘Westerner’. As an example we may look at a reproduction of paintings from Game Pass/Kamberg (Lewis-Williams 1981: 92, Fig. 28; Lewis-Williams 1988: 6, Fig. 2; Lewis-Williams and Dowson 1989: 50-1). In all these cases Lewis-Williams displays the same panel, his copy showing an eland plus four bipedal figures; by contrast, his photographs of this panel display a good number of further figures together with the ones mentioned above, only in part being superimposed (Lewis-Williams 1983, colour photographs 59-61; see also Lee and Woodhouse 1970: 43, illustr. 51 and Wilcox 1956: Fig. 44). However, the reason for omitting these figures in interpretation is neither evident nor explained by Lewis-Williams. But it appears that the choice for reproducing these very figures and no further ones as a unit was made according to features such as size, colour, and in part perhaps preservation. This intuitive selection may well be justified, but the reasons for any such choice should be made evident.

A similar depiction is handled the opposite way by Lewis-Williams (1981: 11, Fig. 2). On the side of four well-preserved humans are the remains of a faded eland. Lewis-Williams comments: ‘One’s first reaction is to deny any relationship between the human figures and the antelope, but, in the light of the ethnographic evidence ... I believe this would be an error’ (op. cit.: 10). Here figures are grouped together which evidently are not contemporaneous. Even if the hypothesis proves right for the whole composition, the single components have their own meaning - which is particularly true for the depiction that was painted first. As a self-contained painting it must have had another, autonomous meaning before further figures were added that led to the present-day interpretation.

The volume People of the eland by Patricia Vinnicombe (1976) is another thorough study of rock art lacking a clear definition of a scene - or ‘composition’, a term used synonymously (e.g. Fig. 237). From Table 2 in Appendix II, ‘Human Paintings - Scene’ (op. cit.: 363), one can conclude that she denominated a scene by the interaction being depicted. Her list contains the interpretive categories hunting, dancing, fighting, other, and ‘uncertain’. But as she is not explicit about the analytical criteria for scenes, panels which should be addressed as ‘compositions’ are treated as ‘scenes’. Hence in Figure 90 (op. cit.: 165), for example, all paintings present on a wall with quite a number of superimpositions seem to be subsumed under one interpretation, on a synchronic level. Yet the general impression gained from this panel is that of a number of layers of different scenes not necessarily related to one another.

Another view is conveyed by art historian H. Kühn (Obermaier and Kühn 1930), who considers the composition to be the central and basic element in the rock art of south-western Africa. Kühn is one of the few researchers who deals with compositions on an analytical level. For him individual figures have no importance other than contributing to a ‘higher’ compositional concept: ‘Die Komposition ist der beherrschende Faktor dieser Bilder, deren Einzelformen ohne Bedeutung sind, mögen es die Gliedmassen des Körpers, mögen es die Teile des Bildaufbaus sein’ (op. cit.: 20). Yet his approach cannot be standardised. It can be an interesting practice to deconstruct a painting like that of the ‘White Lady’ into a number of angular and parallel lines (op. cit.: 21) but this exercise does not seem equally applicable to other paintings as it does not lead to the discovery of recurrent patterns or rules. Consequently this method was not adopted by other authors.

L. G. A. Smits expresses a clear notion of the composition-complex although he cannot offer a real solution to this problem (1983: 74):

Most paintings do not occur in isolation but in groups. Often a number of people and animals are painted near to one another. They seem to be related to each other and form a composition or a scene. While ultimately content will have to be approached through an analysis of the themes represented in the various compositions or scenes depicted, we cannot yet properly distinguish between true and false groupings, or between assembled and intentional scenes (Smits 1971: 17). At present we still lack the criteria to allocate specific paintings to certain groups and to determine the boundaries of each set of paintings that we think belong together.

This remark fully covers the problem and is in part a verbatim quotation of what Smits himself had written in 1971. Yet in 1990 he has to concede: ‘Tools are required to establish whether a particular body of rock art must be regarded as one homogeneous whole or that separate groups of paintings should be distinguished’ (Smits 1990: 17). Thus he proves that almost 20 years of intensive rock art research have not brought about much progress in defining scenes. Consequently, for him his 1971 definition remains valid and, as he overtly admits, this is all but an applicable, clear-cut definition: ‘INTENTIONAL SCENES: true groupings, depicting a scene that is originally conceived and purposely composed as such by the artist, and consisting of a number of paintings that really “belong together”’ (Smits 1971: 17).

The foregoing quotations show that ‘scenes’ and ‘compositions’ are apparently interchangeable concepts - which is only in part correct and useful; or that both terms are combined into ‘scene compositions’ (MacCalmun 1964/65: 91; Fock 1983: 72 ‘szenische Kompositionen’). Elsewhere the latter author connects scenes to narration (Fock 1969: 3), thus being in danger of explaining one unspecified term (‘Scene’) through another even more diffuse term (‘erzählendes Motiv’ = narrative motif); or he leaves the whole issue aside by using the unspecific term ‘group’ (Fock 1979: 84).

Fock’s indicator of scenes or related groupings is spatial closeness. The same criterion is applied by Scherz, another author on Namibian rock art who uses the term scenic groupings (‘szenische Gruppierungen’, Scherz 1986: 41).

Harald Pager often produced the most strictly defined terms for the subjects he was dealing with. He expressed

2) When Ed Wilmsen showed a copy of Lewis-Williams’ reproduction to his trance-experienced Zhu informants in northern Botswana, interestingly enough, most of the discussion was about the eland and its presumed horse features, whereas the human figure in distinct bent-over posture was apparently ignored (Wilmsen 1986: 353-4).
his awareness of the shortcomings in defining a scene as follows: ‘In this “art without frames” there are, unfortunately, no set limits as to what might constitute a group and an error margin must be allowed for the inevitably subjective decision of any recorders’ (Pager 1971: 239). However, a decision has to be taken. Therefore, in those cases where no interaction seemed detectable, he had introduced a ‘35 cm-rule’ according to which all figures within that reach were considered to belong to one composition.

The criteria laid down for the designation of groups are the depiction of concerted action, or the proximity of paintings executed in the same style. The term ‘group’ includes both premeditated compositions and sets of paintings which might be merely a scatter of figures executed by one particular artist in a particular part of the rock shelter. In the present study, distances of about 35 cm between paintings were considered the limit of ‘proximity’. It is, however, possible that some large, loosely spaced groups have been arbitrarily subdivided in this way (Pager 1971: 239).

André Leroi-Gourhan expressed an even deeper insight into the question of scenes in terms of content, working on the Palaeolithic cave art of Lascaux. Regarding ‘assemblages’ and ‘composition’ (1979: 345) he speaks of ‘l’impression d’un ordre conscient ... provoquée par la conjuguaison de taille, l’espèce et de la direction des animaux’. Here some features are named which tie different figures together as a whole, namely size, species and elevation and this surely shows the direction to follow.

Gisela Fischer came to a similar conclusion when analysing the Magdalenian rock engravings from Gönnersdorf (Fischer 1979). According to her, the relations of sizes as well as the walking levels are important factors for the creation of a scene, but besides this she emphasises the connection built up by an activity taking place between at least two figures (Fischer 1979: 243). This ‘decisive feature’ is chiefly made visible by co-ordination of movement and body posture (op. cit.: 245).

A paper by John Clegg aimed expressly to find out about universal rules in composition. It is the most elaborate article on this issue in rock art. Clegg put forth a distinctive definition of ‘composition’ and ‘scene’ using the word composition in its technical art sense; the distribution of the marks which make up a picture in relation to each other and the whole picture surface (the ‘canvas’). One aspect of composition is the scene, where two or more elements of a picture are interacting, telling a story, etc. (Clegg 1979: 468).

He then concentrates solely on compositions, to find rules which govern the placing of important figures or marks on larger panels. In order to enhance his research Clegg made tests with several hundred students which suggested that an innate tendency in humans is to prefer the centres of the ‘canvas’ (op. cit. 476) and that the size of a depiction depends on the space available (op. cit. 477). His conclusion, however, that if the same rules apply to prehistoric rock art their composition is without a meaning (since it is genetically predetermined), is not based on sufficiently convincing data.

