

# EXPRESSION

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THE INTELLECTUAL AND SPIRITUAL EXPRESSIONS OF NON-LITERATE PEOPLES

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Har Karkom, Negev Desert, Israel: Flint orthostats in the Upper Paleolithic site

# EDITORIAL NOTES

## ART AND RELIGION: MEETING OF CULTURES

### DICTIONS, PREDICTIONS AND CONTRADICTIONS

A few months ago in the centre of Jerusalem I met a man I had met a few years before, in a sheikh's tent in the Negev Desert. Then I had been his guest. The conversation that followed may have just some links to the topic of the present issue of **EXPRESSION**: 'Art and Religion'. It illustrates, however, the meeting of cultures and non-conventional looks at the role of religion in art. Further, it creates a useful link between the past and the present.

It was a lucky occasion to meet an old friend, in Safra Square, in front of the Jerusalem town hall. He was dressed in a long cloak tunic and a kafiye; I had on blue jeans and a t-shirt. We sat on the stairs under the palm trees and he expressed his worries. A few days before a natural disaster had taken place in Mecca and hundreds of pilgrims had been killed. Why? He claimed that nothing happens without the will of Allah. What was the message? Is Allah punishing Muslims?

The quietness of Safra Square did not seem to be aware of riots taking place a few hundred meters away at the Temple Mount in the Old City. One of the jewels of Islamic art, the mosque of El-Aksa, and the compound of Haram ash-Sharif, were sources of both worship and hate. The strange debate concerned who had the right to go there to pray. Again my friend commented: 'Indeed it is difficult to understand the will of Allah! Why should religion be a source of hate?' He then mentioned recent news from Al-Jazeera TV station: the blowing up of ancient monuments in Palmyra: 'Religion inspires both, the creation of art and its destruction.'

My friend wanted to talk, to communicate; perhaps to test how different were our thoughts. The hate against Israel was meant to keep the Muslims united. But hate did not bring any solution and did not unite Muslims. Hate is well incremented by education, religious preaching and politics, but it is not just against Israel, it is not concentrated on one target: Sunnites hate Shiites. The sustainers of the caliphate hate everybody else, Muslims and non-Muslims. The Saudis and the

Emirates hate them. Iranians hate Saudis. One tribe hates the other tribe and men hate other men. People have hate in their heart. My friend expected my reaction. I was just listening.

Once religion inspired art. Now religion inspires war: Turks against Kurds, Armenians against Azerians, Palestinians against Israelis, Syrians against Syrians, Egyptians against Egyptians, Yemenites against Yemenites, Libyans against Libyans, Algerians against Algerians; people hate each other and each specific case is always central. 'From the stories of my grandfather things were not much different when my tribe was moving from well to well and other tribes claimed the same wells. Then each tribe knew just what was happening in its area. Now we know what happens also in other regions, but the more we know the less we understand.' It was a strong statement for the son of a tribe. Probably his ancestors were more confident in their ability to understand.

People are running away from their own homeland and entire populations are moving and are helpless. 'Even my tribe is no more the same ... for the opposite reason, they stopped migrating and are stationed in one site, they do not respect traditions and do not know what they are looking for.'

My friend's mood was pessimistic. He claimed that the responsibility falls on democracy. He criticized the European influence. 'They think they are the only civilized people, and look how they destroyed society! Tribal society has sheikhs, everybody respects and follows them. Democracy caused confusion and disasters. Look how chiefs of government are treated by the public opinion. Nobody is happy. What future can you expect for such society? Can we be surprised that pilgrims are punished?' Both of us forgot that we had other engagements and the talking went on.

Having grown up in two different ages, as a child, persecuted in Fascist Italy where democracy was despised, and thereafter, where we were lucky to taste the pleasures and burdens of democracy, it was a cold shower for me to listen to such harsh criticism of democracy. It came to my mind that perhaps not every human society is suitable for democracy. Traditions cannot be cancelled in one day. My friend, a sheikh

himself, son and grandson of sheikhs, reinforced his thoughts: 'Is democracy supposed to be the rule of people? What democracy? Popular democracy is dictatorship, American democracy is constant rivalry between factions and lobbies, Israeli democracy is good for the Jews, not for the Arabs, Egyptian democracy or Syrian democracies are jokes. Most European democracies are using the term for playing competitions between political clans or parties. Just a few people take decisions, the others decide nothing.' What would then be a possible alternative to democracy? 'Democracy can work in a society where slaves or cheap labour are working and an elite is sharing power and makes 'democratic' decisions. Then also the arts are flourishing. At the time of my grandfather the 10 or 15 elders of the tribe did reunite and make democratic decisions for the entire tribe. Then my grandfather decided. If they had to ask the opinion of thousands of people they would never take a decision. If indeed central planning is necessary to make millions of people survive, we need an easy and sound way of decision-making and an efficient management, which can be best achieved by a computer. Besides that, the autonomy of tribes, clans or families should be granted by allowing them to make their own decisions. My father and my grandfather were sheikhs and our family happily led our tribe for generations; things now are much worse. There is no point in calling it democracy or another name. Terms have lost their value.'

Religion has inspired both art and rivalry. Some people dream of having just one religion survive, the one they believe to be the true one. Would that eliminate hate? Would that increment or destroy artistic creativity? Art must be alternative. Otherwise it becomes the decoration of the regime. 'My tribe was producing beautiful carpets. Now they buy ugly ones in the market'. My friend, who was born in a tent, owned a house in town. He was somehow nostalgic for the old time when he lived in a tent. My people pray but do not produce any art any more. Once religion inspired art. Not any more. Look what religion is producing today!

The death of pilgrims in Mecca returned again to his thoughts: 'Every event must have a reason. Every event is a message. Is there a prediction?' I had a rationalistic reaction. Is it wisdom or lack of wisdom to believe that there may be casual events without reason or message?

Some differences emerged between my thinking and the dictions, predictions and contradictions of my friend, a tribesman with a university degree.

While riots were taking place round the corner, disputing the rights to pray or not to pray, my friend had to queue up at the Jerusalem town hall to get a parking permit. Some years ago he might have had somebody to take care of this. And a few years earlier nobody would have needed parking permits to park a car, a horse or a camel. What else will cause us to queue up next?

On the Temple Mount people were fighting and risking their lives over the absurd quarrel on who had the right to pray there. If indeed praying was what they wanted, why not embrace each other and pray together? The beauty of Al-Aksa mosque, pearl of Islamic art, remained silent while people were screaming round it in the name of religion. Is that an aspect of the topic we plan to face, art and religions? E.A.

## CONCEPTUAL ANTHROPOLOGY

Conceptual anthropology is the discipline that combines various aspects of human and social sciences in respect of human behavior and culture, using experiences of the past to understand the present and build the future. The concept gestated for some time until it was formalized during the UISPP Congress in Florianopolis, Brazil, in 2011, setting new horizons for the human sciences. The goal is to understand human behavior and cultural trends, recurring and isolated phenomena, predictable and unpredictable evolution and change, not only in technology, but also in social, intellectual and spiritual life. It is a journey of discovery and emotions.

Each discipline has its own memory as the basis of research and of the advancement of the discipline itself. Combining disciplines is also a union of memories for a broader base of research and culture. Today media replace technical and historical memory. But the human mind's insights and associations are still irreplaceable. Our being and our actions are rooted in the memory. When we err, we often owe it to our memory blurring. When we reach positive results, it is because we have made good use of our memory. We do not refer to electronic memory but to the one expressed in intuition and discovery, the memory that springs from the deep well of our psyche.



Every being, like every discipline, focuses on certain aspects of memory and neglects others. Together, various disciplines and various cultures share wider dimensions of memory. Such approach turned up to give an immense contribution to the study of the intellectual and spiritual expressions of non-literate peoples.

One of the purposes of UISPP-CISENP, the International Scientific Committee on the Intellectual and Spiritual Expressions of Non-Literate Peoples, in addition to the pleasure of meeting and growing by dialogue, is to promote the common commitment to the understanding of such human expressions, with the support of multidisciplinary research. As students of various disciplines, anthropologists and archaeologists, psychoanalysts, educators, sociologists, semioticians, philosophers and historians, we all wish to face questions, which a shared commitment can help clarify. The meeting of different disciplines offers a wider dimension of knowledge and greater capacity for analysis and synthesis.

Faced with the fashion of extreme specialization, which risks reducing scholars to technicians, conceptual anthropology goes against the tide. No doubt, technicians are needed, but we seek a cultural vision and broad overview in the common work of the humanities and social sciences. Let technicians and intellectuals be aware of their different roles, let them do their own jobs and then enrich each other through the joint dialogue.

Research has a real social function when it produces culture. When culture is creative and innovative, it promotes growth of intellect and stimulates new thought. The dialogue is open to all disciplines of the humanities and social sciences as well as to those who do not identify themselves with any specific discipline or who just want to listen. Each listener is a potential transmitter of ideas and ideas grow and spread not only through those who produce them, but also through those who listen. The dialogue does not stop and is a source of growth and enrichment, and also of cooperation and friendship. Research is a provocative, stimulating and inspiring source of awareness. You are welcome to join.

The present day world crisis is a cultural crisis, a crisis of values and of wisdom that has economic, social and political tails. Reviving the role of culture is our modest joint effort to contribute overcoming the crisis.

## **APPRENTICESHIP IN CONCEPTUAL ANTHROPOLOGY**

The apprenticeship, under the guidance of Prof. Emmanuel Anati, may last from a minimum of two months to a maximum of one year. It grants the apprentice the title of "Research Assistant". It involves the apprentice in active participation in research, editorial activities, compilation, organization and layout of exhibitions and publications, arrangement and cataloguing of ethnological collections, planning of cultural and scientific projects.

During the active presence in the Camonica Valley, the selected apprentices will have access to self-catering accommodation on campus, at a symbolic fee.

Preference is given to graduates and other seriously motivated young people with knowledge of the English language and operational abilities in database. Application as informal letter should specify motivations and skills of the candidate and be accompanied by:

- Curriculum Vitae;
- Copy of record of studies;
- ID Card Copy;
- Passport standard photo;
- Letter of presentation or recommendation from a university professor or a previous employer.

Applications should be addressed by email to: atelier.etno@gmail.com.

## **BECOME A MEMBER OF THE UISPP, INTERNATIONAL UNION OF PREHISTORIC AND PROTOSTORIC SCIENCES.**

**EXPRESSION**, this e-journal, is produced by ATELIER, the Research Center in Conceptual Anthropology in cooperation with the UISPP-CISENP (the International Scientific Committee on the Intellectual and Spiritual Expressions of Non-literate Peoples), an organ of the UISPP. UISPP is offering also other facilities, including participation in its World Congress. Membership of the UISPP will ensure you official status as UISPP Active Member of CISENP. If you are a member of UISPP please confirm your status to <atelier.etno@gmail.com>. If you are not yet a member, and you wish to attend the World Congress, become a member of the UISPP. For further information contact the office of the General Secretary: loost@ipt.pt

# DISCUSSION FORUM

**The Discussion Forum invites readers to be active protagonists in debates of worldwide interest in Conceptual Anthropology.**

## **THE M-F PROJECT: MALE AND FEMALE IN PREHISTORIC AND TRIBAL ART**

The M-F project is inviting authors to present papers about the role of the two genders in production, function and concepts of prehistoric and tribal art. Scholars, students and other persons of culture are welcome to participate in this research with their personal ideas and papers. After being reviewed, the accepted papers will be published in **EXPRESSION** Magazine and eventually in a monographic volume. Among the many aspects of such discussion we anticipate some suggestions:

- 1-The role of men, women and children in the production of prehistoric and tribal art.
- 2-The depictions of male and female subjects, their role and function.
- 3-The use of prehistoric and tribal art by males and females, in ceremonies, gatherings, initiation and other rites de passage.
- 4-Can we identify the gender of the artist: what female or male artists produced?

Following the traditions of **EXPRESSION** Magazine you are invited to propose a paper on a specific topic or site.

Short papers of 1,500–3,000 words are suggested, with up to four illustrations each. Illustrations (definition 600 dpi) should be separate from the text and each illustration should have a caption and be pertinent to the topic selected. The papers that are most meaningful for a worldwide debate will be published first in the international magazine **EXPRESSION** and then as a volume. Please indicate the title you intend to present. Your fast reply will be appreciated. Try to avoid general conceptual disquisitions, unless they are of a strongly innovative nature. The deadline for the presentation of the final paper is January 30, 2016.

We look forward to the pleasure of reading your paper. Reply to: "M-F Project" <atelier.etno@gmail.com>.

## **FORTHCOMING NEW DEBATES**

Readers are proposing themes for debate. Some of them may be considered in the near future:

- 1 - The role of **women** in prehistoric and tribal art.
- 2 - **Food** as a means of socialization in prehistoric and tribal societies.
- 3 - **Navigation and colonization** among prehistoric and later non-literate societies.
- 4 - **Sex, food and territory**: from the Pithecanthropian to Sigmund Freud, Karl Marx and Mao Tze Tung.
- 5 - **Art and Economy**: possible relations between economic conditions and art creativity.

Proposals of papers and suggestions on possible developments of these and other issues are welcome.

*Dear Reader, You are invited to indicate your interest in participating in one of these topics by proposing the title of your suggested paper. You are also invited to propose other topics for debates. It will be a pleasure to hear from you.*

## **A NOTE ABOUT THE PRESENT ISSUE**

The theme of "Art and Religion" has produced a large response and a variety of different views. The present issue includes an interesting and varied sample of views from different continents and conceptual approaches. Reviewers because of little concern with standard scientific canons criticized one of the included papers. Nevertheless it is in this issue and may provoke healthy debates. The topic of relations between art and religion is likely to be considered again in future issues. Contributors to this theme that do not see their paper in the present issue may have other chances to appear in the future.

Again the issue of the sequence order of papers has been faced. Various options have been considered: the chronological sequence according to the age of each specific case treated, the geographical succession according to continents of concern, the sequence according to the time in which the papers were submitted, the sequence according to the evaluation of importance of the papers, or the sequence from generic topic to specific ones. Ultimately it was decided to continue the same sequential system followed so far: the papers follow the alphabetic order of the family names of their authors.

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# SANDAL ENGRAVINGS IN THE VILLAGE OF GUERMESSA (SOUTHEAST OF TUNISIA): A GRAPHIC MEMORIZING OF A FORGOTTEN BERBER RITUAL?

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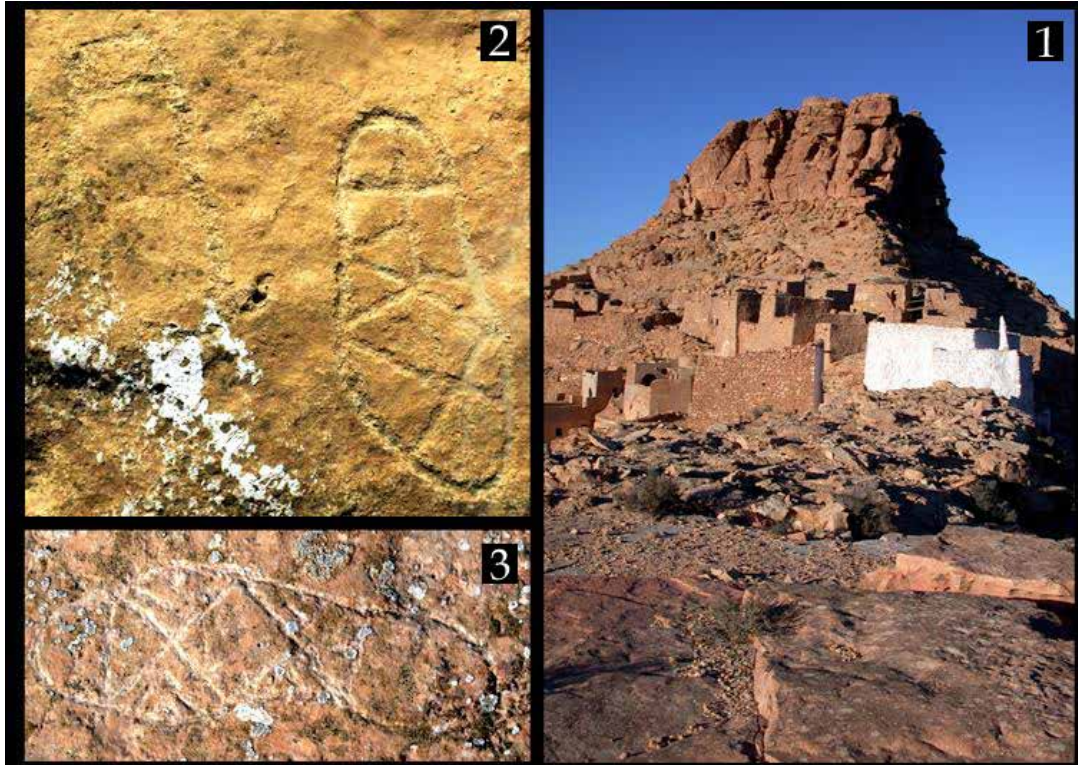


Fig. 1 – 1: GuerMESSa, the ancient citadel (Kalaa) ruins ; 2 and 3 : Engravings of sandals

Several engravings of sandals and sandal contours have been observed at the top of GuerMESSa, a Berber village of Jebel Demer in southeast Tunisia, on the rock slab dominated by the ancient citadel (Kalaa) ruins (fig. 1, 1). This high place seems to be reserved for a ritual practice that we examine in this paper.

These engravings have varied forms and techniques. We notice:

1. Engravings of typical sandals which are easily recognizable. The contour is finely incised or a little thick. The line is regular with no patina. We consider that these engravings are the most recent ones (figs. 1, 2, 3).
2. Sandal contours (or shoes). The line is thicker and the patina is darker (figs. 3, 1; 4). The line can be

hammered or roughly dotted and without polishing of contour (figs. 4, 2).