Scene vs composition - a delimitation

The terms ‘scene’ and ‘composition’ are commonly used in the description and analysis of pictorial art. But the fact that especially in rock art analysis these terms are often used synonymously even by eminent authors shows that they are not defined adequately: their meaning overlaps partly (e.g. Pager 1975: 78; Vinnicombe 1976: 335). Lewis-Williams names the problem of ‘Western notions of framed compositions and scenic relationship’ (1983: 55), yet he evades naming a solution in saying ‘the question of where groups begin and end is relatively unimportant: the panel is rather a network of relationships’ (ibid.). And again he alludes to the ‘Western notions’ in stating that ‘the relationship is then clearly not scenic’ if a depiction is what he calls a ‘juxtaposition’ (ibid.). This might be considered a negative definition, but one can hardly derive a standardisation from it. The way he selects scenes is rather restricted to a specific social complex (viz. ‘shamanism’) discernible through explicit factors such as bleeding of the nose, forward-bent posture, dying eland and so forth - for a comprehensive summary of such features see Yates et al. (1985: 72). But for scenes which unquestionably do exist, apart from the depictions of known trance metaphors, no features have yet been defined that could express the degree of connection between figures or, in other words, that constitute a coherence of figures.

The usefulness and necessity of a distinction between ‘composition’ and ‘scene’ is implicit in much writing on the history of art although it is often not expressed clearly, and explicit definitions are quite rare. A very helpful and suitable definition that is indeed applicable to the analysis of European paintings is given in the Thesaurus Iconographique (Garnier 1984: 44) where one can read about the term ‘scenes’:

Il recouvre toutes les compositions dans lesquelles l’être humain ou divin, seul ou non, est représenté en action ... [. . .] Pour la description d’une scène] On se posera les questions suivantes: quelle est l’action (domaine concerné, activité particulière), qui participe à la scène (nature, nom propre du ou des personnages, fonction, nationalité...), où se passe la scène (milieu naturel, milieu aménagé ou construit, nom propre de localisation), quand a lieu la scène (période naturelle, période historique, date précise), quels éléments de la scène méritent une notation... Le contenu de la représentation permettra rarement de répondre à toutes ces questions.

The last remark is especially true for southern African rock art (nationality, proper name of location, precise date - rock art studies would be quite advanced if these were to be known). In this definition the parameters of a scene are: action, participants, locality, and period.

A definition of ‘scene’ not gleaned from an art history book supports the definition given above: ‘Any incident or episode that may serve as the subject of a description’ (Standard dictionary of the English language 1969: 1124), and corroborated by the accompanying elaboration, though pertaining to drama: ‘a division of an act in a play; one comprehensive event in a play’ (ibid., emphasis added). All these definitions restrict a scene to an isolated event that allows for an all-inclusive characterisation. This notion of scene receives further confirmation from linguistic research: R. W. Langacker, working on cognitive grammar, uses ‘scene as a paraphrase for situation’ (Langacker 1983 II: 23) - although one would like to have a clear definition of a ‘situation’ - and R. de Beaujard provides the short formula: ‘scene: visual input at one time’ (de Beaujargarde 1980: 348).

3) The locality one might esteem to be under-represented in rock art if this was understood as the representation of landscape. Indeed, such elements can be discerned only rarely. However, it is also possible that the place of painting, i.e. the rock wall or a site, is all the artists needed to specify the locality to which the painting relates. Accordingly, for some paintings Lewis-Williams and Dowson were able to show plausible connections between depictions and features of the rock wall on which they were painted (Lewis-Williams and Dowson 1990).

4) In analysing scenes the standard theory of film has long bridged the gap with linguistics, by the equation of a scene with a sentence. This equation has been criticised on good grounds, yet an alternative definition is not provided. A scene is only limited to being shorter than a sequence (Monaco 1980: 142-3, 161).
B. Sandelowsky, who worked on southern African rock art, comes close to this concept, although she does not give an explicit definition (1983: 613): 'Paintings frequently depict a number of human figures, animals, or mythical figures and objects, all obviously related to one another and portraying some event.' However, she wants this to be valid for 'the composition of the pictures' since she does not differentiate between composition and scene.

This broad lack of definition for 'scene' and 'composition' is not a shortcoming of rock art research exclusively, since it is difficult to find a short, clear definition for these widely used terms even in art history encyclopaedias. With composition being defined as 'the most general term for structure and arrangement', as in The Oxford companion to art (1970: 267; see also Clegg 1985: 43), one did not get much further in delimiting the term than the classical Greek authors who saw 'a work of art as an organic whole' being a 'composition by proportion and harmony among the parts and between the parts' (Plato after The Oxford companion to art [1970: 267]). For M. Raphael, 'Individual form and over-all configuration are united in a composition (1968: 234) through several steps:

The artist first constructs for the work a sort of spinal column whose function is twofold: (1) it combines individual forms in such a way that their totality clearly discloses the content, and (2) it serves as the fundamental entity to which all other forms relate by way of preparation or derivation (Raphael 1968: 234.5).

Yet he does not claim to provide an exact definition for composition, but rather delimits the range of this term as being interrelated to the concepts of configuration and realisation (op. cit.: 209-10).

Thus a composition is made up of a number of elements placed together (i.e. com-posed) because the producer believes that they should be related to each other rather than separated from one another. There is not necessarily a thematic coherence; it is just the will and the aesthetic feeling of the artist, on the one hand, that create a composition. On the other hand, and certainly more important for rock art, concepts have to be considered - in part possibly subconscious ones - that originate in the religious and mythical beliefs of a society (cf. Pager 1975; Vinnicombe 1976; Lewis-Williams 1981). Or, as M. Raphael puts it, 'in art objects are not represented for their own sake, but as vehicles of feelings and meanings whose origins are personal, social, and religious' (Raphael 1968: 211).

A general feature of a composition seems to be that it is limited by the size of the 'canvas'. Therefore a composition can be constituted of several smaller entities, 'scenes' (cf. also Clegg 1979: 468 as quoted above), which need not necessarily be produced by one artist at one time. This is especially the case for panels with many superimpositions (Fig. 1). On these panels it becomes evident that various artists painted at one single place again and again, with periods of activity possibly separated by centuries.

A typical composition may be seen in Figure 1 (from

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**Figure 1.** A complex composition from Site A 57, Amis Gorge, Brandberg. Scale 10 cm.
Displaying a high number of figures in comparatively dense concentration. This composition is formed by at least six painting layers dominated by the two arches (the left one being an eared snake), the two tall humans and the two black animals at the bottom. The slightly diagonal order from upper left to lower right is in part predetermined by the rock surface, but the denser concentrations of figures around the head and the end of the eared snake are means of the shaping (Gestaltung) in the composition. The end of the snake especially seems to be the focal point of this composition since all dominant figures of this panel end or start roughly from this place. Some of the scenes within this composition are the ‘wigs’ near the head of the eared snake; the two tall humans; the feline and bent-over human at the feet of the tall figures; the close-up humans and animals in the angle between the two arches.

It is because of the complexity of these larger panels, in which the structure is hard to discern (cf. Clegg 1979), that presently the largest units for systematic and standardised analysis are ‘scenes’, not ‘compositions’.

Whatever distinction one may see between these entities, there can be no doubt that it is justified to speak of a scene for a certain group of figures and to disregard at the same time some close-by figures. What, then, makes us so sure about identifying such a scene?

It is evidently a process in the mind of the beholder that takes less than a second, in which two figures are compared as to the similarities in a number of quickly discernible features such as size, colour, ‘style’, body attachments, perceived action and so on. If there are sufficient similarities, a coherence between these figures is recognised. On regarding a picture the observer in most instances immediately has an intuitive certainty that specific figures belong together. Yet it would be difficult to clearly name the criteria for perceiving these figures as a group. Probably the best one could point to would be the similarity of the figures - if no direct interaction is depicted.

What, then, does similarity consist of in a depiction? Above all, it is the similarity in certain explicit features of two figures one compares in the mind. These features are assessed as to the degree of similarity, i.e. whether they are equal in both figures compared, whether they are similar or whether they are completely different. The more of the compared features are equal or at least similar, the more likely one will consider that the two figures belong together. This, of course, implies that the more elaborate two figures are painted, i.e. the more features there are for comparison, the safer is the identification of the relationship.

Using the principle of similarity as an indicator for scenic coherence naturally implies that the means for generating a scene are available for everyone by mere repetition of formal elements. A scene may thus be produced by more than one artist - which would seem plausible to me in the scene of Figure 2. The artist who painted the second group (irrespective of whether the upper one or the lower one was executed first) reproduced sufficient features from the first group as to create a coherent picture. A scene is not necessarily that which one artist depicts in a single act but rather the product of recurrent formal and thematic ingredients.

A common way to approach the question of scenes is to consider a scene as a smaller unit than a composition by its linkage to restricted events or incidents, or, as one can also put it, to action and interaction. A scene comprises one specific thing going on at a particular time with a limited number of participants. Therefore, in the absence of similar or equal features, interaction taking place in a depiction is a good indicator for the scenic connection of figures. Accordingly, a ‘classical’ hunting scene can, as a unit, be detected as safely as a scene of equal humans striding along (see e.g. Fig. 2). However, the pictorial content of other interactive contexts, such as highly specialised ritual procedures, may not be so readily understood, thus making the detection of scenes more difficult and open to individualistic interpretive assessments.

In a clear minimum-definition the parameters of a scene are:

- activity confined to one denominable action or interaction only;
- time span limited to one level only;
- finite number of participants present.

These parameters evidently do not suffice for rock art interpretations that rightly demand far-reaching concepts beyond the surface of mere representation. But this approach is meant to work on the level of plain analysis where one starts with no knowledge of the beliefs of the artists. To compensate for this lack of knowledge the approach utilises categories that can almost be regarded as universal (thus presumably being basic elements for the transmission of human information - e.g. the message = ‘Mitterung’ in semiotics [Bentele and Bystrina 1978:...
Such elements have been identified by linguists as proper names for objects (nouns) (Clark and Clark 1978: 227) and words that denote action (verbs) (Hockett 1963: 16), as well as notions of size, form and spatial orientation (adjectives, adverbs, prepositions) (Andersen 1978: 364).

As to objects (i.e. nouns), P. Watzlawick explicitly closes the gap between verbal and pictorial communication (Watzlawick et al. 1982: 62) when stating that an object can be made the item of communication by either producing a drawing of it or by giving it a name - which are manifestations of the two basic (and principally different) ways of communication, viz. analogical and digital. Watzlawick further adds that it is analogous communication - painting in this instance - which has a longer phylogenetic tradition and hence a more general validity (op. cit.: 63).

In other words, the painters of southern Africa, no matter when they lived and who they were, had in all probability a notion of 'things' similar to ours. The world around us is full of 'things' and one part of them is animate while the other part is inanimate. The animate 'things', at least, are capable of acting. We can recognise activities in rock paintings provided the manner of depiction is not too alien to our own. We are thus sufficiently competent to identify activities such as 'walking', 'running', 'draggling a bow' etc. But we definitely can not say anything certain about the social or even metaphysical context to which these activities were assigned by the artist. These banalities are the level of interpretation one cannot escape even if one wants to remain strictly analytical.

**'Coherence' - proposal of a new item for rock art analysis**

The term 'coherence' has been helpful in the search for a basic element that is indispensable for the definition of what one might call a coherent scene. In the rock art literature the term coherence is not often used in connection with scenes. A. Leroi-Gourhan wrote (1971: 127): 'A Font-de-Gaume, une galerie entière, la première galerie latérale, est occupée par des figures d’animaux machèvées et incohérentes dans leur composition'. Another quotation comes from P. Skotnes who maintained that 'in art history the coherence of a painting must be studied as part of the composition' (after Deacon 1987: 2). Lewis-Williams and Loubser use the term, too, in the context of compositions (Lewis-Williams and Loubser 1986: 271), although they almost certainly would reject a concept of coherence as it is promoted here.

But it is not because of these quotations that the term seems so suitable for rock art studies. It is rather its use in linguistics where problems related to this term have already been discussed in some depth. Linguists have examined relations among the acting participants in texts and found that they are tied together by a certain essential factor. Closer inspection of the use of 'coherence' and related terms shows that linguistics is not a far-fetched auxiliary science of rock art analysis.

The label 'coherence' is chosen here in allusion to the term 'cohesion' which is used in linguistics when a certain unit above the level of a sentence is searched for in a written or spoken text.

6) M. A. K. Halliday, a functional linguistics scholar, takes the attitude that the 'non-structural resources for discourse are what are referred to by the term COHESION' (Halliday 1985: 288). Since he understands structure as semantic structure (op. cit.: 318), his conclusion is that cohesion means that certain entities belong together. It is at the level of the meaning of a sentence or several sentences that the connection of elements is determined, not by grammatical means.

J. E. Grimes, another eminent linguist, sees cohesion as a formative element for 'paragraphs': 'cohesion in discourse appears to involve the further grouping of information blocks into larger units, rather like the way sentences are grouped into paragraphs in written discourse' (Grimes 1975: 276). A paragraph, again, can be specified as a section with homogeneous theme and action in a specified time setting (Howard 1978: 274) - thus a unit with general resemblance to what can be considered a scene. In other words, a paragraph - thereby resembling a scene - is 'a span of events in which members of a specific group of participants interact' (op. cit.: 275). Within this structure, 'cohesion' works on the fluent connection of setting, background information and events (ibid.). Cohesion is the glue which keeps all elements of a paragraph together. Another useful definition of coherence is to be found in R. de Beaujargarde (1980) who, writing about universals of texts, makes a distinction between 'cohesion' and 'coherence'. Whereas the former is mostly concerned with grammatical items, the latter allows for easy adaptation to paintings:

> COHERENCE subserves the procedures whereby elements of KNOWLEDGE are activated such that their CONCEPTUAL CONNECTIVITY is maintained and made recoverable. The means of coherence include: (1) logical relations such as causality and class inclusion; (2) knowledge of how events, actions, objects, and situations are organized; and (3) the striving for continuity in human experience. Coherence [sic!] doubtless must read cohere; T. L.-E.] is upheld by continual interaction of TEXT-PRESENTED KNOWLEDGE with PRIOR KNOWLEDGE OF THE WORLD ... (de Beaujargarde 1980: 19).

As with the other quotations from linguists, the adaptation to the study of rock art of the means listed here is, at least partly, quite obvious. For example, class inclusion can be detected in such items as species or 'type' and possibly colour. 'Knowledge of how events, actions, objects, and situations are organized' may be represented in identical, similar or co-ordinated posture, action, or elevation. Inasmuch as a speaker needs to mark by commonly comprehensible or conventional devices how things or processes are connected to one another, a painter has to fulfill the very same obligation if he or she wants to communicate.

But as there can be no one-to-one correlation between linguistic and pictorial entities - the linguistic terms rather serve as heuristic devices by means of which certain categories of information transmission can be pinned down in an already introduced nomenclature - it is necessary to find the adequate features in paintings that constitute 'coherence' when present, and which distinguish scenes when missing.

Finding the essence of coherence promises good analytical progress because linguistic evidence suggests
that this is perhaps a universal feature of human communication. That is, coherence is a structural element found in any text produced by man. The concept ‘text’ as used here need not be restricted to language but may also include artistic representation (painting, sculpture, music, dance etc.) or even behaviour or activities (cf. Ricour 1979; Oevermann 1986: 46-7) - a view which has always been an unspoken premise of archaeology and the philological sciences (Oevermann 1986: 51).

Confinement to the latent structures of meaning must not necessarily be a disadvantage. One can also see it as an advantage and a strong impetus towards objectivity - as is the view of a school in sociological (also 'structural' or 'objective') hermeneutics (Oevermann 1986: 35 ff.). This approach even requires temporal and cultural distance because only in this way can one find unprejudiced (universal) rules. There is no necessity to fully promote this view if one is in search of latent structures. Structures are there, one need not induce them; and one is not dependent on a perhaps dubious field-recording situation as may be the case with ethnography. Searching for structures means looking for the comprehensive number of smaller entities and concepts (smaller than, for example, a figure as a whole), the different combinations of which are capable to generate any representation recognisable on the surface. In other words, a structuralistic view of rock art has to look for the atoms of the single figure and therefore every single figure without exception is of analytical interest because it was cogently produced by some latent structures. A non-structuralist, on the other hand, works in a binary way: either a representation matches the hypothesis or it does not. If not, the depiction has to be omitted.

How to measure coherence

Now that it has been pointed out which general characteristics are generic for a scene, the way of quantifying them has to be explained. The system proposed in Figure 3 resulted from work on thousands of figures from the Brandberg and from closely inspecting, self-controlling as it were, the features given most weight when grouping figures into a scene. This latter point needs to be emphasised: the whole system is based on what one does intuitively at first glance. There is no such thing as objective measuring in it - the only advantage of the system lies in applying the very same intuition to every single depiction. There can be no doubt that this system may be completely false and erroneous, but the faults being made are systematic ones and thus rather easy to eliminate once they are detected. This ‘intuitive scale’ was later tested and independently corrected by further subjects.