3. Oval contours, vertically stretched, fitted with a horizontal separation in their lower or middle part. The simplest design is a contour (figs. 3, 2, 3).

These engravings of contours, represented by unit, in pairs or in superposition, mostly belong to adults (fig. 2).<sup>1</sup> They are exemplars of the whole narrative context. The ethnographic literature and the oral tradition do not expand on the subject, but some information

collected in the stories of ethnographers (Louis, 1975, p. 53), as well as directly from some Berber people, confirms the symbolic action of these engravings and establishes a direct link between them and an ancient Berber wedding ritual.

Indeed, the custom, which has actually disappeared, consists of incising on the rock the perimeter of the groom's feet. This ritual comes seven days after the wedding night.<sup>2</sup> But

these stories do not enlighten us about the meaning and the exact symbolism of this act, or the accompanying ritual (procession, uttered words).

The functional value and utility of the sandal (or shoe) are less important than the ritual, symbolic and allegorical significance.

The imprint of contour of the sandal or foot on the rock may have a protective power and an interceptor

1 We emphasize the existence of some small footprints probably belonging to children (a circumcision rite?).

2 In addition to this ritual, in the same place in the village (top very difficult to get to) the husband and his companions engage for eight days after the wedding in various traditional games: *moçleb* (stacking game stones) *orta'gelli* (going down a steep slope on one foot) (Louis, 1975, p. 274).





Fig. 2 : Engravings of sandals (above) and their tracing (below)

of evil. Thus, the sandals might act as a talisman to ward off evil spells that may end the love of the future bride and groom and thus allow the links of marriage to keep tied.<sup>3</sup>

It may also be an act to commemorate a wedding event and a sign of the fulfilment of the wishes of the bridegroom. The sandals/shoes, an accessory which goes by pair, are related to the couple. Both feet together might announce the success of the union of marriage.

Might not the act of engraving the trace of her sandal or her foot on the rock in a high place of the village be the expression of a link of allegiance combined with the beneficial powers of the beyond to ensure their protection and have their blessing?

Leaving the imprint of his shoe or foot on the rock may have a legal connotation (act of appropriation?). The imprint is the physical evidence of the conclusion of a new social contract, or evidence of a change in

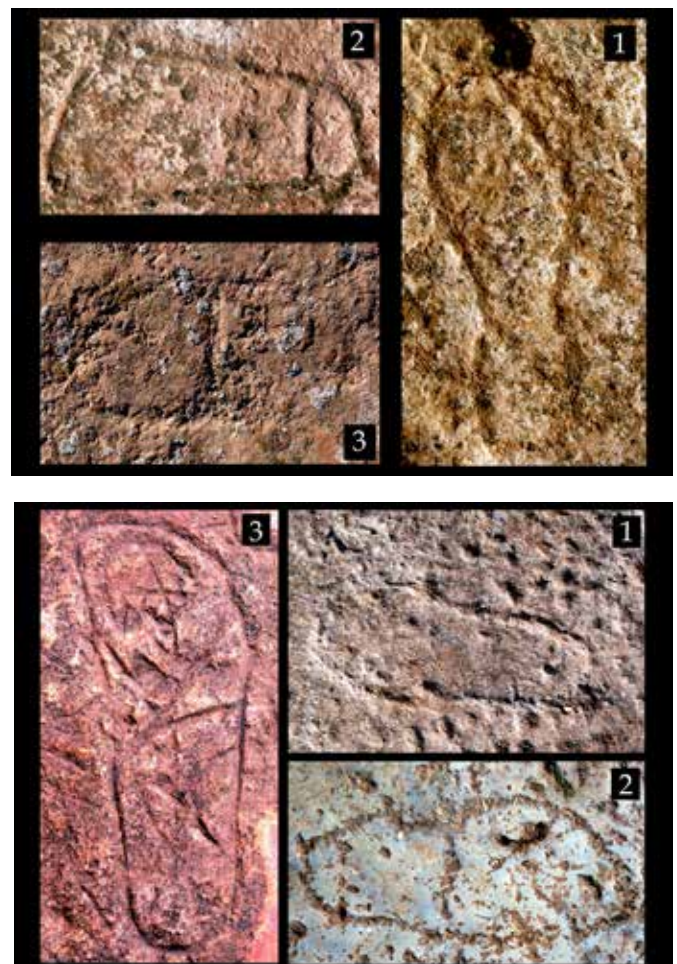
<sup>3</sup> As well as other signs and motifs: fish, hand and geometric signs, the footprint is a protective element present in traditional Berber architectural decoration. In several Berber villages of southern Tunisia, like Beni Zelten, Matmata, Zrawa footprints are moulded at the entrance Ghorfa (rooms).

a social situation: the individual transition from the singles group to that of married. In this case this ritual would be more related to the rise in a new social status. Moreover, many rites of transition from one state to another, observed in many nations and civilizations, are associated with *monosandalisme*, that is, wearing only one sandal (Lebeuf, 1988).

It is not also unheard of that the sandal/shoe has a symbolic commitment and honour, as is the case in the Hebrew tradition (Hidiroglou, 2003).

The symbolism of the sandal and foot is in general very common in the North African Berber traditions. Feet and sandals appear frequently in connection with wedding ceremonials, according to rituals that happen in accordance with a code and specific practices.

To cite examples, we can mention the fact of washing the feet of the bride at the entrance of her new home (in Antifa of Tanant/Morocco) or on the stones of the foyer (in Ich Gern/Morocco), pouring milk on her



Figs. 3, 4 : different types of traces of sandals



right foot (in Inteko/Morocco) or soaking it in water (Pardo, 1999). We also evoke the famous Aghatimen ritual specific for wedding ceremonies in Ahaggar, where in exchanging a woman there is an obligatory donation of a pair of sandals to the one who is the pretender by the customary law (the son of the father's sister) (Gast, 1982).

Engravings of sandals and foot contours were inventoried and described in several rock art sites across the Maghreb in different iconographic contexts which give several interpretations. But they are still exceptionally numerous in the central Sahara: Tébén-tératimt (neck of sandals) in the Hoggar, the gorges of Tiratimines (small sandals) in Immidir, the ravine of Tiratimines near Djanet (Gast, Jacob, 1982, p. 224). Some traces of feet or sandals were even the subject of adoration and veneration worship (Lhote, 1975).

These images, of which we have tried to decipher their meaning, are the graphic memory of an ancestral tradition most probably deeply rooted through time and the memory of a Berber rite which in fact has more or less disappeared. In the absence of sufficiently detailed ethnographic data, it is very difficult to reconstruct this ritual, to penetrate into the exact meaning and raise the mental structures (mental schemas) and collective representations that guided and imposed it.

In Tunisia, in other places than Guermessa, similar images that are engraved on rock slabs exist in other Berber mountain villages in different contexts.

This proves the existence of a strong symbolism of the sandal and foot in the Berber tradition and imagination, which deserves a more detailed study based on a rich and varied iconography and further ethnographic investigation that emphasizes the richness of the ritual life of the ancient Berbers.

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# INTERDISCIPLINARY INTERPRETATIONS OF ANTHROPOMORPHIC COMPOSITE BEINGS IN EUROPEAN UPPER PALAEOLITHIC CAVE ART: AN APPROACH

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## Introduction

European Upper Palaeolithic cave art is especially known for the numerous and different depictions of animals dominated by the herbivores group. There are also a great number of different signs, indeterminable motifs and less frequent representations of human beings. Furthermore, there are anthropomorphic composite beings and composite beings of different animals, which both are rather rare.

The anthropomorphic composite beings are often attributed to the human beings group. In my opinion

they should be regarded as an independent motif. Anthropomorphic composite beings are figures which have human and animal attributes. They are human representations with elements of one or more animals. Therefore they are neither human beings nor animals. Surely the most famous anthropomorphic composite beings in cave art are the *Dieu cornu* of Les Trois-Frères cave (fig. 1a) and two other representations in the same cave (fig. 1b and c), the Sorcerer of Le Gabillou cave (fig. 1d) and the Bird-man of Lascaux cave (fig. 1e).

But what is the meaning of cave art and especially of these anthropomorphic composite beings?

This article tries to give interdisciplinary interpretations of the meaning of these figures.

## General remarks concerning the interpretations of cave art

Although we will surely never know the meaning of European cave art it is, however, interesting and tempting to make interpretations and hypotheses. In



1a



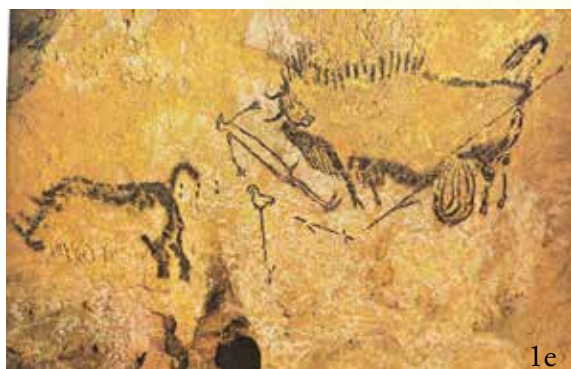
1b



1c



1d



1e

Fig. 1a. The '*Dieu cornu*' in Les Trois-Frères cave (Dép. Ariège, France) (Bégouën, Breuil, 1958).

Fig. 1b. The '*Le Petit sorcier à l'arc musical*', an anthropomorphic composite being between human being and bison in Les Trois-Frères cave (Dép. Ariège, France) (Bégouën, Breuil, 1958).

Fig. 1c. Anthropomorphic composite being between human being and bison in Les Trois-Frères cave (Dép. Ariège, France) (Bégouën, Breuil, 1958).

Fig. 1d. The Sorcerer of Le Gabillou cave (Dép. Dordogne, France) (Gaussen, 1964).

Fig. 1e. The shaft scene of Lascaux cave (Dép. Dordogne, France) (Bataille, 1955).

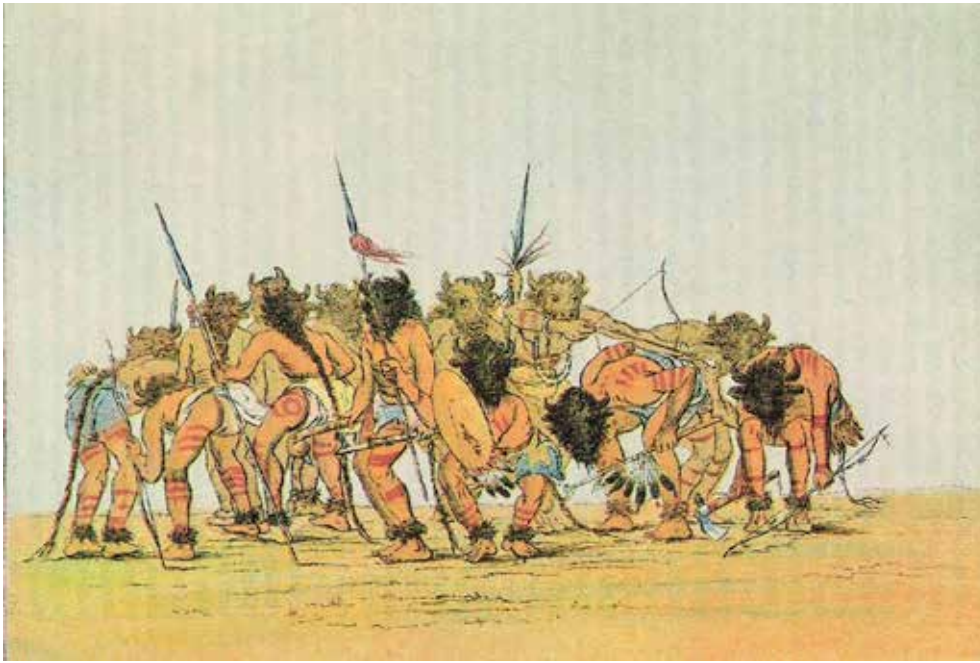


Fig. 2 The bison dance of the Mandan (Catlin 1882).

my opinion an interdisciplinary approach is important to understand Ice Age art better (Braun in press, Braun in press). I also think that no interpretation of cave art in general can be generalized. Furthermore, I think that the motivation of creating cave art was not always the same. We have to keep in mind that the period of cave art is at least 25,000 years ago. In my opinion there were surely several motivations and backgrounds which can be interpreted differently. This can be expressed with the word *Mehrschichtigkeit* (complexity) of the possible meaning of the representations. Since the recognition of Ice Age art (cave and portable art) in the second half of the 19<sup>th</sup> century researchers have made various interpretations of their meaning. While Palaeolithic art was interpreted in a profane way at the beginning (Cartailhac in Roussot, 2002), it was later interpreted in different religious contexts. The anthropomorphic composite beings especially attracted the researchers' curiosity.

### **Ethnology as an auxiliary science**

With the acknowledgment of ethnology as a scientific discipline and the foundation of colonies in the end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> centuries, ethnological comparisons were used to understand European prehistory (Reinach, 1903). Certain ethnic groups, for example, the San and the Australian aborigines who lived as hunter-gatherers, were regarded

as living Stone Age people and their habits and religious beliefs were transferred to the human beings of the Upper Palaeolithic: 'Le présent nous instruira sur le passé' (The present is the key to the past) (Breuil in Laming-Emperaire, 1962, p. 79).

Ethnology shows very well how the anthropomorphic composite beings of the Upper Palaeolithic cave art can be interpreted differently.

### **Disguise for hunting**

In different hunter-gatherer societies the hunters disguised themselves in animal hides so that they were not smelt or recognized as human beings. Breuil and Cartailhac (1906) and De Saint-Périer (1934) interpreted some of the anthropomorphic composite beings in the Ice Age art as disguised hunters.

### **Animal dances**

Catlin visited numerous different North American Indian tribes in the 19<sup>th</sup> century. He described a bison dance of the Mandan, a tribe of the Sioux in the Great Plains (fig. 2). In this dance the dancers are disguised as bisons and imitate the movements of the animal. According to Catlin (1882), the dancers were asking the Great Spirit for a successful bison hunt, because bison was very important game for them.

The wearing of animal masks is known from numerous other indigenous people for different reasons. They are described below in other contexts.

### **Master of animals or ghosts of nature**

The idea of a master of animals is known to numerous hunter-gatherer societies of the world. These were responsible for the availability of a certain animal species. They were often regarded as beings with a mixture of features of human beings and of the specific animal species. Blanc (1960) described how people of the Solomon Islands, living especially on fishing, believe in a master of fish (fig. 3), which shows



attributes of humans as well as fish.

In this context the representation of the Dieu cornu of Les Trois-Frères cave is interesting, because he shows human characteristics as well as those of different animals. This famous figure is located in an elevated position over other depictions of different animals. Because of this special location in the cave and the fact that he combines features of several animal species he could, in my opinion, be regarded as a master of animals.

### Totemism

Totemism is known among numerous traditional peoples. They believe that they descend from a certain animal species, the animal totem, and each person has his/her own protecting spirit. People who descend from the same animal totem form a clan. The relationship between the human being and the animal spirit is in general very strong, so that the person is in a certain sense one part of this species (Durkheim, 1984). Durkheim (1984) speaks of the double nature of a being which is human and animal. It is supposed in certain cases that the specific human being can accept the habits of the specific animal or change into its shape in danger.

In dances, for example, among the Australian aborigines or the Tlingit of the northwestern coast of North America, the dancers wear masks which

show their totem animal and imitate its movements (Durkheim, 1984; Hernández-Pacheco, 1919).

According to Tylor (Durkheim, 1984) totemism was a form of ancestral cult. It is the doctrine of the transmigration of souls after death into another living body. As there is no difference between a human and an animal soul the human soul could live on in an animal.

Seuntjens (1955; 1956) interpreted the anthropomorphic composite beings in the caves as depictions which represent a specific animal clan.

### Shamanism

Shamanism was and is still known among a lot of hunter-gatherer societies. The central figure is the shaman who is the mediator between this world and other worlds. Caves are often regarded as entrances to another world in shamanistic societies. The shaman's costume is an essential element of shamanism and in general represents an animal. In Siberia, for example, it is a deer or a bird. Wearing this costume the shaman changes into this animal in a state of trance and ecstasy, and behaves like it before becoming a human being again (fig. 4a). The helping and protecting spirits are also very important for the shaman. In general they are animals. According to Stolz (1988), these spirits were able to switch their form without problem from animal to human being and vice versa.

Kirchner (1952) interpreted the famous shaft scene of the Lascaux cave as a shamanistic necromancy with a helping spirit, shaman and victim. In the already mentioned Dieu cornu of Les Trois-Frères cave Lommel (1965) saw a shaman in his costume. In fact, the Dieu cornu is reminiscent of a drawing of a Tungouse shaman published by Witsen in 1705 (fig. 4b). This Tungouse shaman combines features of several animal species. But other authors like Duerr (1985), Smith (1992) and Clottes and Lewis-Williams (1996) see a relation between the anthropomorphic composite beings in cave art and shamanism. They could be regarded as shamans in their animal costume or as their transformation into the animal in the state of trance.

On the other hand, the theory of shamanism has been criticized by other researchers (see for example Lorblanchet *et al.*, 2006).

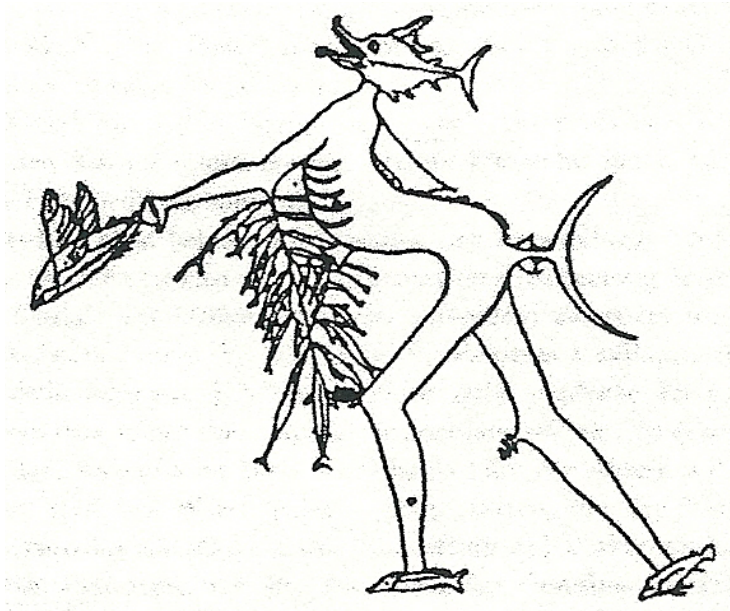


Fig. 3 The Master of Fish of the fishing people of the Solomon Islands (Blanc, 1960).