However, this is not to say that measuring coherence is a method which anybody can apply when first viewing a corpus of rock art. Of course a certain level of competence has to be attained by becoming familiar with the fauna of the rock art region, the lifestyle and technology of the foragers, and the stylistic rules and conventions of the art (cf. Panofsky 1939: 9; and Chomsky’s theory of competence in the reception of Oevermann 1986: 37 ff.). This familiarity has to be gained and is an insight into a foreign culture based on universals of perception, namely on the perception of resemblances in physical manifestations. This human ability to compare things and to build up taxonomies is the indispensable base for communication as in this way the world is given an order. R. W. Langacker writes:

Fundamental to cognitive processing and the structuring of experience is our ability to compare one event to another and register any contrast or discrepancy between them. [...] I assume that acts of comparison in different cognitive domains and at different levels of abstraction and complexity are manifestations of the same basic capacity (or at least functionally parallel) (Langacker 1983: 4).

In this quotation Langacker uses the term event ‘to designate a cognitive occurrence of any degree of complexity’ (ibid.). Put simply, this means that people anywhere in the world are more likely to intuitively see things which are alike as belonging together, than things which are completely different. This human ‘achievement’ (Wittgenstein 1958, after Davidson and Noble 1989: 150) is the basis for the ability to depict in general. What only remains as a bone of contention is when in the Palaeolithic this ability developed (e.g. Davis 1986: 200; 1989: 140; Hewes 1986: 204; Davidson and Noble 1989). Therefore likeness should be a valid concept in scenes of rock paintings too.

The main consideration for the choice of the basic elements of coherence was the constant presence of these elements. This is to say that elements were sought which are represented in every figure, no matter by whom, when or where it was painted. Therefore the features assessed are measurable, hence universal. The criticism one might expect here, is that this is a typical Western, positivist, empiricist view. But it is completely refuted by the similarities and dissimilarities in any kind of rock art - e.g. the rock art of southern Africa is visibly different from the rock art of Australia. Consequently, in practice every rock art scholar tacitly works with this basic form of structuring the depictions he or she is dealing with.

In order to document the intuition about membership in a scene in a recoverable way, it proved most practical to express such intuition in numbers, or more precisely, in points allotted. Thus if one has to make a decision about whether or not two figures belong to one scene (see humans marked x in Fig. 2) they are compared to each other according to a given number of clearly defined features. On a scale of points, figures can score a maximum number if the feature in question (e.g. the colour) is identical in both, or none if the feature is different. After comparing eight features, all points are added and if the sum reaches or exceeds 19 points, the two figures in question are treated as belonging to one scene. In his research into universals of composition Clegg implemented a similar system wherein he assessed the criteria centrality, ‘ornamentness’ and size (Clegg 1979: 470).

No specific scientific methodology is relied upon to allocate the number of points to the features of coherence and the value of 19 points as borderline. Such values are
again an expression of how one intuitively allocates things that one feels are related to each other when working on a large number of paintings in a given area. Nevertheless, more statistical work is needed on these features to establish a better base for their assessment. At the moment, as with any hypothesis, this system is a closed circle; everything that contributes to coherence is utilised for this very purpose, because of the mere presumption that it indeed seems to contribute to coherence. Only the universality of physical features is derived from an outside system - and therefore the degree of coherence which is assigned to scenes cannot claim to be objective, although it would seem plausible. At the moment the main advantage of this method is its systematic character and the possibility it offers to start an analysis of groups of figures at all.

One important point which needs to be stressed within this system of evaluation: coherence is a property of figures in a relational system in which always two figures (and only two at the same time) are assessed on the basis of their external features. The result is always a number of points which expresses the scenic or thematic closeness of two figures: the higher the score, the closer are the figures and the more coherent is the scene.

Figure 3 shows that identical features are not always given the same number of maximum points. This is because two human figures of the same type but different sizes are more likely to be related than two figures of identical size but of different type. Thus identical type is ‘awarded’ five points, whereas identical size only warrants four points.

Then again, since completely different sizes did not appear to be as strong a separating feature as different types, two figures with different sizes still get one point, while figures of different types get no point at all for this feature. On the table the hierarchy of features descends from left to right: most coherence is generally expressed by sameness of species and least coherence springs from identity of attributes or instruments.

To render this system accessible to other researchers and to make the framework applicable to other paintings it must be explained how identicalness, similarity and difference are being assessed in the various features. The following section establishes for every parameter in Figure 3 what is understood if features are said to be identical, or similar (corollary: sequentially altered), or different.

SPECIES
Identical. Human figure vs human figure, i.e. woman and woman, or man and man; animals: the same species.
Similar. Humans: woman vs man or unspecified human, or man vs woman or unspecified human; animals: if species are not clearly discernible, small bucks or large antelopes are considered similar.
Different. If no similarity is apparent, e.g. kudu vs zebra or human vs therianthrope.

TYPE
Identical. If both figures have the same number on the list of types (for a strict definition of the types of the Brandberg paintings see Pager 1989: 352).
Similar. If human figures have bordering numbers on the list of styles (e.g. styles 6 and 2 are ‘similar’ to 1, ibid.), only styles 3 and 4 (ibid.) have to be considered different although they are in neighbouring places; animals: if they have been allocated the same level (out of three levels) of closeness to nature, but are not identical as if painted by one artist.
Different. If human figures have non-bordering numbers on the list of types (e.g. 5 vs 1, ibid.); animals different: levels of closeness to nature; all figures: outline paintings vs filled-in paintings.

POSTURE
Identical. If the figures display the same posture of the body with the same position of legs and arms (maximum deviation 15°).
Similar. When posture of the body is the same (e.g. bent over) but position of legs and/or arms is different.
Different. If posture of body and position of arms and legs are different (for strict definitions see Pager 1989: 357).

ACTION
Identical. If both figures are displaying the very same basic configuration, e.g. standing vs standing, or running vs running.
Similar. Different static configurations among themselves are similar as well as different non-static configurations, e.g. squatting vs standing and walking vs running.
Different. A static action vs a non-static action, e.g. sitting vs walking.

COLOUR
Identical. If both figures have the same colour-name on one page in the Munsell Soil Color Chart (1975); a colour name is given to groups of one to six numeric colour tones in the Color Chart.

![Figure 3. Basis of calculation in the assessment of coherence. Different values of points are assigned to features on identity or similarity or dissimilarity.](image-url)
Similar. Figures with colour-names of adjoining fields in the Munsell Soil Color Chart (e.g. 10R red vs 10R weak red, ibid.).

Different. Figures with colour-names of non-adjoining fields.

SIZE.

Identical. If the difference in size is less than 10%.

Similar. If the difference in size is between 10% and 20%.

In case of the presence of smaller figures these can be regarded as similar if there are some intermediate figures, i.e. figures of a size between the largest and the smallest figure (sequential alteration).

Different. Differences of more than 20% without intermediate sizes.

ELEVATION

Identical. Figures that are turned in the same direction and have more or less the same (imagined) walking level (maximum difference of an arm’s length of the figure).

Similar. Figures that are turned in the same direction but the (imagined) walking level differs for more than an arm’s, or leg’s (on animals), length of the referring figure; similarity is also given in cases of twisted positions, i.e. figures with their bodies turned in different directions but looking into the same direction.

Different. In cases of no congruence.

ATTRIBUTES

Identical. Figures displaying the same shape of heads (according to list of types in Pager 1989: 355), the same horns (for animals), the same instruments, the same body attachments and/or the very same kind of special stylistic features (e.g. disjointed body parts). If none of the figures has any special attribute at all this, too, is considered to convey identity.

Similar. If two figures for example have disjointed body parts but these do not occur on the same places on their bodies; or if one figure has bow and arrows and the other only has a bow.

Different. Attributes present on one figure and absent on the other.

For a practical example see Figure 2 (Brandberg, Ga˚aseb Gorge, Site 12). Probably everyone will at first sight discern two groups of humans with an inner coherence that can doubtlessly be attributed to each of them because there are strong similarities between the members of each group. But asking whether both groups form a unity or not, whether both subgroups belong to one scene, will elicit different answers from various people.

Calculation of the coherence value for the figures marked x in Figure 2 is as follows:

<table>
<thead>
<tr>
<th>Feature</th>
<th>A/B</th>
<th>A/C</th>
<th>B/C</th>
<th>B/D</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIES</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>TYPE</td>
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<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>ACTION</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>COLOUR</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>SIZE</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>ELEVATION</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>ATTRIBUTES</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SUM</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>21</td>
</tr>
</tbody>
</table>

Every observer probably agrees that figures B and C are of high coherence and that their relation to figure A is uncertain. However, if figures A and C can be assigned to one scene (coherence 20 points), it follows that figures A and B also belong to one scene (in spite of a coherence of 16 points), since they are linked by figure B which has sufficient common features with both of them. To check the coherence to the group of women above (e.g. to figure D) one should choose the two figures looking most similar, in this painting figures B and D. As demonstrated above, these two figures display enough coherence to include them in one scene; would I have chosen to compare figures A and D, i.e. the ones not looking most similar, then the result would have been only 18 points and they would not have constituted a coherent scene. Choosing always the two members looking most similar out of two groups has the advantage that in case of insufficient coherence the first calculation is already decisive and final for all other figures in question.

The benefits of determining coherence

It is now necessary to discuss why this complex system for the definition and rating of scenes should be implemented especially in view of other recent and promising approaches to the establishment of scenes (e.g. Lewis-Williams 1981: 20, 1983: 55, 1986: 176; Hammond-Tooke 1982: 73; Lewis-Williams and Loubser 1986: 271). These last approaches call for concepts of scenes which principally consist of relations of symbols and metaphors.
This may be acceptable for certain domains, but there can be no doubt that the artists still had further means available to create connections; for example, in a group of figures that are merely walking together as in Figure 5.

Here no specific hypothesis needs to be tested to establish that these figures belong together. Evident features of likeness in physical shape are creating a unitary picture. In the sample of paintings from Brandberg analysed so far (approx. 5600 figures in 499 scenes that only comprise humans) scenes of this character amount to approximately 42%. It has to be conceded that within these 42% (= 209 scenes) there is a certain number which through specific arm positions or bent-over postures may rightly be related to trance experience. However, the overwhelming number of such groups is at first sight characterised by a jointly executed activity. When J. D. Lewis-Williams stated that 'activity groups are less easy to quantify than one would suppose' (Lewis-Williams 1981: 20) he may have had such groups in mind. He furthermore maintains that 'Activity groups often provide, by the relating of elements, a valuable clue to the meaning of other enigmatic paintings and also to the significance of the plethoric eland paintings' (ibid.). His main use of the concept of activity groups is 'chiefly to clarify certain sets of puzzling
paintings and, ultimately, the significance of the dominant element of the art, the eland’ (ibid.). This view about activity groups is not as explicitly expressed in his later writings, but it is a constant factor always implicit in his work.

The entity of an ‘activity group’ indeed makes a lot of sense when working on a large sample of rock paintings without a hypothesis as to the semantic aspect of the art, but rather undertaking an analysis which tries to implement culture-unspecific elements of human communication. This is evident from any representational depiction of living beings. They are generally dominated and visibly characterised by interaction at different levels of co-ordination. This is the case in static configurations such as standing or lying together, but not so where specialised activities are aimed against each other, as is evident in presumed fighting scenes. The statement that ‘a herd of eland by themselves, for instance, do not constitute an activity group’ (Lewis-Williams 1981: 20) is based on a different understanding of what has to be regarded as some kinds of activities or processes; these are detectable by being expressed through a verb. Langacker writes that the definition of ‘process predications involving physical activity’ [...] ‘makes no reference at all to motion, either physical or abstract, so this schematic description is applicable to both static and dynamic relations’ (Langacker 1983: 125). Consequently the definition of an activity group as a universal concept is not dependent on dynamic activity but is already sufficiently marked by a static relation. The term ‘activity group’ may therefore very well be extended to ‘a herd of eland by themselves’ and there is no evident reason why activity groups should only be ‘almost entirely defined by the activities of human beings’ (Lewis-Williams 1981: 20).

Now that the entity of an activity group is explicated, its importance within a system of communication can be demonstrated. In seeking elements that make figures appear to belong together, the first and most basic features are those which are alike - a banality which indeed was never questioned by any author. But what holds true for the physical appearance should also hold true for physical processes. As much as a common colour, for instance, makes two figures seem to be related, so an equal or similar activity basically makes them cohere stronger than if the activity was different. Thus, participation in any common activity has to be regarded as a component potentially defining activity groups. Once this is accepted, the categories and structures of activity have to be determined. Looking at the activity displayed in Figure 5, without more interpretation than is needed to call these figures ‘humans’ (and without culture-specific background), one can say that these figures are walking. A cliché, indeed, but it is the starting point for the analysis of any kind of action where activities are placed into structural categories without the application of ethnocentric interpretation. Accordingly, the common stride in one direction is the most obvious and elementary aspect in the activity of these groups as coherent units. The observer is guided, as it were, by the activity of the figures to the goal they are aiming at. However, a material object as a goal (other than the next group) is not visible in this instance - nor is it in most other depictions of striding people - hence the conclusion has to be that the main intent of the painter was the representation of figures that are walking without a painting’s goal in sight. Of course this is another platitude because every painter indeed painted that which he or she wanted to paint. But the recurrent repetition of a certain content has to be regarded as a culture-specific element in this instance people striding along in the same direction.

It is possible to seize this very intention in a structural way by assigning to it the status of the Focus of the depiction. The Focus is an explicit means which helps the beholder to recognise the main information the artist wants to convey; it emphasises what the interest of the actors in the scene is directed at, even if it is seemingly aiming nowhere. In language communication the function of Focus is practically the same: it marks the new information, it is the centre of an ‘information block’ (Grimes 1975: 280). Halliday specifies that "The focus functions as a signal to the listener that this is what news, what is to be attended to' (Halliday 1981: 11). In other words, for a speaker the focus is ‘that which is at the centre (or ‘focus’) of his communicative interest’ (Crystal 1980: 148). The Focus is used to relate something new by means of something already known. For example, everybody in a forager society knows a hunter by his or her equipment. ‘Hunter’ is often the Theme in scenes in the rock art of Namibia. But a hunter is capable of doing an endless number of things, hence what he or she does is the News which is told in a depiction, thus constituting the Focus. However, looking at the rock art of Namibia, hunters are not represented in an endless number of doings but in a rather small number of activities, the least of which is actual hunting. Behind this conspicuous focal selection lies a strong culture-specific mechanism which still awaits explanation.

The advantage of the category Focus is in its potential for the distinctive description of events at a low level of interpretation. For the denomination of the Focus there is no need to fantasise some social procedure depicted in the scene. Instead, activities are seen on an elementary level such as movement or application of instruments - and yet one obtains distinctive descriptions.

A number of ten Foci proved sufficient for a comprehensive analysis of the Focus of rock painting scenes. Two of these are concerned only with technical-compositional features, which is the case where more compelling features of activity are lacking, namely:
DC = 'density centre of the scene', the place where most figures are closest to each other;
EP = 'most elaborate painting', the figure which took most effort to be accomplished (for further specifications see Lenssen-Erz 1989: 360).

If either of these Foci applies to a scene the figure(s) as such stand in the foreground with the activity being of less importance. This compares to many depictions of animals which seem to fulfil their function by their mere presence.

The remaining Foci are chiefly concerned with the activity displayed in a scene. Static relations are expressed by:
CDG = 'common direction of gaze';
BF = 'bi-focal', which may also occur in dynamic processes;
MF = 'multi-focal', also in dynamic processes, commonly one might call this 'disorder'; it appears only in 1.6% of the scenes analysed so far.

Another comparatively unspecific Focus is:
CDM = 'common direction of movement', which can be attributed to the scene in Figure 2.

Most complex and perhaps most interesting are the Foci CI = 'centre of interaction';
GI = 'goal of interaction';
CSA = 'centre of specialised action', the specialised action being in most instances a strictly defined specification of interaction (cf. Lenssen-Erz 1989: 368);
GSA = 'goal of specialised action', another specification of interaction.

The four last kinds of Foci are interesting insofar as specific social effects of activity may become visible without, of course, necessarily relating the meaning. At any rate, interaction is the result of social processes and in order to give 'interaction' a strong culture-specific potential for the Focus it was defined according to activities which require articulation. Therefore walking in single file in a group of several people is not listed under 'interaction' here.

To give an example of certain Foci: in Figure 4 the uppermost scene would be assigned a GI with the antelope being the goal of interaction. In the scene at the bottom a CSA would be matching, referring to the three figures displaying a visible co-ordination in their body postures and movements (which by definition is specialised action).

Figure 6 gives an impression of the importance of different Foci in the Brandberg rock paintings. In this unselected sample insignificant activities are the main theme of the paintings and this statistical significance poses questions as to the meaning of the art. That the painters took the effort to use a highly developed communication system to chiefly convey most ordinary and mundane human activities gives quite some credence to the assumption that a good part of the rock art of the Brandberg is of symbolic meaning, using iconic items as opposed to metaphorical expressions of culture-specific concepts.

Conclusion

It has been proposed here that the Focus be regarded as the central entity in the informative structure of scenes as it is in language, but without doubt a scene is not characterised distinctly enough by only denoting the Focus. Therefore its background has to be analysed too, because with the Focus being concentrated on action and consequently on 'actual news', the background may - under ideal circumstances - allow a temporal and spatial specification for that activity. Accordingly everything that is detectable in a scene but does not contribute to the Focus is 'collected' under the heading of Setting. This can be all kinds of special features, objects carried, or gestures. However, this aspect of a scene has not been studied in its structure so thoroughly that a small number of categories were determined to cover all kinds of Settings (cf. Lenssen-Erz 1989: 349).