Fig. 4a. Transformation of a shaman from animal shape into a human shape. Lithography of caribou, Eskimo artist, 1971 (Stolz, 1988).

## Myths

There are a lot of myths which tell us of an era of our world when beings, the ancestors, lived who had human and animal characteristics at the same time. The beings of that time could switch their shape without problem from a human form into an animal form and vice versa (see for example Durkheim, 1984; Lévy-Bruhl, 1935). Myths served as an explanation of the world and its beings. Nowadays this transformation without problems from human into animal and vice versa is only possible by the shaman. According to Campbell (1991) these myths of humanity go back to the Palaeolithic period.

Different animal masks were/are worn in ceremonies among a lot of traditional people to revive the origin of the world and the myths were/are shown in dances. According to Hernández-Pacheco (1919) the anthropomorphic composite beings could represent depictions of spirits, figures of imagination or mythic figures, as they are known in the religious beliefs of numerous aborigine people.

## Neuropsychology

Neuropsychological investigations relating to cave art, especially those of altered states of consciousness, has had some interesting results.

Altered states of consciousness can be the result of different narcotic drugs (for example plants), music (for example rattles and drums), dance, long and constant fast breathing (hyperventilation), deprivation



Fig. 4b. Representation of a Tungouse shaman published by Witsen in 1705 (Stolz, 1988).

of the sense organs (for example by darkness), isolation, etc. (Lewis-Williams, Dowson, 1988; Grof 2000). Clottes and Lewis-Williams (1996) applied the phenomena of altered states of consciousness to shamanism. The darkness and the isolation in the caves could have evoked or intensified these states. Moreover, flickering light – which the artists used – stimulates hallucinations. As already mentioned caves are seen as entrances to other worlds in shamanism. When shamans get into trance and ecstasy their state of consciousness is altered. Ecstasy is a deep altered state of consciousness. The shaman does not feel like a human being anymore, but he/she transforms into the animal which his/her costume represents. The animal spirits play an important role in shamanism. According to Clottes and Lewis-Williams (1996), at least three phases of altered states of consciousness can be distinguished. The specific persons feel like animals. According to the same authors, it is possible that the rocks became alive under the flickering lights and that the animal spirits came out of the cave walls. The anthropomorphic composite beings could be shamans who changed into an animal in their ecstasy or representations of the master of animals who appeared to the shaman in the third phase of hallucination.

Interestingly Grof (1988), a representative of transpersonal psychology, did research in the 1960s on altered states of consciousness under the influence of psychedelic substances, especially LSD. People had experiences in which they changed into an animal or identified with this animal.

Wilber (2001), a scientist of consciousness, interprets the anthropomorphic composite beings of the Upper Palaeolithic cave art as gods of nature (masters of animals) or as sorcerers (shamans).

## Conclusion

The explanations mentioned above show how complex the phenomena of Upper Palaeolithic cave art and especially the anthropomorphic composite beings are. Furthermore, they show clearly how an interdisciplinary attempt is necessary to approach this topic. But nevertheless, in my opinion, we will never know the exact motivation or background and what these mysterious figures signified for our ancestors of the Upper Palaeolithic period. The anthropomorphic composite beings do not reveal their secret. Isn't it exactly this mystery which fascinates the viewer of our rational times? For this reason I want to conclude with the following quotation by Albert Einstein (Grof, 2000, p. 19):

*Das Schönste, was wir erleben  
können, ist das Geheimnisvolle...  
Wer es nicht kennt und sich nicht  
mehr wundern, nicht mehr staunen  
kann, der ist sozusagen tot und  
sein Auge erloschen.*

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## ART IS STRUCTURAL MAGIC, NOT ILLUSTRATION

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Religion, magic, ritual, myth, emblematic systems and art all subconsciously express the same archetypal structure in different media. Identical visual 'episodes' and 'grammar' appear in apparently different cultures, and apparently different 'developmental' eras worldwide. This paper demonstrates cultural structure by revealing the standard visual typology, its sequence and the axial ocular grid between the eyes of typological characters, in six artworks that other authors used in different interpretations in a previous edition of *EXPRESSION*. The new method raises the core content of culture to conscious appreciation.

We habitually ascribe overtly visible correspondences between artefacts, to practical considerations such as experience; or to inter-media 'translations' such as recording, illustration, communication or memorial; or to diffused and acquired politico-religious programmes. However, conscious correspondences merely add to the camouflage that conceal the real wellspring of culture, which is fed by the eternal undercurrent of archetype, or structure itself. Ritual and myth in all their forms are known to be highly structured, as Levi-Strauss demonstrated (1964). Artworks differ only in some conscious meanings and in styling, as I demonstrated in a paper on Gobekli Tepe art for *EXPRESSION* 9. Even semantics and styling are largely products of cultural mutation, not only of conscious processes.

### Art or graffiti?

One of the frequent challenges to the new structural approach to rock art is that some panels appear to be cumulative, thus not artistic. The 'graffiti' approach relies mainly on apparent style, technique, layering (Thembi Russell, 2012), relative damage, patination, or carbon flake or oxalate dating (Li *et al.*, 2012). Yet Anne Solomon (2011) found no adequate theory of artistic features, or of how 'attributes, stylistic or iconographical, relate to society, history and culture'.

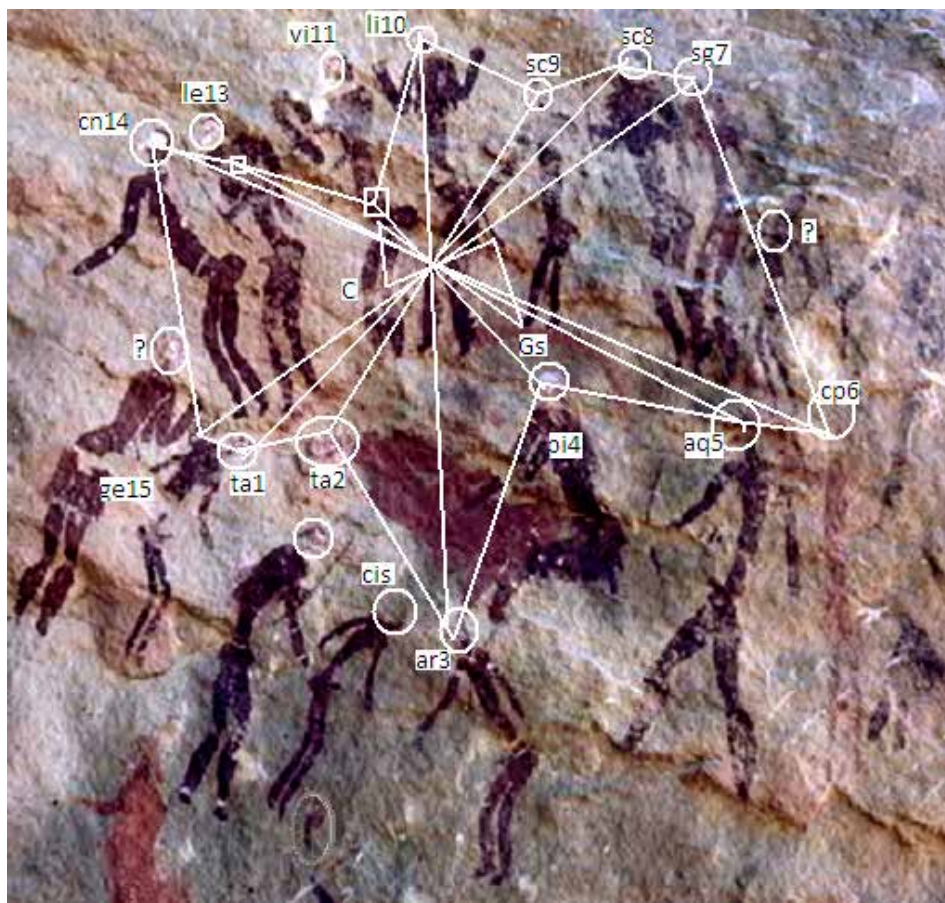


Fig. 1. San rock painting of a trance or healing dance (after David Lewis-Williams, Fig. 2, *EXPRESSION* 8, June 2015. Mindprint labelling by Edmond Furter).

Art history and anthropology are rarely applied in rock art research, 'in the belief that images are artefacts... [for] spatial, distributional, or stratigraphic analysis.' (p. 57, citing Holl, 2004). Solomon also cites Gell (1998) on his anthropological art theory; art is not determined by culture, but 'only... their relationship to other artefacts in the same style... shaped in the inter-artefactual domain, obeying immanent injunctions governing formal stylistic relationships'. Gell had found that 'an image of a certain divinity might take on a wide variety of visual forms', and a style is not necessarily connected to a divinity. Solomon concluded that 'the difficult task of developing interdisciplinary perspectives necessary [for] visual histories, has barely begun.'

The present study found that some apparently additional figures may instead be re-working of existing figures (Arabic Bir Hima engraving, Furter, 2014, p. 173). Some works requiring months or years express elaborate or doubled imprints that indicate sustained and compulsive inspiration (Korean Daegok Ri

whaling cliff engraving, (Furter, 2014, p. 199), and Russian Kamenniy 7 pavement, (Furter, 2014, p. 200). Some known collaborations contain the mindprint sequence of typology (see table), and the ocular axial structure (see illustrations), probably expressed by the artist who determines the position of the eyes of the sixth to the twelfth, or sixth to the sixteenth figure, since the first five could always be approximately spaced (Mexican Cuajiniulapa Mandela Day hut mural, (Furter, 2014, p. 134). Some densely overpainted works reveal a crosswise swastika-shaped progression in the sequence of layers, as in the Drakensberg Cathedral Peak Man Cave I panel (Furter, 2014 p. 62), that indicates one artist, and thus contradicts Russell's assumption of accumulation.

Some overpainted works have 'warped' or 'woven' stratigraphies that invalidate the Harris matrix (Drakensberg Ndedema herder trio, (Furter, 2014 p. 223). Some diverse paint flake dates came from works that are apparently stylistic units. Random 'art' made by strewing portraits on a table, or street scene photographs, do not contain mindprint, indicating that most rock art is art. Among the six works discussed here, very few expected types are missing, and very few figures are extra or intrusive. All these clues indicate that the apparent accumulation of figures may arise from the elaboration of single typological figures, or pairs, or short rows, into panels, thus involving only two artists; or from stylistic variation by one artist (as in two examples here); or in collaboration. Solo art remains the norm.

### Art or illustration?

Archaeology and anthropology rely greatly on ethnography, on the assumption that artists, viewers, or members of cultures illustrate myth, and could

consciously or symbolically 'explain' the functions of their art and other artefacts. However art, myth and ritual such as initiation do not arise from conscious processes, and are not reliably 'developed', nor transmitted. Only compulsive expression, and thus perpetual renewal or re-invention, could explain the persistence of cultural structure across time, place and polities. Artistic design structure (always distinct from regular geometric design strength, and from a perspective grid) is apparently invisible to conscious viewing, yet it could be reliably revealed and predicted by using the standard list of types; the frequency of their optional attributes; their sequence; and the relative spacing of the eyes of typological figures. Even apparent exceptions in the triple-layered structure follow rigorous statistical probabilities. The structure is thus predictive, and infinitely testable.

### A cultural typology checklist

Artistic types could be named after constellations (which differ from abstract, equal-area, featureless 'signs'), for mnemonic convenience, and are numbered to distinguish the four optionally doubled types (Taurus t1 and/or t2; Leo t12 and/or t13; Scorpius t8

and/or t9; Aquarius t5 t20 and/or t5 t21). All artworks containing a grouping of more than eleven figures include these elements, at fixed probabilities (here in percentages); in this peripheral sequence, clockwise or anti-clockwise; and confirmed by ocular axial lines, between eyes of binary opposite typological figures:

- Type Taurus t1 and/or t2; twisted 48%, bovid 19%, large
- Type Aries t3; neck bent or long 42%
- Type Pisces t4; rectangular 26%, male
- Type Aquarius t5 t20/t5 t21; varicoloured 44%, hyperactive 31%, horizontal 30%, large 24%
- Type Capricornus t6; ingressed/egressed 48%, horned, double-headed
- Type Sagittarius t7; as/with a bag 25%
- Type Scorpius t8/t9; bent forward 34%, strength feat 31%, sticks, ritual
- Type Libra t10; arms V or W posture 53%, staff 34%
- Type Virgo t11; axis to her womb 87%, pregnant
- Type Leo t12/t13; 'ocular' axis to his heart 85%, feline 14%, inverted 11%, large
- Type Cancer t14; ingressed/egressed 45%, canine,

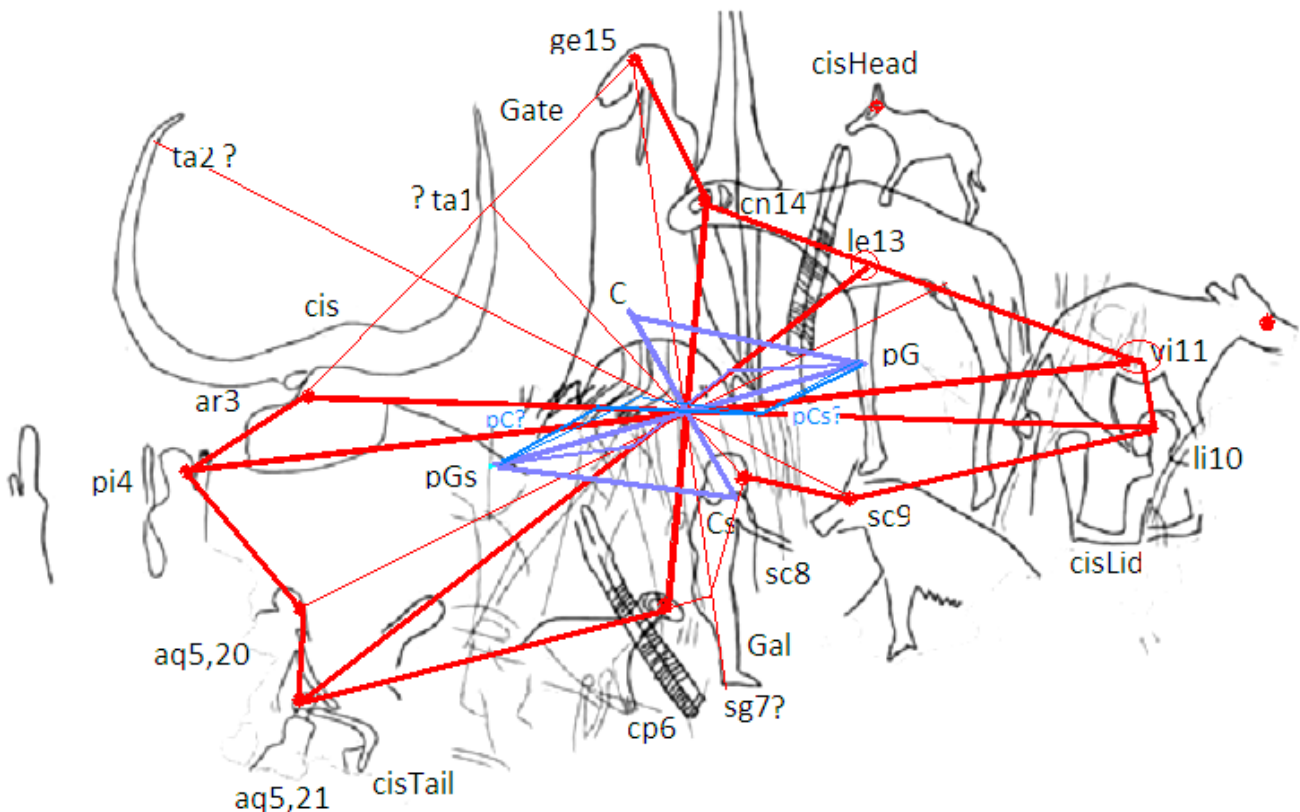


Fig. 2. Buffalo engraving at Ramada shelter, Jebel Ousselat, Tunisia (after Jaâfar Ben Nasr Fig. 5, EXPRESSION 8, June 2015. Mindprint labelling by Edmond Furter).



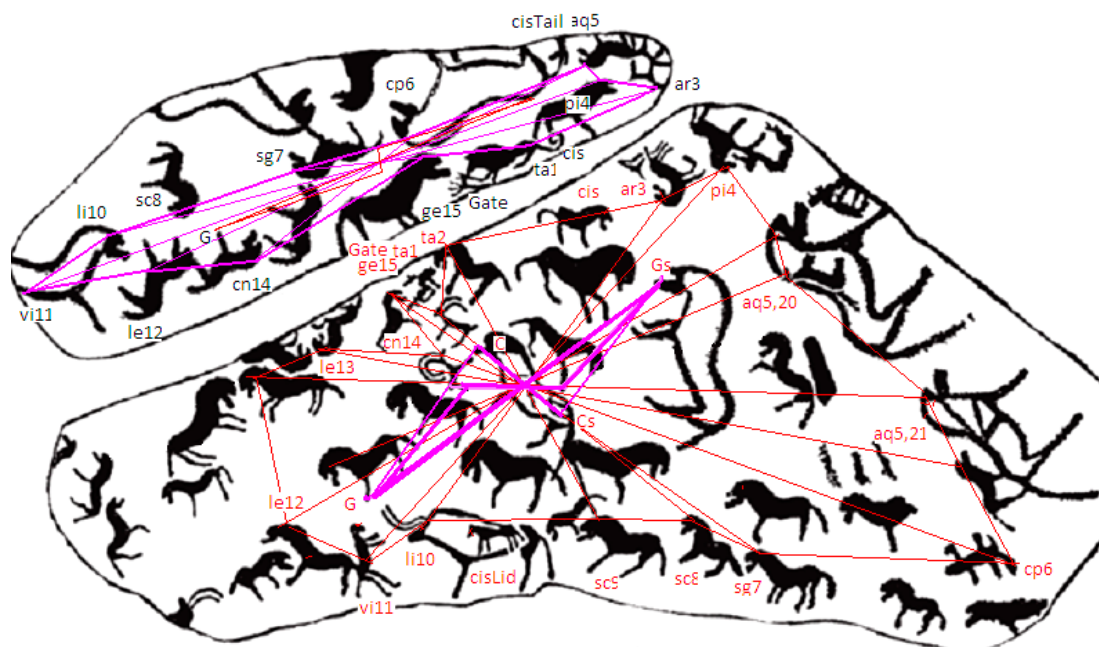


Fig. 3. Horses engraving at Terekty Aulie, Group 3, Kazakhstan (after Dr Kenneth Lymer, Fig. 2, EXPRESSION 8, June 2015. Mindprint labelling by Edmond Furter).

porcine

□ Type Gemini t15; rope 33%, bag 21%, smiting 16%, doubled 8%

□ Ocular axes between t1-t8/t2-t9, t3-t10, t4-t11 womb, t5 t20-t12 /t5 t21-t13 heart, t6-t14, t7-t15 (six or more axes)

□ Axial centre 100%; marked 49%, limb joint 26%

□ Galactic pole (pG); between t11-t12; marked 81%, limb joint 68%

□ Galactic south pole (pGs); between t4-t5; marked 65%, limb joint 50%

□ Celestial pole (pC); neart1, t15, t14, t13, t12; marked 60%, limb joint 50%

□ Celestial south pole (pCs); neart8, t7, t6, t5; marked 55%, limb joint 37%

□ One edge of the polar triangles is on the horizontal or vertical plane

□ Equatorial edge may be formed by outline economy between some eyes.

□ The dominant theme could be any of the 16 types, usually related to the temporal framework or Age of the work or local culture, approximate to one of the four past eras.

### Archetypal structure in six random rock art works

Six of the rock art works used by five different authors in EXPRESSION 8, contain a sufficient number

of figures to test the mindprint structural standard against.

The South African San healing dance painting (fig. 1) includes these features (known global averages noted):

□ T2 twisted (48%), large

□ T4 squatting (25%), male

□ T5 large (24%)

□ T6 egressed (48%)

□ T8 and t9 dance, with sticks [abundant, not accounted].

□ T10 arms in V/W posture (53%)

□ T11 axis to her womb (87%), pregnant?

□ T13 axis to his heart (85%), large chest

□ T14 egressed (45%)

□ T15 is a bag (21%) on the back of t1, doubled (8%) by an extra figure

□ Ocular axes att1-t8, t2-t9, t3-t10, t4-t11 womb, t5-t13 heart, t6-t14, t7-t15; nine axes

□ Axial centre (100%), marked (49%), on a knee (limb joint 26%)

□ pG at t11-t12, marked (81%), on a hip (limb joint 68%)

□ pGs at t4-t5, marked (65%), on a foot (limb joint 50%)

□ pC at t15-t14, marked (60%), by a knee (limb joint 50%)

- Equatorial edge at t5 and t13.
- The overall theme is t8/t9, often a healing ritual or spiritual feat of strength.

The Tunisian Mt Oussellat, Ramada buffalo engraving (fig. 2), includes these features (global averages noted):

- T1,t2,t3, t7damaged?
- T4 squatting? (25%)
- T5 t20 hyperactive? (31%)
- T5 t21 hyperactive? (31%), horizontal?(30%)
- T6 horned
- T8 strength feat?(31%), stick?, ritual?
- T9 bent forward (34%)
- T10 arm V/W (53%), staff (34%)
- T11 axis to her womb (87%), pregnant
- T113 axis to his heart (85%), large
- T14 ingressed (45%)
- T15 bag coat 'karos' (21%)
- Ocular axes at t3-t10, t4-t11 womb, t5t21-t13heart, t6-t14; four axes
- Axial centre (100%), unmarked (51%)
- pG at t11-t12, marked (81%), knee (limb joint 68%)
- pC at t15 or t13, marked 60%, knee, or foot (limb joint 50%)
- pCs att7 or t5, marked 55%, shoulder, or ? (limb joint 37%)
- pC-pCs on one of the horizontal planes?
- Equatorial edge at t13.
- The overall theme is t3 Aries Triangulum, of spring resurgence and sacrifice, typical of Age Aries and ritual art of the last 2,000 years. However, the horizontal plane supports the polar option at t13-t5, typical of Age Taurus 1 and the Ice Age thaw. Ovids, canines, porcines and bovids also appear at Gobekli Tepe. The polar 'clock of Ages' seems unresolved in this work.

The Kazakh horses engraving at Terekty Aulie, Group 3 (fig. 3), includes these features (global averages noted):

- T1 bovid (19%)
- T3 neck bent (42%)
- T5 varicoloured (44%), large (24%)
- T5 t21 varicoloured (44%), hyperactive (31%)
- T5b varicoloured (44%), large (24%)
- T5 t21 varicoloured (44%), hyperactive (31%)
- T6 egressed (48%), double-headed

- T10 horns V/W near arms V/W posture (53%)
- T11 axis to her womb (87%), pregnant
- T13 inverted (11%)
- T14 ingressed (45%), horned
- T15 adjacent to a rope man churn group [not on the grid, not accounted]
- Ocular axes at t1-t8, t2-t9, t3-t10, t4-t11 womb, t5-t12, t20-t12, t5 t21-t13, t21-t13, t6-t14, t7-t15; ten axes
- Axial centre (100%); marked (49%) by an arrow
- pG at t11-t12, marked (81%), hoof (limb joint 68%)
- pGs at t4-t5, marked (65%), jaw (limb joint 50%)
- pC at t1, marked (60%), hoof (limb joint 50%)
- pCs at t7, marked (55%), hoof (limb joint 37%)
- pC-pCs on the horizontal plane of most figures, confirmed by the probable time of the work, however an alternative plane is possible.
- Equatorial edge at t5 t21b, and t9.

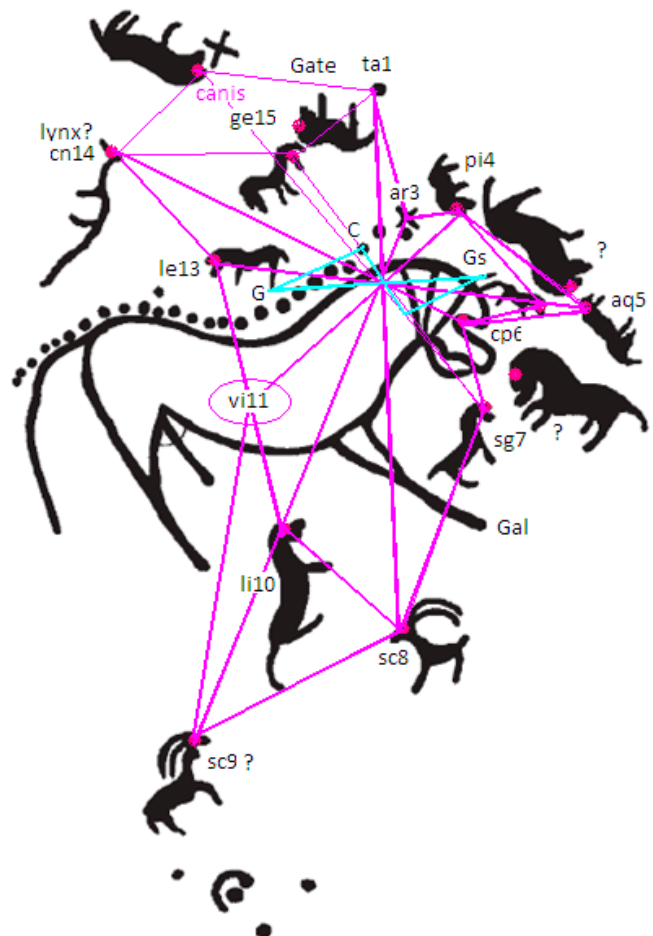


Fig. 4. Stallion engraving at Terekty Aulie, Group 4, Kazakhstan (after Dr Kenneth Lymer, Fig. 3, EXPRESSION 8, June 2015. Mindprint labelling by Edmond Furter).

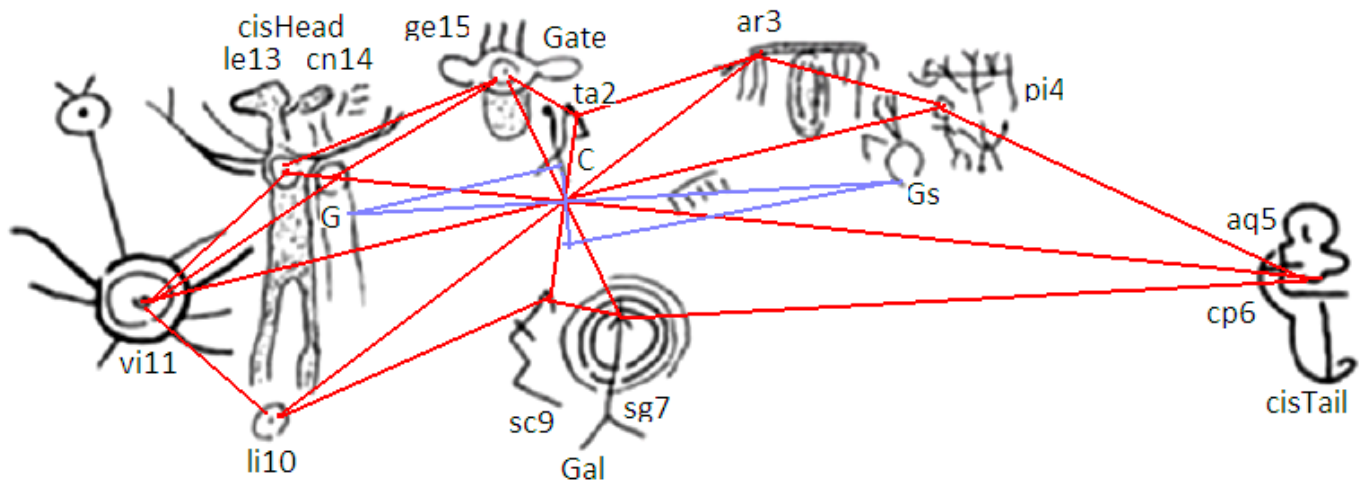


Fig. 5. Figures and semi-geometric shapes engraved at Lluta, Arica, Atacama Desert, Chile (after Luigi J Boro, Fig. 3, EXPRESSION 8, June 2015. Mindprint labelling by Edmond Furter).

□ The overall theme is t5, social ritual, which is often equine, an ambiguous species that could also express t4 or t3.

The adjacent panel expresses a mirrored mindprint, 'geared' at t14 or t15. Separated double imprints are never perfectly aligned. Among the regular features in the mirrored panel are: t1 twisted, t3 long neck, t11 womb, t12 heart, t12 inverted, t14 egressed, t15 near a 'buck bag'; line economy at t5 t6 t7 t8 t10, t12; six axes; two polar markers on a horizontal and vertical plane.

The Kazakh stallion group engraving at Terekty Aulie, Group 4 (fig. 4), includes these features (global averages noted):

- T1 ?
- T3 cross
- T5 doubled
- T6 ingressed (48%)
- T7 juvenile
- T10 therianthrope
- T11 axis to her womb (87%), with male genitals (rare)
- T13 axis to his heart (85%)
- T14 egressed (45%), lynx
- Ocular axes at t1-t8, t2-t9=t3-t10, t4-t11 womb, t5-t12=t5-t13 heart, t6-t14, t7-t15; eight axes on six lines
- Axial centre (100%)
- pG at t11-t12; marked (81%), hoof (limb joint 68%)
- pC at t15, marked (60%), but eight of the dots

from a polar 'ratchet'

- pCs at t7, marked (55%), on a halter
- pG-pGs on the main horizontal plane; pC-pCs on an alternative vertical plane.
- The overall theme is the t5-t13 axial pair, of death, social renewal, and transformation, often feline or equine.

The Chilean Atacama Desert figurative and semi-geometric panel at Lluta, Arica (fig. 5), includes these features (global averages noted):

- T2 twisted (48%)
- T5 large (24%), axis to its heart more usual at its opposite t13
- T6 egressed (48%), double-headed?
- T9 bent forward (34%), stick? Ritual?
- T10 near arms in V/W posture (53%), [not on the grid, not accounted]
- T11 axis to her womb (87%), pregnant
- T13 axis to his heart (85%), feline? (14%), large. Varicoloured and hyperactive as more usual at its opposite t5
- T15 rope? (33%), bag? (21%)
- Ocular axes at t2?-t9, t3?-t10, t4-t11 womb, t5 heart-t13 heart, t6?-t14?, t7-t15; six axes on five lines
- Axial centre (100%)
- pG at t11-t12; marked (81%), hip (limb joint 68%)
- pGs at t4-t5; marked (65%), knee (limb joint 50%)
- pC att1-t15, marked (60%), foot (limb joint 50%)
- pG-pGs on the horizontal plane, pC-pCs on the vertical plane
- Equatorial edge at t14? (rare)



[] The overall theme is the t13-t5 axial pair, typical of alchemical works in all cultures.

The Argentinean Los Morteros Block 2 semi-geometric engraving (M. Basile and N. Ratto, Fig. 3, *EXPRESSION* 8, June 2015. Not illustrated here) includes these features: T1 twisted; T2 bovid?; T3 long neck; T4 rectangle (head); T5 t20 hyperactive, T5 t21 hyperactive, large, tailcoat head; T6 ingressed, tailcoat head (more usual at t5); T7 [no eye on grid, hip instead], juvenile?; T8 ritual?; T9 bent forward?, ritual?; T10 arm V/W posture, staff (on head); T11 axis to her womb, pregnant; T12 feline?, inverted, large; T13 axis to his heart; T14 bird; T15 rope-man, bag head, bag hip.

Ocular axes are testable at t1-t8, t2-t9, t3-t10, t4-t11 womb, t5 t20-t12, t5 t21-t13 heart, t6-t14, t7-t15; thus eight axes plus a structural axis. The axial centre is marked; pG at t11-t12 is marked (hand limb joint); pGs at t4-t5 is marked; pC at t14-t13 is marked (mask); pCs at t6-t5 t21 is marked (circle); pC -pCs is on the horizontal plane?. There is an equatorial edge at t10 and t12. The overall theme is t15, creation or manifestation from sky ropes, and physical order.

Predictable recurrent features, in sequence, and in rigorous axial ocular spacing, as in six examples from *EXPRESSION* 8, argue against diffusion, development, or conscious tradition. Archetypal expression in core aspects of style and design, is clearly subconscious and compulsive. It is near impossible to find any artworks or rock art works with more than 11 figures, that do not express the standard visual structure. Even some semi-geometric and wholly abstract shapes express typological attributes and ocular spacing. No art is entirely representative, nor entirely geometrical, as Gombrich (1982) found.

### **Rock art analysis requires a new paradigm**

The current paradigm of art and culture sees attributes, emblems, symbols and conventions as arbitrary, accumulated, developed, diffused and transferred, thus greatly diverse. Yet art is now revealed as structured, instinctive, standard, and perpetually original. Only some superfluous aspects of styling are recognizably unique. David Lewis-Williams (2012) sees diffusion in recurrent motifs, such as 'the well-known meandering

red line with white dots, found over so wide a geographical area that it seems impossible that it could have been independently conceived by different artists'. His followers ascribe 'standardised forms of the majority of the figures in San rock art' to cultural patterning, and 'single painters who moved around'. This study indicates instead that most highly detailed standardized forms are universal.

Visual 'grammar', and probably all the elements of magic, ritual, myth and religion, is hard-wired in our perception and behaviour, beyond the scope of practical considerations. Concepts and language are limited and unreliable descriptions of visual expression. Structural or conceptual anthropology applied to rock art brings cultural expression within reach of conscious appreciation. Mindprint requires the re-alignment of a range of assumptions, and of our conscious paradigm of what art, design, inspiration, culture, perception, humanity and nature are. Mindprint is probably a partial description of the archetypal elements informing culture. Further elements could be found. Rock art research could be enriched by extending its scope from cognitive and semi-conscious symbolic analysis, informed by ethnography; to global art analysis, informed by archetypal structure, and by structural expression in other cultural media. Art research could likewise inform other sciences and crafts by describing the structure of subconscious visual expression.

Edmond Furter is a technical journalist, environmental impact assessor, and structural anthropology researcher. The book *Mindprint* proposes a new method of cultural analysis.