To conclude, a scene can be fully and distinctly described through three parameters: firstly the Subject or Theme of the scene; secondly the Focus; and finally the Setting. This treatment of rock art data enables researchers to analyse any number of rock paintings with categories that allow a direct assessment of the content of a scene - without having to resort to interpretive notions such as hunting scenes, dancing, domestic scenes and so forth. The abstraction in the Focus categories summarises scenes according to a social rating of the activity (interaction) displayed and not according to an imposed personal evaluation. Through the denomination of the latent structures Focus and Setting a comparison is possible between scenes which superficially may not seem to have much in common.

Acknowledgments

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COMMENTS
By SHIRLEY CHESNEY

Tilman Lenssen-Erz’s paper has meant a great deal to me since I read an early draft after meeting the author at an international conference in the late eighties. I received his present article just a short time after reading Pat Vinnicombe’s review of the first volume of the late Harald Pager’s series on Namibian rock art, in which Lenssen-Erz’s team devotedly published the work of their mentor (Vinnicombe 1991). Both the article and the review demonstrate for me the tragic-comedy in our late-twentieth century’s inability to find ‘coherence’ in our methods and our texts.

What interested me about Lenssen-Erz’s article and which I still feel is the greatest strength of his paper is the significance he grasped in making the relationships between motifs and the totality of his rock art sites explicit: raising the question of defining and differentiating ‘composition’ and ‘scenes’ in rock art, systematically. How to see the work as an encoded visual language, rather than analysing and interpreting the individual forms is the goal he set himself in this paper.

Lenssen-Erz summarises the use of the term scene in the literature of rock art analysis and sees it used interchangeably with the word composition. Some of the examples he gives of Spanish Levantine and South African rock art are mostly figurative where the distinction he makes between scene and composition might easily apply. But in the new work of documenting Upper Palaeolithic superimpositions (be it through analysis of pigments by Lorblanchet at Pech Merle and Cougnac or by Clottes at Niaux, or by delineating the ambiguities of perception by Ucko, Layton and their team at Hornos de la Peña) it would be difficult to see if the variables (and their quantifications) would assist in the complex task of distinguishing subgroups, testing them for coherence and arriving at further information about innate structures, or the meaning of a group, much less of the composition as a whole.

The author frankly states that ‘at the moment the main advantage of this method is its systematic character and the possibility it offers to start an analysis of groups of figures at all’.

Finding the essence of coherence in pictorial rather than linguistic terms becomes the task for which certain discernible features (size, colour, elevation, attributes) are compared in a scheme relating one figure to another to delineate quantitatively a subgroup of figures constituting a scene, ignoring other close-by figures, because of the admitted complexity of entire compositions.

Perhaps this is where I become most dissatisfied with the author’s formulation. Despite several good quotations, he fails to give an adequate definition of composition or indicate the depth of content previous researchers have assigned to it. It is not just the totality of figurative and non-figurative markings from which a much smaller subject of related forms can be isolated which are called scenes. Composition can be seen as the structuring principle itself by which artistic mind and feelings, material means and historical context are all interrelated.

Lenssen-Erz belongs to a new generation of researchers who have benefited from the questions raised in mid-century by Raphael, Leroi-Gourhan, Laming-Empeeraire and Marshack, among others, who questioned the validity of assigning meaning to prehistoric symbols through ethnographic parallels. It has always been the case, it seems, that even these researchers, after describing the formal structures of their system, somehow smuggled ethnography in by the back door to show the ‘secret idea’ behind the structural system.

What was liberating in their work after so many years comes back to haunt me and others in the rock art community in the formulations of Lenssen-Erz. With what measures can we evaluate his method? Can we see its adaptation and value for studying rock art outside the Brandberg of Namibia? Can these variables be adopted for the groups that made the analysis of non-iconic and non-representational systems possible in the work of Marshack, d’Errico and Bednarik?

Are there any proven universals in the terms theme, focus and setting defined by Lenssen-Erz that make them more efficacious than the terms subject/object, centre of interest and context with which we are familiar in looking at pictures?

Underlying the use of structural theory from which the author quotes is the idea that it is possible to make an analysis on the basis of ‘culturally-unspecific elements of human communication’.

The author seems aware of the limitations of using ‘like’ = ‘like’ or ‘similarity’ as the basis for anything more complex than a simplified group, defined as

- activity confined to one denominated action or interaction only;
- time span limited to one level only;
- finite number of participants present.

He himself comments that these parameters are insufficient for ‘interpretations that rightly demand far-reaching concepts beyond the surface of mere representation’. Reaching that level of conceptual understanding he identifies as possible only with ethnographic knowledge.

Expressing intuition quantitatively returns one circularly at the end of this complex process to higher levels of familiarity and intuition but not necessarily to conceptual understanding by the route that the champions of ‘internal analysis’ felt would lead them towards that goal.

Following his method for accessing coherence where comparisons between figures yield numerical values for being identical, similar or different, species difference is assigned the lowest value. Thus the relationship between Leroi-Gourhan’s famous ‘bison/horse’ pairing can hardly be addressed. Overlapping or confronting figures in European Upper Palaeolithic panels would not be assigned the values to bring out the significance we must accord to these favoured motifs.

Is human communication possible without being embodied culture-specifically? What is the culture-specific mechanism behind the small range of activities describing the category focus of the theme, hunter, in the examples of the author? Lenssen-Erz feels that the use of the descriptions ‘walking’, ‘hunting’, ‘dancing’, ‘fighting’ etc. are imprecise and are imposed by the specific culture of the contemporary researcher on a prehistoric art system. But modern science has taught us that Lenssen-Erz’s method, his use of his intuition and terms, must equally effect the ‘signified’.
At this point I confess to being struck in my own self-doubts about how those insights I acquired from the mid-century masters of this discipline can be practised. Pat Vinnicombe expresses my feelings when she asks (cries out), "if meaning cannot be deduced, is there any point in establishing structure?" She continues by answering her own question that the huge data base Lensus-Erz has enlarged and the method he adopted have surely helped him deal with the thousands of figures reproduced from the Brandberg. For one who never has such an overwhelming practical task which Vinnicombe, Pager and Lensus-Erz have carried out with such selflessness, this is a satisfying confirmation of its value. But I am unconvinced that it is suitable for the more complex symbol systems that emerge from the very beginnings and continue into contemporary indigenous practice.

Modern science is not less rational or objective by abandoning the separation of rational intuition/space/time/subject/object dichotomies for truth of integrated experience that can bring us closer to the Brandberg indigenous artists. To do this, I believe we cannot depend on linguistic theory, symbolic logic as universal terms or methods to reach such widely divergent, culturally-specific art forms as the Drakensberg prehistoric Namibia and Upper Palaeolithic Franco-Cantabrian art. But we must continue to bring from each region and each time what our best, most experienced and dedicated researchers can contribute in their own autonomous domains. In this sense, I look forward to the continuing theoretical work of Lensus-Erz in the area of composition which I think is most important for all of us.

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By JOHN CLEGG

Lensus-Erz's paper is a fine example of careful, detailed work. Particularly praiseworthy is the explicit use of the technique of formalising an intuition so that it may be applied objectively.

The paper is particularly welcome to me personally because it refers to detailed analysis of technical attributes of pictures, such as the relationships between figures, and various aspects of drawing.

The paper originated in work on rock art of the Brandberg. There is a large number 9) of groups of human 10) figures, often marching in step. The author calls such groups scenes. Around these groups are other human figures, which may or may not 'belong with' the groups. It is desirable to determine whether the outlying figures belong with the group, so that the data for analysis may be complete. The ultimate aim is to examine the human

'scenes' with a view to elucidating what they are about, in the context of Lewis-Williams' work on trance.

A great deal of good work has gone into the development of methods to recognise 'scenes' in this particular body of rock art, and the author generously wishes to share the work and results with the rest of us, hoping that we may find it useful. Certainly it would be interesting to recognise scenes in rock art, and to have tools to help us do so consistently.

Cross-cultural validity?

There are two questions to ask of the tools presented here for the recognition of scenes:

1. Are the methods described so clearly that they can be used by someone other than the author; do the methods contain systematic errors?
2. Does the method actually do what is claimed, namely recognise scenes?

Both questions can be investigated by trying the proposed method on other examples. If it is to be useful outside the Brandberg, it should work at least passably on pictures from other cultures.