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## **SORCERER-KINGS IN THE OLMEC ROCK ART OF PRECLASSIC MESOAMERICA**

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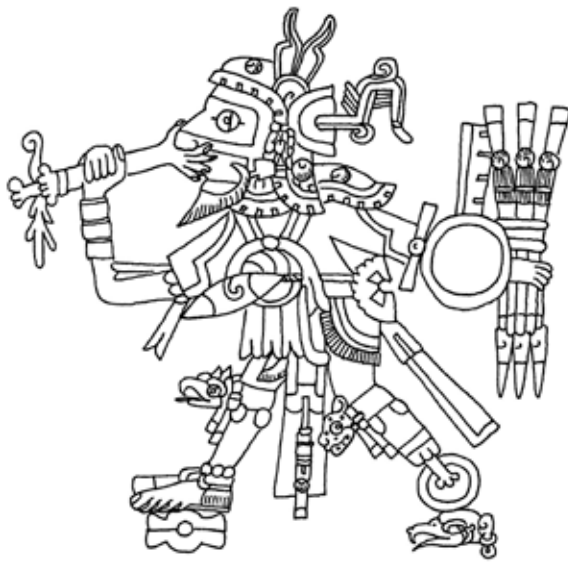
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Much has been written about the importance of shamanism in the Olmec-style art of the Early-to-Middle Preclassic periods (1500–500 BC) (Furst, 1968; Reilly, 1989; Tate, 1996), each discovery yielding new insights into a ceremonial complex that pervaded much of ancient Mesoamerica. Shamans in Preclassic Mesoamerica have usually been defined by a set of tropes that differ slightly from the classical attributes of shamanism in Siberia, East Asia and North America (Klein *et al.*, 2002, pp. 388–389). Recent iconographic studies of Olmec art have shown that shamans served as intermediaries between the ‘natural’ and ‘supernatural’ realms; interacted with the ‘supernatural’ realm through ecstatic rituals featuring contortionism; transformed into animal alter-egos; and controlled the weather (Furst, 1995). Moreover, there is ample evidence indicating that rulers often had similar ritual roles and that their shamanic attributes were commemorated in public sculpture.

While there is little doubt that shamanism was a fundamental part of a Preclassic ceremonial complex present in many societies in ancient Mesoamerica (Reilly, 1989; Tate, 1996), little attention has been given to the existence of a related form of ritual practice involving sorcery or acts of ‘supernatural’ manipulation for personal gain and malfeasance. Sorcery has been observed throughout the tropical lowlands of Central America and Amazonia and is often conflated with shamanism (Saler, 1989 [1967];, pp. 88–90; Vitebsky, 2001, pp. 45, 48–49; Whitehead, Wright, 2004, p. 10). Likewise, a number of studies have demonstrated the existence of sorcery among the Mexica (Carrasco, 1999; Heyden, 1999). The purpose of this exploratory paper is to determine whether sorcery was also a prominent feature of the Preclassic ceremonial complex associated with Olmec art. In particular, since rock art is often seen as a



a



b

Fig 1. Renditions of Tezcatlipoca based on Late Postclassic period Mexica codical sources: (a) *Codex Fejérváry-Mayer* (1971:44); and (b) *Codex Magliabechiano* (1970:67). (Drawings by the author)

marker of the ritual spaces by sorcerers (dark shamans) such as mountains and caves (Vitebsky, 2001, p. 70), this study will focus primarily on Olmec rock art.

One of the most well-known traditions of sorcery in Postclassic period (AD 1390–1520) Mesoamerica is associated with Tezcatlipoca (the Smoking Mirror), a trickster god of sexual excess, sacrifice and divination among the Mexica (Carrasco, 1999, pp. 41–42; de Sahagún, 1970, p. 5). Although this deity appears to have been associated with different facets of Mexica social life – as a patron of youth, warfare and rulership, like many sorcerers, he occupied an ambiguous position with respect to the natural, social and moral order. In his role as a sorcerer, Tezcatlipoca was linked to a number of material items (sacra) which functioned as tropes of his ‘supernatural’ powers (Seler, 1908:, pp. 177–181) (fig. 1):

1. *itlachiaya* (his visual power): this item was a hand-held obsidian mirror used for oracular vision (de Sahagún, 1970, pl. 20; Seler, 1908, p. 181).
2. obsidian mirrors placed on the head (diadems), chest (circular or ovoid pectorals), or in place of the foot as emblems of oracular power and often linked to speech scrolls representing the ‘smoke’ emanating from the mirrors (Heyden, 1999, pp. 191–195).

3. black pigment made from the soot of torches mixed with tobacco and poisonous creatures such as scorpions, centipedes and spiders; this paint was placed on the body or face to protect the wearer from harm (Heyden, 1999, p. 192). This paint can cover the whole body or appear in stripes.

4. *Tepeyollotl* (heart of the mountain): Tezcatlipoca could also transform into a jaguar alter-ego (*nagual*) that ruled over other animals, lived inside caves and created earthquakes (Day, 1999, p. 246). This aspect of the god was sometimes highlighted by his use of jaguar pelts as clothing.

Because of their close relationship to Tezcatlipoca as a sorcerer, the co-occurrence of some of these sacra in the archaeological record of Preclassic Mesoamerica could be used as multiple lines of evidence to plausibly establish the existence of a tradition of sorcery similar to the Tezcatlipoca complex among the Mexica. Of course, in his guise as patron of warriors and youth, Tezcatlipoca was connected to many other artifacts, such as headdresses topped with quetzal plumes, spear throwers, shields (*chimalli*) and flutes (Carrasco, 1999, p. 43; Heyden, 1999, pp. 195–198; Seler, 1908:, p. 179). However, these items can be found in contexts that are not directly related to sorcery. Such artifacts



are therefore too ambiguous to use as diagnostic indicators of sorcery in the Preclassic period and will not be considered further. Taken together, the four tropes of sorcery associated with Tezcatlipoca present a valuable formal approach (i.e., using contextual and iconographic clues) to studying Olmec rock art that also relies on an informed interpretive framework (i.e., Mexica ethnohistoric and codical sources) for making specific comparisons and analogies to understand the significance of its imagery (Taçon, Chippendale, 2002, pp. 6–8).

While Olmec art (including the rock art) represents a polythetic class of artistic expression in Preclassic Mesoamerica, a number of common iconographic motifs and themes are present for some scholars to postulate that it illustrated certain elements of a widely

shared Preclassic ceremonial complex associated with emerging forms of rulership (Reilly, 1989; Tate, 1996; Taube, 2000). Based on the presence of various sorcerous sacra in Olmec rock art that became associated with Tezcatlipoca in later centuries, I suggest that the practice of sorcery can be identified as a component of these politico-religious traditions. The evidence, however, indicates that at least two sub-traditions of sorcery may have existed in different regions of Preclassic Mesoamerica.

The first sub-tradition of sorcery is centred in the central highlands of Mexico and emphasized the jaguar nagual, cave imagery (or contexts) and to a lesser extent the black pigment as a means of depicting the ‘supernatural’ power of Preclassic period rulers. A prominent example of this kind of artistic strategy

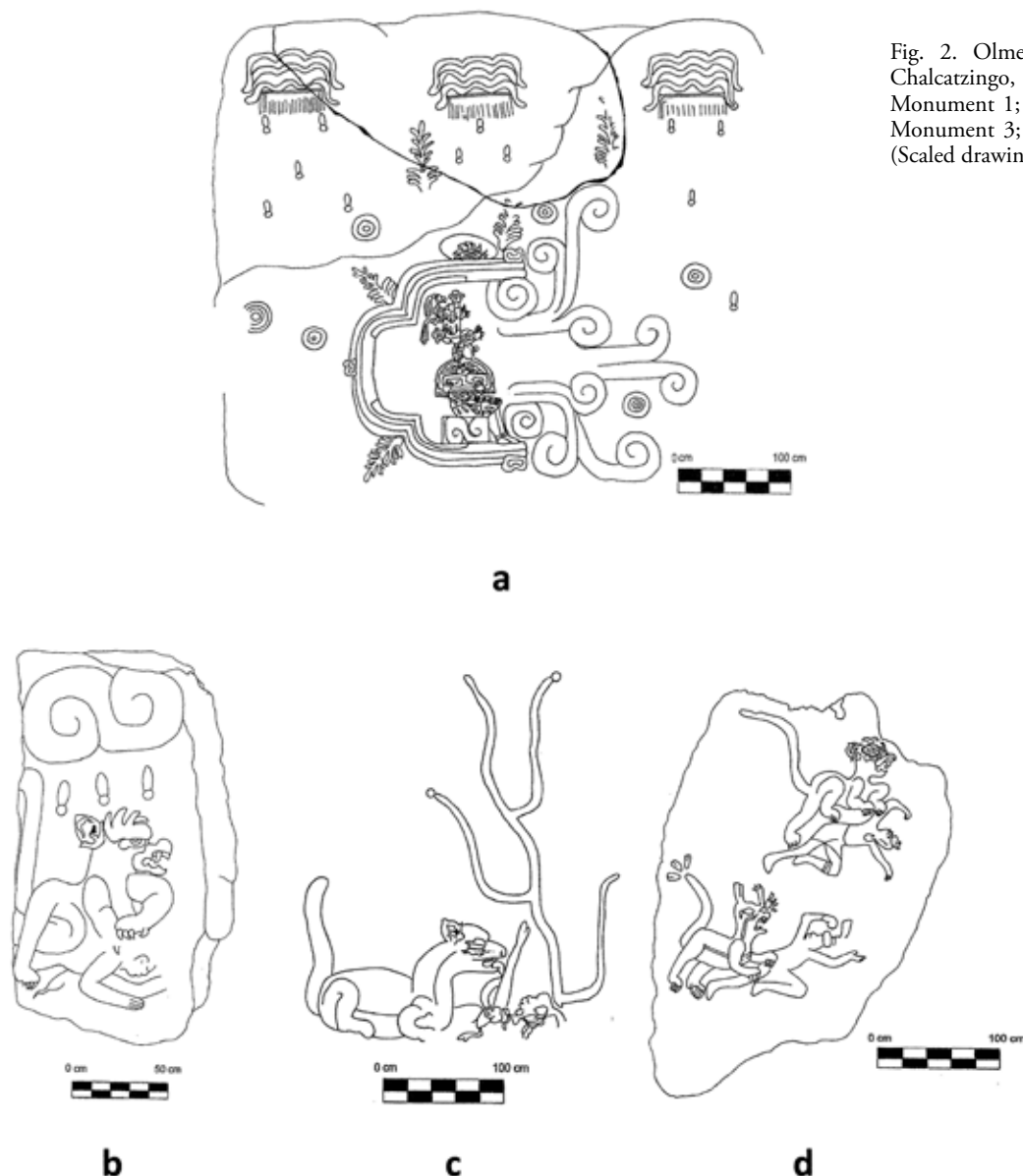


Fig. 2. Olmec rock carvings from Chalcatzingo, Morelos, Mexico: (a) Monument 1; (b) Monument 31; (c) Monument 3; and (d) Monument 4. (Scaled drawings by the author)

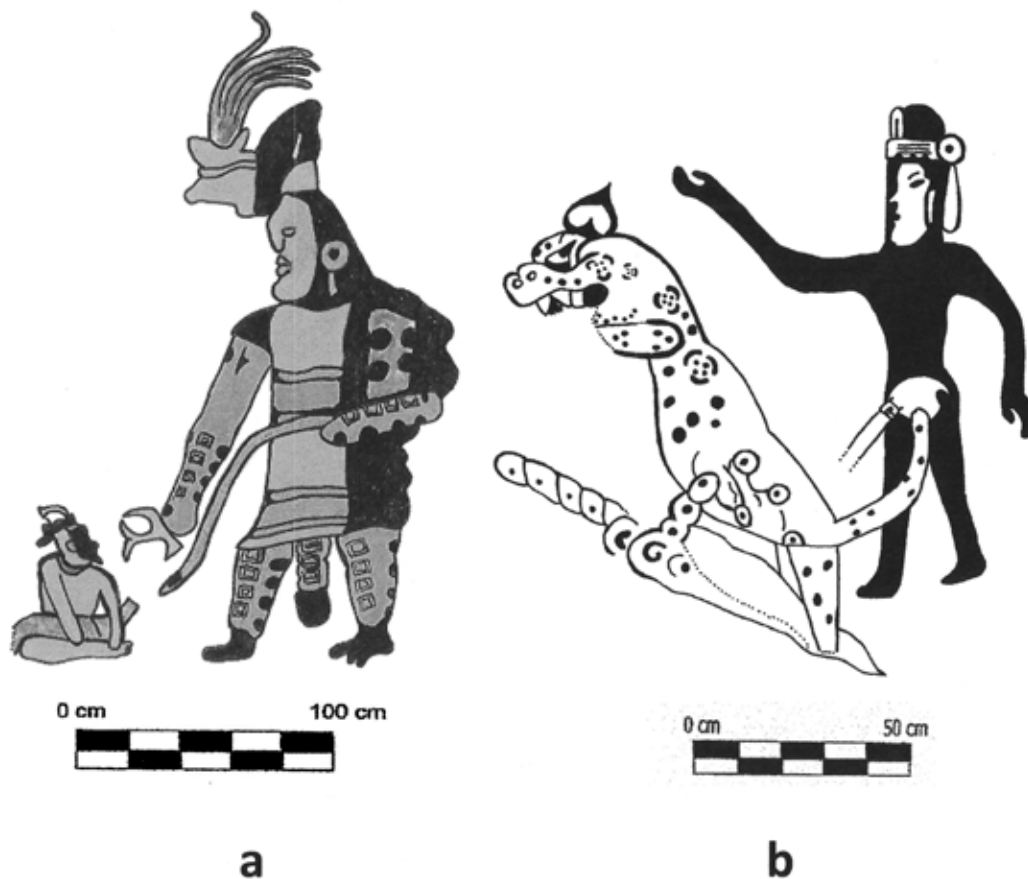


Fig. 3. Olmec rock paintings from Guerrero, Mexico: (a) Juxtlahuaca Painting 1; and (b) Oxtotitlán Painting 1-d. (Scaled drawings by the author)

comes from Chalcatzingo in Morelos, Mexico (fig. 2). This ancient village and ceremonial centre reached its apogee in the Middle Preclassic period (700–500 BC) and is best known for its elaborate petroglyphs carved in the Olmec style (Angulo, 1987). There are two clusters of such rock carvings at Chalcatzingo. The first cluster (Group A), located on the western slopes of a nearby sacred hill known as Cerro Chalcatzingo, contains reptilian representations of the earth suspended in a watery underworld which serves as a source of rainfall and agricultural fertility. A more elaborate version of this scene can be observed in Monument 1, the largest rock carving in this cluster (fig. 2a). In this petroglyph, a seated human figure is depicted in the centre of a quatrefoil representation of the earth as a serpent surrounded by clouds, rainfall and verdant plants. The figure is decorated with many of the trappings of elite status, such as a headdress with quetzal birds, a nose ornament and a ceremonial bar. In addition to representing the ‘supernatural’ basis of the power of Chalcatzingo’s rulers, a common interpretation of this human figure is that he is a Preclassic period

predecessor of Tepeyollotl-Tezcatlipoca (as the lord of the mountain) and Tlaloc (as the harbinger of beneficial rains) based on its cave-like context and rain imagery (Aguilar, 2005, p. 24; Angulo, 1987, p. 140; Cook de Leonard, 1967, p. 57–58, 60). Indeed, Angulo (1987, p. 136) has noticed that the crossed-band motif in the flame-encircled eye of the earth monster closely resembles the Mexica glyph *omaxalli* (crossroads) which symbolized the locations of temples dedicated to Tezcatlipoca and other earth deities. Although no jaguar traits are visible in this composition, many of the Group B petroglyphs found on the northern talus slopes of Cerro Chalcatzingo (e.g., Monuments 31, 3, and 4 in order from west to east) are distinguished by the recurrent use of feline imagery (figs. 2b–d). While the animal figures in these rock carvings have frequently been linked to shamanic cosmologies involving human-jaguar transformation (Reilly, 1989), the use of motifs found on Monument 1 such as clouds (Monument 31), rain drops (Monument 31), crossed-bands (Monument 4), vegetal designs (Monuments 3 and 4) and flamed

browridges (Monument 31) support the notion that these feline figures were connected to the figure in that petroglyph and to the rulers of Chalcatzingo as animal alter-egos (nagual).

Another example of this sub-tradition is drawn from Juxtlahuaca cave in eastern Guerrero, Mexico. Most of the evidence for human activity in this cave, including a series of polychrome Olmec-style rock paintings, occurs more than 1,500 m underground. The most well-known of these pictographs is Juxtlahuaca Painting 1 (Gay, 1967) (fig. 3a). The best preserved portion of this mural consists of a small reddish human figure with a beard sitting cross-legged and holding a

ceremonial bundle. This personage faces a standing human figure dressed in a black tunic with red and tan stripes, a black headdress with blue-green feathers, as well as arm and leg sheaths decorated with the pelage of a jaguar. Even though the jaguar spots on the figure's body have often been interpreted as signs of shamanic transformation (Reilly, Garber, 2003, pp. 134–135), it appears that these jaguar skins functioned as items of clothing and therefore as a way to pictorially identify the nagual of the ruler as a jaguar. While much of this regalia highlighted the status of the individual as a noble, the jaguar costume (and the rock painting's placement in a deep cave) strongly suggests that the

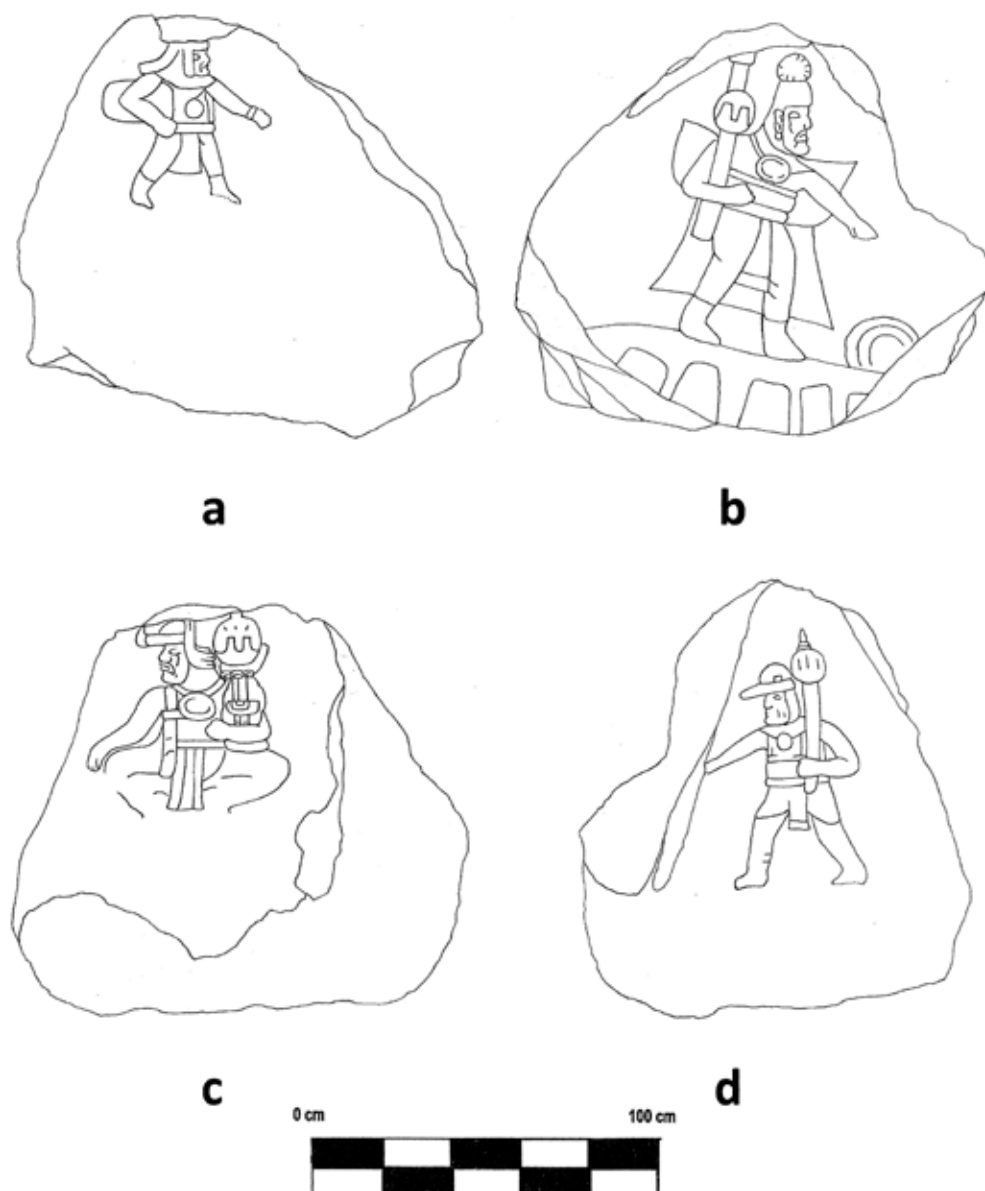


Fig. 4. The four carved sides of the Las Victorias Monument (Chalchuapa Monument 12) from Chalchuapa, El Salvador: (a) Fig. A; (b) Fig. B; (c) Fig. C; and (d) Fig. D. (Scaled drawings by the author)



standing figure from Juxtlahuaca Painting 1 was associated with an early form of Tepeyollotl.

A similar image is found in the Middle Preclassic period (900–500 BC) Olmec rock paintings of Oxtotitlán cave, located in the centre of Guerrero. One such pictograph, Painting 1d (fig. 3b), depicts a human figure standing behind a feline zoomorph. The human figure is painted completely in black except for the face, certain elements of the headdress and the groin area. The feline, possibly a jaguar based on its spotted pelage, is shown in a rampant position with its right hind leg resting on a series of circular designs. Initially, archaeologists argued that there might be a sexual link between the jaguar and the human personage in this painting (Grove, 1973, p. 134), possibly recounting a hitherto unknown creation myth that humans and jaguars mated to create the Gulf Coast Olmecs (Stirling, 1955). Although such mythological origins are suggested by the linear element which seems to emanate from the standing figure's groin, it is equally likely that the jaguar may represent the animal alter-ego of the human figure. From this alternative perspective, the linear element stretching from the human figure towards the jaguar may simply be a graphic device to show a connection between the two beings. While such a notion is certainly congruent with the nagualism in the Tezcatlipoca complex, the black-clad figure seems to also have been inspired by the sorcerous use of black pigments in later times.

Much further to the south, in the Chalchuapa archaeological zone of western El Salvador, there is evidence for a second sub-tradition of sorcery attached to rulership. In this sub-tradition, a different set of sacra emphasizing the use of mirrors was employed to denote sorcery in Olmec rock art. This evidence occurs on a rock carving on a large boulder known as the Las Victorias Monument (or Chalchuapa Monument 12) (Anderson, 1978). The four personages depicted on different sides of this boulder are generally shown with regalia associated with Preclassic period rulers, including capes, war clubs, arm bands, heavy belts, decorative loin cloths and headdresses (fig. 4). All four figures are also shown with circular pectorals identical in form to the concave iron ore mirrors found at major Preclassic ceremonial centres in the Gulf Coast lowlands such as La Venta and San Lorenzo Tenochtitlán (Diehl, 2004, pp. 70–71, 93–94). Such

mirrors not only denoted elite status but also have a long history of use as divinatory devices (Taube, 1992, p. 170). In addition to these mirrors, fig. C in the Las Victorias Monument (fig. 4c) is shown carrying an object with a large circular plaque secured on top of a bundle similar to the *itlachiyaya* or hand-held mirror used for oracular visions by Tezcatlipoca (see fig. 1b). This instrument was typically constructed of precious materials such as gold or feathers in the Postclassic period (Seler, 1908, p. 181). Likewise, the circular section of the Preclassic version seen in fig. C contains a double-merlon symbol that seems to have been associated with jade in Olmec iconography (Taube, 2000, pp. 311–313). Collectively, these objects appear to have manifested the ruler's special status as a diviner or sorcerer.

To summarize, the available evidence derived from a comparative analysis of the iconographic motifs and use contexts of seven examples of Olmec rock art from various parts of Preclassic Mesoamerica indicates that the material objects (sacra) associated with sorcery in the Tezcatlipoca complex of the Mexica were also present in the Preclassic period. Although it appears that sorcery was intimately connected to notions of rulership at this time, it does not seem to have been a unified tradition of ritual practice such as the shamanic traditions found in the Preclassic ceremonial complex (Furst, 1995; Reilly, 1989). Rather, data from Olmec rock art confirm that there was a range of ritual practice linked to sorcery. In the central highlands of Mexico, sorcerer-kings were linked with nagualism and occasionally the use of black pigments. But in El Salvador, the sorcerous powers of rulers were more readily identified through their use of mirrors for divination. Beyond the specific case of Olmec rock art explored here, the comparative methodology proposed in this brief paper could be fruitfully expanded to a larger sample of Olmec art in order to derive greater insights into the role sorcery played in Preclassic Mesoamerican societies as well as its relationship to the shamanic practices that informed the worldviews of much of the art in this period.

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**MEANINGS OF THE DEER CAVE  
(PORTO BADISCO, ITALY): NEOLITHIC ART**

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**Summary**

The Deer Cave (Porto Badisco in Apulia) is one of the richest and most complex Neolithic European paintings and also a temple with special abstract geometrical graphics associated with the deer. If we consider some of this cave's graphic features, the question arises as to what it has in common with the abstract and geometric art of the Palaeolithic caves that are located in neighbouring lands. Indeed, hundreds of surfaces covered in signs have been discovered in these caves, such as parallel lines, zigzags, chevrons, waves, marks, spots, circles, labyrinths and mazes, similar to the motifs painted at the Deer Cave but also to some caves in France and Spain. Although we are used to separating the concepts of archaic hunters from those of evolved hunters, my studies have revealed something in common between the Deer Cave and the adorned sanctuaries of the Pleistocene. I am referring to the arrangement of the figures on the walls, to the search for significant forms in the rock, to the sacred path adapted to the spontaneous layout of the cave, to the handprints and the attendance of children and so on. The question is whether these elements suggest a real continuity between the two eras. Furthermore, since the interpretation the art of Badisco led me to the same psychedelic phosphenic interpretation, I wonder if this model cannot be applied to certain material from the Palaeolithic.

**The premise**

Some years ago I published a book in which I suggested an interpretation of the Neolithic art of the Deer Cave in Porto Badisco (Apulia, Otranto),<sup>1</sup> whose graphics and structural characteristics became the starting point of the hypothesis presented here. Porto Badisco cave can be used as a model for talking about neuropsychological art, but also for talking

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<sup>1</sup> Leone, 2009a; some of the contents of the book can also be found in; Leone 2001, 2002, 2009b, 2011.





Fig. 1. Pebble, with a spiral and rays emerging from the central line. Grotta delle Veneri, Lecce. (photo, AAVV 1997)

about an imaginative language inferred from the natural forms of the rock. Both elements can also be found in the Palaeolithic. In another work on Apulian prehistoric art, I developed a general vision of the local artistic phenomenon and I grabbed recurring themes, persistences and possible connections. In particular, I noticed a long duration of the symbolic and abstract-geometric language that started at least 28,000 years ago and returned several times in successive eras. This strange and difficult language dominated the portable art of the Palaeolithic but then it reappeared intensely on the walls of the Deer Cave in the Middle Neolithic and Copper Ages.<sup>2</sup> Subsequently, it appeared on the pottery of the Bronze Age and was finally given new life as well as more structured, organized and folkloristic elements on the vases and the statue-stelae of the Iron Age (especially in the Daunian culture),<sup>3</sup> thereby closing a symbolic and decorative path that had lasted for millennia. It was a visual expression that did not always stay the same, it rather changed in the richness of its forms, in the composition, the semantic precision, the technical execution (engraving, painting and sculpture) and the use of media (walls, stones, bones, pottery and statues). Perhaps it lived a millennial ideological continuum that adapted itself to the various graphical and cultural innovations instead of running out. Here I would like to discuss its presence or possible continuity between the Palaeolithic and

the Neolithic. This does not mean that the graphic changes introduced at the end of the world of archaic hunters destroyed the existing concepts and motifs of art. It is more likely that certain Palaeolithic beliefs may have continued to motivate the creation of the graphic symbols and myths of the Neolithic. I would not rule out the possibility that certain aspects of art and metaphysics applied to the rocks of the Deer Cave, date back to the Palaeolithic.

### Palaeolithic art in Apulia

Let us start with the main elements of Palaeolithic graphics in Apulia. Very little is left of parietal art, which can be found in the rock shelters of Gargano, Grotta Paglicci and Grotta Romanelli. It is also present in the Deer Cave with finger tracings and a pair of animal profiles carved on the wall (an ox and an ibex).<sup>4</sup> Hundreds of pieces of portable art have been found (fig. 1), such as pebbles, slabs of limestone, alabaster, painted bones, etched and carved, even the sketch of a head on a large stone and two Venuses in bone.<sup>5</sup> So far, Palaeolithic graphics has involved 18 sites in caves and shelters. Three of them are indoors, nine on the coast and six near the sea.<sup>6</sup> In the northern region, the Gargano, there is a series of small rock shelters and the cave known as Grotta Paglicci. This is where the most animal figurative findings come from. Inside the shelters, there are only abstract motifs engraved on the walls. In the south, in the Salento region, there are other well-known sites: Romanelli, Grotta delle Veneri, Grotta del Cavallo and the Deer Cave itself. Grotta Romanelli, excavated in the early 1900s, is a cornerstone of the Italian Upper Palaeolithic and gave its name to both the flint culture and the portable art, precisely defined as Romanellian.<sup>7</sup> In the centre of the region there are only the Grotta delle Mura and the Grotta di St Maria di Agnano. The first shows many stones with geometric and animal motifs, in the second carved objects were found associated with

<sup>4</sup> Guerri, 1992. In the same cave several bones have been found with strings of parallel and perpendicular lines.

<sup>5</sup> For an overall view, please refer to Graziosi, 1973; Ingravalle, 2004; Leone, 2004.

<sup>6</sup> These are the Grotte del Cavallo, Romanelli, delle Mura, Grotta dei Cervi (Deer Cave), Cipolliane e Prazziche. It is thought that other caves, not far from these, are now submerged under water.

<sup>7</sup> The Romanellian and the Epiromanellian are aspects of the Italian Epigravettian and Epipalaeolithic.

<sup>2</sup> although in a minor form, this could also be seen at Grotta Cosma (Graziosi 1973), at Grotta S. Croce (Radina 2002), on vases, on the *pintaderas* (Graziosi, 1980) and on the little Neolithic female statues (Leone, 2009a).

<sup>3</sup> For pottery, please refer to De Juliis (1977), Yntema (1990); for statue stelae, please refer to Nava (1980) and Leone (1995).



Fig. 2. Panorama of the west wall (end chamber) with natural forms of rock: a face with two eyes (on the left); an oval hole shaped like a vulva (in the centre); a head of a person seen in profile (on the right). Chauvet Cave, Ard'èche. (photo, J. Clottes; AA.VV. 2001)

a very rare burial, that of a Gravettian woman buried 25,000 years ago with the fetus still in the womb, late in her pregnancy. The presence of additional burials in the other caves<sup>8</sup> indicates that these burial places were regarded as probably the final resting place for special or privileged individuals, as well as being artistic. However, the true relationship that existed between the funerary and artistic usage remains unknown to us.

The chronology of the portable art ranges from Gravettian and Epigravettian<sup>9</sup> in Gargano, to Gravettian, Romanellian and Epiromanellian in the centre and in the Salento. Among the oldest examples, dating back about 28,000 years BP,<sup>10</sup> there are two blocks of limestone fallen from a wall of Paglicci and covered by parallel and sub-parallel lines similar to the parietal signs that can be found inside the same cave, inside the cave shelters of the Gargano and in Grotta Romanelli. The latest findings were found in layers dated by C14 back to 8240 ± 120 years ago (Grotta

delle Mura).<sup>11</sup> The greater impact of abstract geometric motifs (which is mostly in Salento) dates between the Romanellian and the Epiromanellian and, therefore, in the Epipalaeolithic.

The most common motifs of parietal art are: linear signs, lines, triangles, both ovals and pubic, combined with phallic shapes and long silhouettes of schematic anthropomorphic style, but also fungus and ray motifs that come out through holes in the rock surface. The portable art has more varied motifs. The long and flat bones have bands of parallel lines that enclose notches arranged in various ways, the large slabs of limestone are arranged in large meanders, net-shaped and stair-shaped; other stones are surrounded by long ribbons or snake forms, irregular shapes and concentric circles; some stones show motifs from Azilian culture paintings. There are also animal figures. The oldest find is a bone engraved with an ibex and covered by chevrons and thick sub-parallel lines dated back about 22,200 years BP.

8 That of a boy and a woman, at Grotta Paglicci; that of a bison (with two corpses buried together) at Grotta delle Veneri; and that of a baby at Grotta delle Mura (Calattini, 2002). See also Leone, 2006.

9 The Epigravettian is an aspect of the Gravettian, contemporary of the Solutrean and Magdalenian, formed about 18,000 years ago and partly continued in the post-glacial era. It is characterized by the small size of the instruments, a partially rising trend to geometric shape and the increasing number of flint scrapers.

10 Palma Di Cesnola, 2003.

### The Palaeolithic idea compared with the Deer Cave

What the abstract geometric language of the Deer Cave and the local Palaeolithic have in common is yet to be discovered, but perhaps it is not a coincidence if so much non-figurative graphic art is concentrated

11 Calattini, 1996.



Fig. 3. The scene of metaphorical hunting. The hunter aiming at the deer causes phosphogenic visions: anthropomorphs like the cross of Malta, 'S' inside mazes and a 'p' (Greek rho)-shaped character, which goes rightwards leaving a trail of dots; everything is moving. Deer Cave, Porto Badisco. (Tracing, Leone, 2009)

in the same geographical area. The Deer Cave is a Neolithic underground shelter superbly decorated with very enigmatic geometric abstract motifs.<sup>12</sup> It's 'the deepest and the most artistic of the Apulian caves as well as the most important sanctuary of Neolithic Europe. It is over 1,500 m deep and is covered with murals for about 600 m. It has two entrances'<sup>13</sup> and three long decorated corridors that cross in a big room where there are ochre paintings; other paintings are in bat guano.<sup>14</sup> If we consider some with abstract shapes individually, they are identical to the Palaeolithic ones (concentric circles, grids, ladders, parallel lines, wavy lines, dots), while others are more similar to the motifs which appear in the Mesolithic in Spanish schematic art<sup>15</sup> in Grotta la Pileta (Malaga) and in the Atlantic megaliths (comb-shaped images, stars, mazes, deer and surreal anthropomorphs).

In common with the ancient adorned caves of France and Spain, the Deer Cave has above all the same physical characteristics, with the underground world and the suggestive shapes of the walls and of gigantism: holes, vulvar forms, faces and the monstrous anthropomorphic beings trapped in the rock, natural elements that are not always recognized even when associated with paintings. I have seen



Fig. 4. Scene of a phosphogenic 'journey' with a 'p'-shaped psychonaut advancing, supported by concentric circles, towards two parallel zigzags. The concentric circles indicate both its shift and his altered mental status; behind him, a group of phosphogenic shapes. Deer Cave, Porto Badisco. (Photo Graziosi, 1980)

sundry elements of this type in prehistoric sites, such as shelters, caves and megalithic stones that cannot be the result of chance.<sup>16</sup> Rather, all this reveals a refined trend towards surrealism supported by the power of suggestion, specially inside the caves with the floating glow of lights. I believe that the human and humanoid form, although lacking in graphics, had an important ideological significance. For this reason, I would suggest examining the shapes of the walls where there is a concentration of paintings and art in general, outside as well as in darkness. In the Badisco cave there is also a rich sexual symbolism, including a phallic idol that emerges out of the wall.<sup>17</sup> Childhood traces are also present, like a hundred handprints of a child of about five years old.<sup>18</sup> It is not lacking in surreal anthropomorphic paintings and even symbolic animals such as deer, canids and goats.