For no remembered reason I chose the first five of the following pairs of figures from pictures which I believe are scenes (Fig. 1):

1. Kühn 1956; Fig. 54, p. 72: top large boar and man
2. Trezise 1971: Plate 11, p. 56: horse and ex-rider
3. Trezise 1971: Plate 13, p. 66: woman and orange man
4. Stanton et al. 1965: dust cover: horse and rider
5. Stanton et al. 1965: dust cover: ship and crew
7. Stanton et al. 1965: dust cover: row of ships

I followed the directions in the paper so far as I could and attained the following results:

<table>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tr>
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<td>1</td>
<td>3</td>
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<td>3</td>
<td>3</td>
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<tr>
<td>Attributes</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Sum 13 8 10 7 12 32 32

Results: description of method

I found that in general the description was clear enough for me to work from. The main difficulty was in determining style (Fig. 1.3) or type which are defined in relation to Pager's list of types to which I do not have access, and which would not be applicable anyway to the pictures I chose.

All the pairs I chose involve difference of species or sex, which had an overwhelming effect on the total. Comparing the posture of humans and other animals was difficult, for only one is of upright stance. For cross-cultural usage I find that the two attributes style (or type) and species are too similar, so that one characteristic could be counted twice; the same trouble came when trying to
scene with several fish and several fisherpeople, the one angler with a fish on the end of his line 'belongs with' the fish. This example makes it seem that I do not accept the 'banality which indeed was never questioned by any author' mentioned by Lenssen-Erz. In fact I do not believe that coherence is an important element in scenes. The author refers to characteristics generic of a scene. In my understanding a scene is the product of a desire to make a statement about the interaction of several (two or more) elements (independent things). Every pair of elements of a scene belong together more than they belong to elements exterior to the scene 11). The problem Lenssen-Erz offers to solve is to recognise which figures in a picture belong together, and thus may be constituents of a scene.

In Australia, scenes in rock art have been sought for two hundred years; a few have been found, but in general they do not form a very important part of rock art. But we do have fairly numerous rows of motifs: people or birds or fish, often of similar size and style and facing the same way. These things would, I believe, be recognised by Lenssen-Erz as coherent 'scenes'.

But in the examples of scenes I happened to choose, the first six are not cohesive enough to be part of a 'scene', because the protagonists are of different sex or species.

Several days later I realised that 'a fleet of ships' (6) is also a scene, like its constituent 'soldiers in a boat' (4), and its constituent 'a platoon of soldiers', as 'cavalry charge' (7) may be more of a scene than its constituent 'man on a horse' (5). In the event the fleet of ships and cavalry charge both scored maximum points for coherence. When their coherence was measured (see table above) 4 and 5 (horse and rider, ship and crew) are NOT scenes, but 6 and 7 (row of horsemen, row of ships) are.

The Bayeux Tapestry experiment showed that the proposed measures are very sensitive to the scale of scene: a platoon of soldiers (in a boat) is coherent, and therefore a scene; whereas soldiers in a boat is not; a fleet of ships is a coherent scene. This puts the whole discussion into a complexity and scale where the skills of semiotics are essential. I imagine that the letters of a written word may be less coherent than the words in a sentence, which in turn may be less coherent than sentences in a paragraph. But as I write this I think of examples which disprove my suggestion. I shall thankfully leave the question to the semioticians.

A proposal
I believe that we should gratefully incorporate Lenssen-Erz's work in our tools for studying rock art, but that another name be found for the entities he is able to define so thoroughly, perhaps coherent scene? This would free the word scene for its common usage, and allow composition to return to its technical meaning in art works of.

Composition is the spatial relationship of the marks to each other and to the rock surface: the distribution of the marks over the surface.

My work on this concept revealed it as a powerful tool. Composition can be studied and measured more objectively than scenes, or coherence, because it does not depend on the recognition or definition of species, actions, types. Moreover, the 'message' in composition may be found. Departure from a 'normal' composition, if not

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11) This formulation has the advantage that it allows scenes within scenes.

compare the posture and the actions of people/boat, human/boar, horse/rider. These problems are doubtless caused by my poor knowledge of the whole system, but need to be eliminated for cross-cultural use. How is size measured? I measured maximum length, but would prefer a simple measure of area, such as max L x max B. Elevation puts too much weight on facing the same direction. The whole system is biased against dissimilar things being in the same scene; it is biased in favour of homosexual human figures marching in step.

Scenes
My idea of scene is not like Lenssen-Erz's, nor are my scenes so cohesive. For instance I believe that in a fishing

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Figure 1. Pictures 1 to 7. From Kühn 1956; Trezise 1971; Stanton et al. 1965.
explained by shape of support, or taphonomy, implies deliberate grouping.

Lenssen-Erzen’s provocative paper is effectively about the semiotics of, not language, but rock art. It raises several other interesting points.

Tautology and perspective

Lenssen-Erzen states:

of course a certain level of competence has to be attained by being familiar with the fauna of the rock art region, the lifestyle and technology of the foragers, and the stylistic rules and conventions of the art.

Statements of this type make me very uneasy. It is certainly true that a growing understanding of any art and its environment snowballs in a positive feedback loop, making it easier to comprehend new examples of art or culture. But it is also true that such feedback is tautological, for it becomes easy to recognise what is already known, whether the knowing is correct or erroneous. And with each iteration it becomes harder to accept new ideas. The example in the proposed scheme which worries me most is the apparent assumption that perspective is not a part of this art. European Renaissance perspective allows distant and close objects to be a part of the same scene: given similar objects, the nearer one is larger, more saturated and contrasted in colour and shade, with its feet lower on the picture plane than the further (all things being equal, including that the ground is below eye-level). If this perspective were recognised as a feature of the rock art under consideration, neither elevation nor size would be so important in the diagnosis of scenes. Looking at Figure 2, I see a picture where the smaller figures, their feet higher up the page, are also more distant. The runners in the foreground who are overtaking the marching group are taking a shortcut down a valley near us. If Figure 4 is examined with the same idea of perspective, the question about how many scenes there are can be restated in terms of how many different perspectives there are.

I do not have the space to consider fully the last page or so of the paper, which seems to me a very valuable contribution to the semiotics of rock art. But I am a little concerned at the remark that the focus of Figure 4 is the antelope, which looks to me probably NOT to belong to the women in front of it: species different 0, style different 0, posture similar 4, action similar 4, colour different 0 (the women have white faces, the antelope faded body), size similar 4, elevation different 0 (judging by the antelope’s leg-length), attributes different 1: total 13. Let us hope I misunderstand how the system works.

I am very grateful to Lenssen-Erzen for sharing his work with us and giving us the opportunity to use it as a stimulus for what I hope will be productive discussion.

John Clegg

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University of Sydney, N.S.W. 2006
Australia

By BERNARD M. J. HUCHET

This is a very thoroughly researched article discussing a methodological problem poorly investigated in the past. The author shows an acute awareness of problems inherent in his approach to the identification and analysis of rock art scenes. As such, I merely wish to further clarify the extent to which some of these problems may reduce the methodological accuracy, and perhaps act against the universal applicability, of the scheme.

Although Lenssen-Erzen makes every attempt to rely on universals using linguistic models as heuristic devices, his method can not be equally and objectively applied to various bodies of rock art. This is due to the manner in which artistic conventions used in a given region can introduce subjectivity in the variables he uses to define a scene.

Consider for instance the ways in which Lenssen-Erzen’s scheme is affected by artistic conventions present in the rock art of the Laura region, Australia. On the basis of my analysis of 1000 anthropomorphs, I can conclude that these conventions affect the reliability of at least two of the eight features used by the author to assess the coherence of scenes, namely action and attributes. The depiction of action appears largely governed by a regional convention whereby over 94% of humans display a lack of movement. Certain attributes of the Laura figures also reflect stylistic conventions used across the region. For example, 71.5% of the heads on anthropomorphs are round in shape and plain, lacking anatomical features except for the eyes. The second most represented head shape category includes only 6.4% of the total sample. A similar pattern is again apparent in the depiction of men’s penises with 81.2% belonging to the dominant category, and the second most represented category including only 5.2% of the total sample of penises.

These regional stylistic conventions do affect the validity of the scheme. In the Laura region, the proximity of human figures sharing identical features such as head and penis shape, lack of action and other stylistic conventions, may be read by Lenssen-Erzen as an art scene with his scoring system when, instead, none of the figures may have been intended as part of a scene. The scheme may thus be too premature to deal accurately with problems introduced by regional artistic conventions. However, such problems are watered down because the author relies on a relatively broad range of features to establish the presence of a scene.