### The Chauvet Cave: anthropomorphic walls?

The subjects painted at Badisco are much more numerous and organized in a new syntax, but when compared with anthropomorphic walls and animals, the images seem to come from the metaphysical thought of archaic hunters. The thought of the artists expressed itself through the experience of many dimensions. One of these dimensions was the search

<sup>12</sup> The first drafts on phosphene interpretation are in Leone, 2001; 2002.

<sup>13</sup> The exploitation of the targeted double-entry plan could stir up a particular form of suggestion.

<sup>14</sup> Inside were found pots, tools, amulets and ornaments decorated with the same symbolism as the paintings.

<sup>15</sup> Beltran, 1982. Grotta la Pileta has also similar paintings; Leone, 2009A: 58.

<sup>16</sup> Leone, 2014.

<sup>17</sup> Anati, 2004.

<sup>18</sup> Not far from the handprints there seems to be the previously unknown burial of a child.



for material signs that would reveal the existence of a parallel, immaterial, universe to get in contact with. In this regard, I would like to point out that human figures also appear on the walls of the Chauvet Cave,<sup>19</sup> particularly on the western wall of the end chamber, where there are at least three elements of this type, collected at present only by photographic analysis (fig. 2). In the middle of the panel, on the top, a relief recreates two owl eyes and, in the lower part, a natural niche recreates a mouth which also houses a painting of a rhinoceros inside. Further to the right in a large cavity wall, there is an oval hole shaped like a vulva. Further to the right the head of a person appears seen in profile. In this picture you can see the forehead, the hairline or a hood, the eye (probably underlined with brown substance), the nose and the chin. This is very long and looks more like a phallic element than a beard. It also houses the painting of a female pelvis woven on to the head of a bison and maybe also of a feline. You can also see the shoulder and the paw of the bison, which goes to form the left leg of the woman. It should be noted that all the west wall paintings have a close relationship with these beautiful forms and occupy only certain portions of the rock surface. They do not ever casually invade the three anthropomorphic signs that emerge from the stone. In fact, they belong to it symbolically: the rhinoceros in the niche's mouth, the feline-bison-woman on the phallus-chin and the whole zoo pantheon that unfolds from one side to another of the wall. If you focus on these paintings, you get the impression of seeing a film that shows zoogenic metamorphosis in process, a film that begins with the appearance of the buffalo to the right, and ends with that of the feline to the left. Indeed, as it unfolds, many other identities (both mythical and symbolic) appear and disappear, like the horse, the rhinoceros and the elephant. My interpretation accords closely with the shamanic theories of the caves and with the idea of darkness exploited psychoactively in order to rouse psychedelic and mythic visions. Along with the neuropsychological model, my aim is to develop a mythical explanation, because my hypothesis is that even the most ancient art has fused together myth and visions.

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19 Leone, 2011.

## **The psychedelic metaphor, the visions, and the movement of figures**

Let us go back to the Neolithic non-figurative language. The artists of Porto Badisco expressed an ideological and visionary universe, which already had its own abstract geometric coding. According to my analysis, these forms were abstract entities existing in the past. The reappearance in the Deer Cave of this surreal world made up of figures in motion and therefore equipped with power occurred due to a psychoactive factor symbolized in a hunting scene painted beside the geometric shapes, re-evoked at least sixteen times underground.<sup>20</sup> The protagonists of the psychedelic<sup>21</sup> and metaphorical hunting are a deer and a hunter (with bow and arrow), accompanied by two dogs. This metaphor was, of course, the evocation of a myth in which a psycho-pomp deer was the guide which used to lead the hunter to a cosmos characterized by a phosphogenic presence.<sup>22</sup> Many of these geometries I have classified by the term 'phosphogenes' because they may result from the phosphenes: entoptic forms seen in the prolonged darkness or during certain altered states of consciousness or through electrical stimulation. Some of these elaborate forms can be identified in the Romanellian graphics.

The use of phosphogene geometry can be traced back to immemorial times. The repeated vision of entoptic phenomena and phosphenes may have fed the mythical imagination and led to the consolidation of entities, spirits, ghosts and energy, forming an abstract-geometric universe parallel to the figurative one. The change in shape occurred over time. The cosmos was transformed, enriched or depleted due to cultural and doctrinal changes and repeated entoptic experiences. It must be said that some familiar forms used at Badisco are joined to the phosphenes. A cross (fig. 3), for example, is both a person (interpreted as an antropic phosphene and a psychonaut immersed in his altered states of consciousness), an 'S' or a wave (a snake and therefore a zoogene). Other phosphogene forms are concepts and feelings, such as the spiral and the concentric circles, which indicate

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20 Leone, 2009a.

21 The etymological meaning of the Greek words ψυχη (psyche, soul) and δηλαιν (delein, to manifest), translating as 'mind-manifesting'.

22 Today there is a similar myth evoked by Mexican shamans (huicholes) who hunt, symbolically, the father-deer of the peyote (Samorini, 1995, Leone, 2000a).

both movement and determined psychoactive states (fig. 4). The challenge is to decode these figures and rebuild the cosmos pantheon which they represent. Without the hunting or psychedelic interpretation, the reading of the art of the Deer Cave would remain elusive. This way, instead, it is plausible to think that the abstractions are a fusion between the phosphenes, the vision, the mythical culture and the mood of the artist, and that the artist painted what he himself must have seen and felt. In general, we can state that certain phosphogenic works also work as symbols and are able to describe sensations, movement and altered states of consciousness, especially if associated with animals and humans.

A special feature of the art of the Deer Cave is precisely the graphic movement, sometimes summed up in strange shapes and intricate movements that condense moving sequences. To give an impression of movement there are also signs that I called additional: points, lines and trails that describe the movements of the characters, like in comics. I think movement is very well depicted in the Palaeolithic. Some of the abstract forms can be transformed and changed in appearance from one side of the wall to the other. The same thing can happen with animals, whose movement on the walls confuses our visual perceptions, so if we see two, three or four of them, they could well be one or two specimens described graphically as moving or how they momentarily appear. I think that the Chauvet Cave has the best representations of this kind in the end chamber.<sup>23</sup>

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# ART, RELIGION AND MYTH: WERE THEY INTERRELATED IN UPPER PALAEOLITHIC TIMES?

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Secular or religious? This is the first question that researchers tend to ask about the Upper Palaeolithic cave paintings of western Europe. Were the images a mode of communicating, say, kinship matters, political information or territorial limits? Or were they primarily, if not exclusively, an expression of religious beliefs and experiences?

This initial question is readily answered in a broad sense. The location of many images in dark, virtually inaccessible chambers and passages (I am not concerned here with portable and *alfresco* art) strongly suggests the existence of some sort of esoteric, probably religious, system of which they were a manifestation. But that answer merely places us on the threshold of further questions. What is religion? Was the making of the images a ritual? Were the images related to myths? Did they have socio-political as well as religious significance?

We may not be able to answer all these questions, but I believe we can answer some of them. As in all archaeology, we do not have to know everything in order to know something. It would be premature to dismiss all attempts to get at the meaning (in a broad sense) of Upper Palaeolithic cave art. This article therefore addresses, in summary form, fundamental issues on which many questions about Upper Palaeolithic art depend. Indeed, we must understand these issues if the questions themselves are to be meaningful.

## Multi-component Religion

Numerous writers on Upper Palaeolithic art refer to religion without defining the word. If we accept religion as it is generally understood in the West today, we shall imprison ourselves in our own economic and social times. I therefore define religion broadly as a

belief system founded on acceptance of supernatural beings and realms. A religion without a supernatural component is not a religion at all, but rather a philosophy. On this understanding, we can go on to distinguish religious experience, belief, ritual and mythology. The mix of these four components varies from society to society, some giving more prominence to one element than another. I consider each in turn. First, we must ask why people all over the world believe in supernatural things and beings for which there is no incontrovertible evidence. If there really were supernatural beings who intervene in the affairs of human beings, their actions and interventions would be easily identifiable and leave no room for doubt.

In the absence of indisputable evidence, theologians and philosophers have devised various arguments to explain why people believe in supernatural realms and spirits. Some argue that human beings have an innate (God-given?) desire to explain things around them: death, the rising and setting of the sun, and the origin of thunder and lightning are but a few. So they invent invisible beings with powers similar to, but also beyond, their own. This argument is insufficient. Why do people everywhere come up with the same unlikely answer, supernatural spirits? Moreover, contrary to some writers, people are not genetically programmed to ask why questions. True, all people have the capacity to ask such questions, but that capacity does not force them to ask the questions. Within all societies, some individuals do ask them and some do not. In any event, many why questions presuppose the existence of something beyond the natural world. How did people acquire that pre-existent belief? More important is the question why people select only certain things as requiring supernatural explanation and not others. If we can identify the things that a society deems in need of supernatural explanation, we shall come some way to explaining its social structure. Supernatural explanations often favour one segment of a society above others.

A more persuasive explanation for belief in supernatural things is indisputably universal; indeed, all fully modern people can glimpse supposed evidence for such a realm. It lies in the functioning of the human brain. All normal people experience dreams and mildly altered mental states, such as euphoria

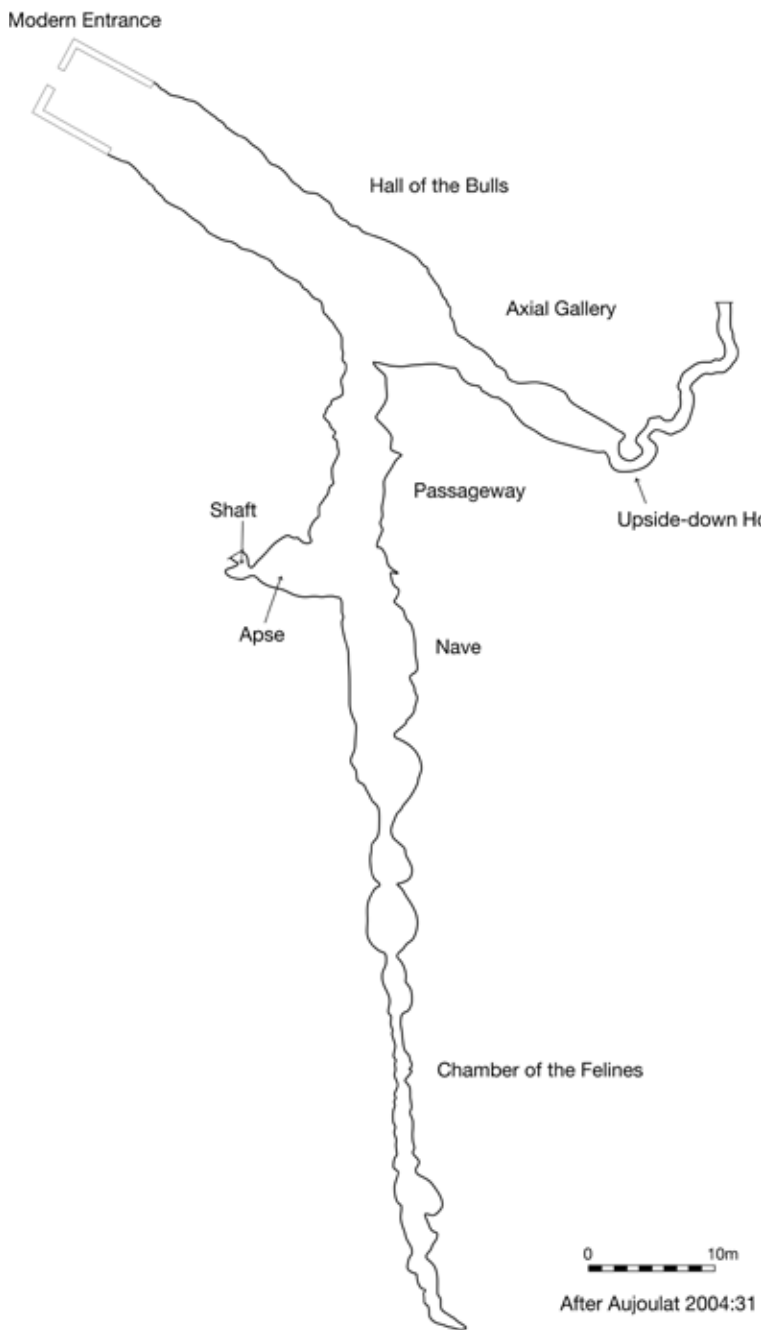


Figure1. Map of the Lascaux Cave.

and inner peace. In addition, some experience more vivid states that we call hallucinations. These intense altered states of consciousness may be natural in the sense of being pathological (e.g. schizophrenia) or they may be intentionally or accidentally induced by various means that include sensory deprivation, meditation, pain, intense rhythmic activity, such as dancing and chanting, and the ingestion of hallucinogenic substances. These induced states have

much in common with dreams: they involve bizarre happenings, transformations and the collapse of time. To make daily life possible, people have to distinguish between altered states, both natural and induced, and ordinary, day-to-day experiences. That process of discrimination and understanding entails speaking to others about the experiences. In this way people come to a communal understanding. That understanding is, in many societies, the reality of a supernatural realm that impinges on human life in dreams, altered states and, by extension, strange happenings. In other words, belief in supernatural entities is derived from universal mental experiences.

Today, especially in the West, science and education have challenged this interpretation of altered states by uncovering the electro-chemical processes of the brain in dreams and altered states of consciousness. Abandoning the ancient supernatural interpretation is, however, difficult for some people. Some psychologists, such as Jung and Freud, have invented secular understandings that continue to invest these sometimes disturbing mental states with some sort of deep meaning.

In sum, a universal need to come to terms with shifting mental states is undeniable. I argue that, because Upper Palaeolithic people were fully modern, they too had to come to terms with the natural functioning of the human brain and the various mental states that it produces.

Once people take the workings of the brain to indicate a supernatural realm, they set in train a number of developments. What they accept as religious experiences leads on to the formulation of a set of shared religious beliefs that explain those experiences; they use the experiences as a foundation for often very elaborately worked out belief systems and pantheons. The experiences are, however, not equally shared: some people naturally experience them more intensely and more frequently than others; moreover, some assiduously seek to induce them. Inevitably, some beliefs are contested, especially when they are formalized into emphatic doctrine. Indeed, within all religions there is no unanimity of belief and doctrine, despite claims to divine revelation and a socially uniting role of religion. Within a given religion, this sort of contestation leads to social discrimination: those who experience (or claim to experience) spiritual

insights are more respected than those who do not. As a result, all religions are hierarchical. The degree of complexity in religious hierarchies seems to be related to economic and political complexity.

Some researchers, especially in the second half of the 20th century, have taken certain hunter-gatherer societies to be non-hierarchical, for example the southern African San (Bushmen). This conclusion is, however, based on the notion of social discrimination being expressed in visible wealth. In fact, San people who possess no material wealth but nevertheless claim to have contact with the supernatural realm are accorded more respect than those who do not. This respect is subtle and not always apparent to observers from another culture. Some are feared. Here we have the pre-capitalist roots of inequality.

After religious experience and belief, the next component we need to consider is religious practice. This point brings us face to face with Upper Palaeolithic cave art. When people experience what they take to be a supernatural realm, they feel that they must do something in response to it: to harness it or to evade it. Because people share religious experiences and beliefs, the actions they perform as a result of them also tend to be shared, though some may be performed in private. These shared actions are necessarily standardized and repeated. This is what we call ritual. In highly organized societies rituals are often extremely elaborate: at repeated points they refer explicitly or obliquely to religious beliefs, as in a high mass performed in a Christian cathedral. Interestingly, some rituals are designed to induce religious experiences that may range from the mild euphoria created by chanting in a highly symbolic cathedral to intense altered states induced by frenzied dancing or hallucinogens. In these instances, religion loops back on itself and becomes self-perpetuating: experience → belief → ritual → experience.

Another component of religion is the devising and recounting of myths. For the purposes of this article I take myths to be narratives that refer to origins, transformations and supernatural interventions. It seems that all societies have myths of this kind. This universality, I suggest, derives from the fabric of daily human life, which is necessarily lived in the flux of time: all human activities have a beginning and an outcome that, because of the passage of time, is different from

their beginning. This is the sequential structure of narrative. It is inescapable in all human life and communication. Narratives that derive from religious experience and belief, but that are embedded in and often justify origins and specific social and economic contexts, are especially powerful myths. Ultimately, many myths justify the existence of religious and political hierarchies directly or by implication.

Why myths exercise great emotional impact, far more than ordinary tales of daily life (people sometimes die in defence of myths), is the next question. Philosophers and folklorists have formulated various answers to the problem. I need not review them here, save to say that there is probably no single answer. I argue that part of the answer is the presence in myths of what I call nuggets. These are selected animals with rich connotations, turns of phrase that trigger proliferating emotions, items of material culture that have rich associations and so forth. It is very difficult, often impossible, for people from another culture to uncover all these oblique yet emotionally powerful associations.

### **Upper Palaeolithic cave art**

This discussion of religion leads to some general points that we can make about Upper Palaeolithic people, society and art.

The makers of west European cave art were fully modern *Homo sapiens*. On the evidence currently available, it seems highly unlikely that their predecessors in western Europe, the Neanderthals, made images. I therefore suggest that it was the fully modern brains of *Homo sapiens* that facilitated the making of images. (Here I restrict art to recognizable images of animals and people.) Indeed, the wiring and electro-chemical functioning of the human brain made possible the formation of mental images: people can mentally picture things that are not present. Next, in certain altered states of consciousness the brain projects those images on to surfaces in a manner that has been likened to a slide or film show. Then, given the emotional and social importance of the images, Upper Palaeolithic people desired to apprehend, or fix, what were sought-after and valued visions: people reached out to them and traced their outline on surfaces. Projected mental imagery thus led to the making of two-dimensional images of three-dimensional things. People did not

cleverly invent two-dimensional images: their brains produced them.