A second problem I perceive in Lenssen-Erzen’s method is that it has not been subjected to independent testing, contrary to his assertion. In fact the approach used to develop the evaluation method is circular and the validity of the scheme remains to be tested against clusters of figures known to have been depicted as scenes from artists themselves or knowledgeable informants. Australia represents a potential field to test the author’s scoring system as there are a number of Aboriginal informants who have provided information on the art. I am not aware, however, of ethnographic accounts that relate to scenes although many relate to isolated figures.

In conclusion, the author has made a major methodological contribution in his attempt to deal with the definition of scenes. While I do not query most aspects of the author’s methodology and the concepts relied upon, I do have reservations in accepting that a score of 19 points will work objectively to define scenes in any rock art region, due to the presence of artistic conventions.

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REPLY

By TILMAN LENSEN-ERZ

I thank the commentators for their Comments and the valuable hints they gave regarding my concept of a scene. I particularly appreciate the Comments of Shirley Chesney and John Clegg - authors I see as being among the few rock art researchers who have examined this issue in considerable depth in their own research.

There are, however, some points which need clarification. It appears that I did not emphasise strongly enough the importance of the essential link between events/interaction and the concept of scene. This point was somehow missed or underestimated by all three commentators. I would like to stress that my understanding of a scene is not meant to be extended beyond the apparently common, though obscure, notion of a scene. This notion somehow relates a scene to some actual event, and thus depends on some minimum degree of action and interaction. This understanding is rather narrow and perhaps conservative, but it seems better compatible to other people’s unexpressed ideas of scenes.

In her Comment, Shirley Chesney doubts whether my concept of scene would help to identify scenes within compositions of Palaeolithic art in Europe. Clearly, it does not help - because I do not think that there are scenes in this art. The information conveyed by Palaeolithic European art did not, or only rarely, require the reproduction of events since the presence of the (animal) symbols served the conveyance of the message (cf. also the figurines). Chesney is certainly right that analysis of composition would seem more promising for this body of art. But her complaint about the lack of analytical devices for composition in my paper is in itself a prototypal expression of the complex problem: each of the terms she uses, such as ‘structuring principles’, ‘artistic mind and feelings’ or ‘historical context’, could be the starting point of an extensive scientific and philosophical discussion. And yet, as I have quoted, the progress in research on composition would seem minimal considering the attitude reported of Plato some twenty-four centuries ago. The purpose of my approach is not to find the ultimate and universal key to analyse all rock art. The main scope of my analysis of scene is to resort to hard data in the paintings (i.e. data which do not change under different theoretical perspectives) and considering the soft data, viz. interpretation, only when every depiction has provided hard data input. In view of the features of a composition proposed by Chesney I do not see how hard data could be collected for compositional analysis.

From the same misunderstanding of my approach springs Chesney’s demand to perhaps test the application of scene analysis on other, even non-iconic and non-representational systems. The concept of scenes I propose is a heuristic device, i.e. a tool allowing the extraction of data from rock paintings long before the whole complex system is fully understood - a point which probably will never be reached. For the Brandberg rock art this tool is applied to a body of art which is dominated by human figures depicted in elementary activities. Other bodies of art, I believe, will need very different variables for the analysis of groups and small entities other than composition. Because of this restricted application of my devices I chose, and narrowly defined, the terms theme, focus and setting which, Chesney says, duplicate the ‘familiar’ terms subject/object, centre of interest and context. I am not aware of any rock art literature which would elaborate on any one of these terms (except perhaps on subject - a term which I also use), which thus not only lacks universality but even some small-scale adaptation.

I totally agree with Chesney that my disposing of terms such as ‘hunting’, ‘dancing’ etc. in the description of scenes is not objective. But my terminology may prevent such circular connotations as hunting scene = hunting magic, or dance scene = trance dance etc. My terminology is based on structural features instead of random ethnological associations.

Finally, Chesney wonders whether there is any point in establishing structure if meaning cannot be deduced. Structure in communication mirrors other structures in society. For example, in the Brandberg rock art it can be demonstrated that the division of labour in the society of the painters is reproduced in the paintings by a clear patterning of female and male activities (Lensen-Erz 1992).

John Clegg in his Comment tests the numerical system for scene analysis. This is very helpful and provides the opportunity for further clarifications. First of all, I must say that this analysis was not designed to ultimately examine scenes in the light of Lewis-Williams’ trance hypothesis. For me it is only a by-product to find out that only some 20% of scenes with humans in the Brandberg art display such a degree of interaction that they might compare to 80% of those scenes which are published as demonstrating shamanic interpretations.

In his testing of the coherence analysis, Clegg has formulated the second question wrongly: ‘Does the method actually do what is claimed, namely recognise scenes?’ Perhaps I was not clear enough in this point, but it is my view that my method does not recognise scenes, it creates them. The way I chose the features and the arbitrary borderline I drew at 19 points can only result in an artefact. Nonetheless, this artefact matches most of the time that which in common understanding would intuitively be termed a scene.

With Clegg’s choice of scenes I do not see much difficulty even though he arrives at a sufficient number of points in only two instances. In my paper, however, he seems to have missed the part where I stated: ‘in the absence of similar or equal features, interaction taking place in a depiction is a good indicator for the scenic connection of figures. Accordingly, a “classical” hunting scene can, as a unit, be detected as safely as a scene of equal humans striding along’. Hence most of the groups which Clegg chose are scenes because of the interaction which is depicted (riding of a horse or use of a boat are forms of interaction). A row of ships, on the other hand, would not seem to me to be a scene, since ships cannot act and therefore do not create an event (only what is done with the ships becomes an event).

The only real problem which I see lies in the first depiction which is from the Spanish Levant. There is, of course, no similarity between the man and the boar. But there is also no obvious interaction. The only link might be juxtaposition. The meaning of this scene (if it is one) seems to lie at a level which does not imply the direct interaction that is constituted by the very act of shooting. In my opinion the - admittedly nebulous - features of
composition carry more information in this picture than the event-associated features of a scene.

This standpoint also applies to most of the Australian rock art and therefore I agree with Clegg’s critique that rows of similar motifs in Australian rock art might be detected as scenes. However, the very low differentiation of activities in most of the Australian figures does not enable one to define particular events. The vast number of events or ‘scenes’ have the same theme, focus and setting, thus making the notion of scene superfluous. Features of composition might be more promising in the analysis of Australian rock paintings (as, for example, in European Palaeolithic art). This point is also emphasised by Clegg, but I see the same problem in his opinion as in Chesney’s Comment: the concept of composition proposed here does not lead any further than Plato’s concept. I doubt that with a bulk of exclusively soft data a ‘more objective’ study of composition would be possible. I see Clegg caught in composition in the same trap as with scenes when he speaks of ‘deliberate’ groupings. How can one know what is deliberate when the painter cannot be questioned? And the problem still remains that there might be an idea about what should be analysed, but there is no indication about how this should be done - a methodology is lacking.

Clegg also touches on the issue of perspective in the paintings. Clearly, I do not have the slightest difficulty in perceiving a good number of paintings as if conveying spatial depth. However, this concept still seems tentative to me and I have no idea about its possible significance, hence I do not see how to incorporate it in the analysis of rock paintings. What we perceive as spatial depth might equally well be meant to convey, for example, temporal depth.

In view of the Comment of B. Huchet I can only repeat what was said before in condensed form:

- Scences are representations of events, therefore they are most likely to be found in art bodies which show a high differentiation in human activity (e.g. paintings of southern Africa, Sahara, Spanish Levant).
- The calculation of the coherence-rate is neither objective nor universal. It is a heuristic device shaped especially for the rock art of Namibia. What might find a broader application is the idea to begin analysis with features which are basic to human perception, viz. the physical morphology of a phenomenon.
- Interaction between subjects in a depiction is a sufficient condition to constitute a scene.
- If interaction is not very elaborate, equality and similarity of morphological features can evoke a degree of coherence which helps to perceive various figures as one scene.

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Resumen. Generaciones de investigadores de arte rupestre han estado escribiendo acerca de ‘escenas’ y ‘composiciones’ sin una conveniente, extensivamente reconocida definición de lo que éstos son. Este artículo trata de determinar las diferencias entre escenas y composiciones y de definir una ‘escena’ a objeto de introducirlo en un análisis uniforme del arte rupestre. Un concepto de coherencia es desarrollado como un constituyente de las escenas que pueden ser determinadas por medio de un sistema numérico de clasificación. Finalmente un modelo estructural para el análisis sistemático de información sobre escenas es propuesto, usando las categorías de tema, foco y montaje.

REFERENCES