An important component of altered states that I have not so far mentioned is the widely reported mental experience of a vortex or tunnel. Near-death experiences, for instance, are said to include the sensation of moving down a passage with a light at the end. In the progression of altered states from mild to deep, the vortex leads from diffuse and geometric mental entities to fully developed hallucinations of people, animals and bizarre happenings that include the blending of the human body with powerfully conceived animals. For some people, the experience of a vortex is thus the gateway to profound religious experiences, to a supernatural realm.

On these grounds, we can formulate some possible explanations for Upper Palaeolithic cave art. Broadly, I argue that the functioning of their brains led Upper Palaeolithic people to seek religious experiences, to formulate religious beliefs, to perform rituals and to narrate myths, all in the specific social context of the time and place. For them, entry into a cave was analogous – or even identical – to passage through the vortex into a subterranean spiritual realm. When we note that sensory deprivation is one of the many factors that can induce altered states, we are in a position to suggest that the dark, silent caverns may well, in addition to other factors, have sometimes had a mind-altering function for those who ventured into them, especially if they were consciously in search of spiritual experiences. Rituals involving chanting, meditation, rhythmic movement and perhaps, but not necessarily, the ingestion of mind-altering substances were thus bound up with the making of some subterranean images. From this general observation we can move to studies of specific caves.

### **The caves themselves: an example**

The diverse topography of the French and Spanish caves and the varied distribution of imagery within them are striking. Attempts to produce a template that accounts for all the multiple forms is impossible. André Leroi-Gourhan's pioneering work, for example, was successful in some regards but failed in others. To illustrate the relevance of the concepts of experience, belief, ritual and mythology that I have outlined I therefore select a specific example: Lascaux.

Although the Upper Palaeolithic entrance to Lascaux may not have been in the same place as the modern entrance, it was probably nearby (fig. 1). It led into the Hall of the Bulls, which was comparatively close to the surface and relatively accessible. The chamber is approximately 9 m ( $\pm 30$  ft) across. The paintings are on an upper, calcite-covered level and comprise two converging cavalcades of animals. It seems clear that the overall effect was composed. The animals include horses, aurochs (bulls; the largest is 5.5 m [18 ft] long), deer and a bear; there are also some linear and quadrilateral signs. The paintings of these images must have been communal: a platform to reach the required height had to be built. The large space permitted a fairly large number of people to view the images and to perform rituals that may have included dancing and the chanting of myths that related to the impressive animals. This area was probably a vestibule. It leads to areas that can accommodate far fewer people.

The Axial Gallery leads off the Hall of the Bulls. To enter it, one passes beneath and through the cavalcade of animals. In the Axial Gallery the animals are painted on the upper sides and over the ceiling: a visitor is surrounded by animals. At the far end of the gallery is the falling horse, painted around a boss of rock; it is a miracle of draughtsmanship. The Gallery slopes downwards and the carefully planned enveloping images, together with the upside-down horse at the end, create a sensation of a vortex leading down to a nether realm of animals. An offering of ochre-coated flints was deposited in a niche at the deep end of the passage. The ochre on the flints suggests a relationship between paint, the animals painted and flints that had a special symbolic status.

The imagery in other parts of Lascaux is for the most part more confused. Entry to these other parts required some bending down and, eventually, crawling. The deepest part is the Chamber of Felines. This space can accommodate only one person at a time and then only by lying down. The images were scratched and seem to have been made swiftly. They include felines, one of which has lines emanating from its mouth; another has lines suggesting urination. Another offering, a horse's tooth, was taken into this remote part of the cave.

The overall topographic and embellished complexity of Lascaux suggests multiple uses. At a broad level, we



may suggest communal rituals being performed near the entrance. Here people may also have performed myths relating to the animals, which were probably a source of supernatural power that the rest of the cave suggests only a few people were able to control. These special people penetrated into the depths of a supernatural, animal-inhabited realm via a combination of the narrowing passages and their own parallel mental vortex. Some of them scratched visions of the animals that they saw in the depths. Other parts of the cave, such as the Shaft, were possibly reserved for different kinds of experiences, also involving just a few people.

What seems clear is that the cave and its embellishments constituted a template for mental experiences and related social discriminations. The highest members of the religious hierarchy were probably associated with the deepest parts of the spirit realm where, in constricted spaces, a few privileged people could experience their personal power visions and see the revelations of their predecessors. All the components of religion, as I have defined them, were thus involved and expressed within the specific topography of the cave. Other caves that have different configurations clearly demand other interpretations in terms of the components of religion.

We may not be able to explain all the decorated Upper Palaeolithic caves. But the multi-component definition of religion that I offer helps us to begin to distinguish interrelated spiritual and social spaces with political implications. Within the confines of their own time, Upper Palaeolithic people were doing what others down the ages have done, each group in its own way in natural or built spaces.

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## THE MYTH OF CYCNUS AND ANCIENT CARVINGS OF THE ARCHAIC APUAN LIGURIAN PEOPLE NEAR PONTREMOLI (MS, ITALY)

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### Abstract

The Author reports her personal experience on the prehistoric carvings in Upper Lunigiana, which were not known before the discovery made by the Archeoclub of Italy ALATE. In this paper she presents the prehistoric carvings made by the archaic people whose capital was Apua, not legendary as the discovery of the high-reliefs of the Ligustian Boat demonstrates, supported by the mythical figure of Cycnus (the Swan). A boat carving on mountain rock is the expression of a population that has two souls, the mountain and the sea. The Apuan Ligurian people is also connected to the figure of the moon carved five times on the “Rupe delle Lune” (Rock of the Moons). The high-reliefs in the six sites of the “Lunigianese Park» which we hope will soon be set up, deal with many concepts connected to social organization, religion and the sacredness of human manifestations, including sexuality.

Key words: carving, statue menhir, Lunigiana, Apuan Ligurian

### Why remember the pre-historic myths?

Why remember myths from the prehistoric point of view and found in tribal art? To this question I could reply: why remember Gilgamesh, why read Homer, Hesiod, and so on? The only difference between prehistoric and historic myths is in their expressive form: on one side there are the carvings (or engravings) executed by a non-literate people, whose deep meanings are at the roots of human culture, in visual art which is a “first hand historical document” (Anati, 1988, p.38); on the other side there are many masterpieces of art, whose complex aspects deal not only with one single particular people and its society, but with human knowledge itself. “Writing before

the advent of writing” is the definition of E. Anati for prehistoric rock engravings and cave paintings: they are a way to leave messages directly on the rock surface, messages full of meanings still to the present people, messages of the archaic Apuan Ligurian people, not only reflecting its way of life, but also its spiritual vision also through myth.

### The Cycnus (Swan), the Moon, and the “Apuan Ligurians”

Both the Swan and the Moon are ethnic elements present in the culture and in the conceptuality of the ancient population which lived in Upper Lunigiana, near Pontremoli (MS, Italy). Michel de Montaigne, who travelled through Pontremoli during his journey in Italy in the 16th century, was also involved in the



Fig. 1. High-relief of the Ligustian Boat (fig.1), whose protome is the head of the swan, associated with the myth of the Ligurian king Cycnus. The high-relief is 15 cm long, 8 cm high, 7 cm wide: its sub-elliptical protome is 5 cm long, its highest side 2 cm.

debate regarding the legendary Apua and identified the mythical site of the Apuan Ligurian capital in the San Genesio hill, south of Pontremoli, today called Urceola or Saliceto. As reported by Manfredo Giuliani (1933; 1939), famous scholars from the 15th to the 20th centuries believed in the real existence of Apua: they believed in the tradition of the Apuan Ligurians and their settlement on the mountains near Pontremoli. In the 20th century Manfredo Giuliani, famous historian and ethnologist, was certain of this theory, based not only on the writings of 15th and 16th centuries notaries and scholars, but also on certain ethnological peculiarities as the archaic cacuminal pronunciation of certain consonants, a typically local archaic characteristic. Giuliani based his

theory also on the historical hostility, heritage of the Pontremolese, still present in the 20th century against Luni, a Roman colony of the 2nd century B.C., established on the coast to control the last Apuan Ligurian rebels, who had remained after the historical deportation (40,000 were deported in 180 BC) to Sannio, Campania, south Italy. His words “just a few flowers and often prickly thistles were taken from the mountains of Pontremoli to the Roman ruins of Luni” were significant (Giuliani, 1933). He was convinced of the real existence of Apua and of the archaic Apuan Ligurian settlement near Pontremoli, but there was no proof: only a strong feeling of hate that is still felt by the present Lunigianese against Roman Luni through the millennia.



Fig. 2. The Oblong Shield: width 28 cm, 22 cm height, max. depth 10 cm. Its shape is the same that winds twice around the high-relief of the Ligustian Boat. Polybius (2nd century BC) describes the oblong form of the Ligurian shield. It overhangs the Archaic Cameo: 36 cm width, 33 cm height, 19 cm depth. It is in the sacred almond tree that surrounds it.

### **Tradition and research from the 15th century to the 20th century.**

In the first half of the 20th century the historian Ubaldo Formentini discovered the ancient road that connects Pontremoli to *Marina Anziate*, the ancient port on the Ligurian coast near present-day Deiva Marina, which Scilace or Pseudo Scilace had written about in the 4th century B.C. (Shiple, 2011). Formentini's work shows two important aspects: the settlement of the archaic Apuan Ligurian population near modern Pontremoli and their knowledge of navigation. In fact, the archaic Apuan Ligurian population could have passed along the ancient road, but this did not prove their settlement in the mountains of Pontremoli.

### **The missing proof in the discovery of the Archeoclub of Italy, ALATE.**

The recent discovery of an extraordinary high-relief of a sun boat carved in a rock re-opens the centuries-old debate, and in my opinion, it also concludes it. In fact, the high-relief of the swan hints at the famous ethnic myth of Cycnus, the Ligurian king turned into a white swan: this is the previously missing proof (fig.1). I have called the high-relief the *Ligustian Boat*. Its aspect and its function are the same as those of all ancient sun-boats, including the Etruscan, Roman, Sardinian and those from the pre-indoeuropean Mediterranean area of the 4th Millenium B.C. Like the apparent movement of the Sun re-birth after sunset, the sun-boat transported the soul of the dead





Fig. 3. The carving of the Stele Bas-relief is similar to the Apuan Ligurian Statue Menhir classified by Ambrosi as B group (1800-1100 BC) and dating to the Bronze Age. But as the head is not well separated from the bust, it could be dated to an intermediate period, between the Aeneolithic and the Bronze Age.

and, in common belief, it took the soul to be born again in the afterlife. The *Ligustian Boat* does not only have a cultural meaning, but also an ethnical one: it belongs to the Apuan Ligurian people and it shows the double identity of both a sea and mountain population how only the Apuan Ligurians were in this part of the Apennines, where their descendants were killed or deported by the Romans in the 2nd century B.C., after having confirmed their disastrous defeat that outraged the consul Q. Marcio (186 B.C, Livius, XXXIX,20,8). *Prius sequendi Ligures fnem quam fugae Romani fecerunt*, (the Ligurians stopped following before the Romans stopped running away). *Non tamen obliterare famam rei malae gestae potuit; nam saltus unde eum Ligures fugaverant Marcius est appellatus* (Livius, XXXIX,20,10) (however, he could not wipe out the memory of the defeat, because the mountain pass which the Ligurians had sent him away from was called *Salto Marcio*).

The Ligustian Boat shows a definite knowledge of the various parts of the vessel with nice finishing touches: the broadsides, the *cheniscus* (ornament of the stern in shape of goose), the *protome* (figurehead), the hull and the proportions, are all things not easily known by a mountain population. But on the other hand the high-relief, cut out of sandstone in one of the most inhospitable and wild places in the mountains, also

shows the other aspect which is the opposite, but at the same time complementary: the marine soul of this population.

### The Ligustian Boat and its characteristics

Near the *Ligustian Boat* there are small burial caves and also female sexual high-reliefs, two aspects that according to Ambrosi do not concern the historical, but the archaic Apuan Ligurian population that buried its dead; they did not burn the dead, as the population did in the historical period. Which other population, if not the archaic Apuan Ligurian ancestors of those who practised burning? The hypothesis that the high-relief belonged to the archaic population is strengthened by other aspects as follows:

The sign that covers the high-relief twice as a sort of frame, and similar in shape to that of another high-relief, in a nearby site, called *Scudo Oblungo* (Oblong Shield, fig.2), typically Apuan Ligurian, as Polybius writes (Storie, XXIX,14,4). Inside the double frame, the high-relief of the Boat has a central position, as if it was a planned project.

Its perfect artistic quality on the rock reveals the existence of a project committed to a very able artist, capable of carving not any kind of old sun boat, but that with the representation of Cycnus.

Even if the figure of the animal head has been eroded





Figs. 4a, b. Carvings of Moon in its different phases on the Rock of the Moon.

Measurements: every carving measures 3.5 cm in depth.

First Moon (on left in fig. 4): 23 cm diameter; its eye measures 3.5 cm; it contains two moons in its circumference: the superior half moon is at a distance of 7 cm from the circumference,

Second Moon (in central position): 22 cm diameter; it is divided vertically into two parts by a natural vein in the rock.

Third Moon: 30 cm diameter with maybe a natural central protuberance.

Fourth Moon, the Black Moon (in fig. 4, in the background): diameter more than 30 cm.

Fifth Moon, on the tower rock (not in fig. 4); on the left-hand side near the first moon is a wonderful crescent half moon.

(by stones, wind, water and so on), on the small protome (2X5 cm) across millennia, it is still easy to recognize the Swan's head, particularly because of its long neck that pushes forward the small boat, cut on slanting rock and moving toward the edge of the cliff, like the soul towards the end of life. Which animal can accompany a Ligurian soul, better than the ethnic Cynus? The rhetorical question also finds its confirmation by looking at other ethnic high-reliefs in the six nearby sites, all of them discovered by ALATE,

precisely the *Oblong Shield*, the *Archaic Cameo*, the *Rock of the Moons*, the *Stele Bas-relief*. Altogether, these carvings recall the Apuan Ligurian people and their archaic settlement in the mountains near Pontremoli.

### **Emmanuel Anati's lesson, a guide to understanding rock art.**

*"like writing, it is an unending source of information for historical reconstruction" and furthermore "for the fact that for its own nature it has remained in situ and*

*we can find it there where it was created, it constitutes an immense archive more than any other reliable and comparable” and what is more: “each high-relief [...] is a first-hand historical document” (Anati, 1988, pp. 32, 35, 38).*

### **Rock art, an archaeological find on-site, improves the historical reconstruction**

On the basis of the aforementioned reasons, I think it is necessary to re-do the historical reconstruction, acknowledging the fact of the Apuan Ligurian population's settlement on the mountains near Pontremoli, where its high-reliefs can still be found, all of them facing west, towards the mythical Apua. Its ethnicity is accounted for by the fact that it was found in the place where it had been carved, in its original context. Almost all the statue menhirs ascribed to this Apuan Ligurian population, also the creators of the *Stele Bas-relief* (fig. 3), have been found out of context, unlike the *Ligustian Boat* which was found in its exact context, on its native rock, a certain sign of its belonging to the Ligurian people and to its mountain soul.

### **Particular aspect of the Ligustian Boat**

Another important concern is the peculiar conceptuality of the high-relief. Comparing it with other sun boats, one notices the particular relationship between the protome and the cult Boat in all the other sun boats. In the Etruscan sun-boats (Camporeale, 2015), Roman (Winckelmann, 1831), Sardinian (Lilliu, 1966, p. 514; Lilliu, 2000, p. 483; Iaia, 2004; Dolfini, 2004; Bartoloni, 1987), Valcamonica (Marretta, 2015, p.115), and the cycladic (Kerényi, 2012, fig. 17), the protome is always functional to the boat. On the contrary, in my opinion the boat is functional to the protome in our *Ligustian Boat*, as can be seen from Fig.1. In fact, the whole boat moves up towards the long neck and towards what originally must have been the head of the mythic Cycnus, a typical identifiable Ligurian archetype also present in the Liguri small bronzes dating back to the 4th century B.C. now in the Louvre Museum. See also in Virgil's poetry: *Ligurum ductor fortissime bello...Cupavolcuius olorinae surgunt de vertice pinnae* “ in Aeneidos X, 185 ff). The archetype represents the reference image (Kerényi, Prolegomeni, 1972) on

which *Weltbild* is based, “*the reality of the world*” the idea of genesis and origins. In our case the archetype is the Ligurian king Cycnus, transformed into a swan, an animal which is associated in the high-relief with the re-birth of the soul, therefore with a double value, ethnic and spiritual. So, in my opinion, the sense of the ascending of the sun boat towards its protome is also the archetype. The other ethnic high-reliefs discovered by the A.L.A.T.E. are: the *Oblong Shield* (fig. 2) that stands above the *Archaic Cameo* (fig. 2) with the typical Ligurian dolichocephalous skull (according to the research of Sittoni 1923, 24 and 27), the *Bas-relief of the Stele* (fig. 3) and the *Rock of the Moons* (fig. 4). On this last rock, the moon, the ancient mother as per the definition of Giuliani, turns exactly towards the west and towards Pontremoli “*ad confluentum*” that is at the confluence of the Verde and Gordana streams of the Magra River, under Apua on the San Genesisio hill.

### **A Livy quote and a toponymicals interpretation.**

At this point it seems appropriate to remember the words of Titus Livius (XLI,19,1): *Cis Appenninum Garuli et Lopicini et Hergates, trans Appenninum Friniates fuerant, intra Audenam amnem* “On this side of the Appennines the Garuli, the Lopicini and the Ergati had their settlement on the other side, the Friniati within the waterway of the river Audena”. Audena reminds us of Antena, the ancient name of the river Magra that even today gives its name to the small village of Cavezzana d'Antena and to the whole d'Antena valley itself, where the river Magra rises, which connects people who live on both sides of the Apennines, by the Cirone Pass. As far as I know, nobody till now had ever put in connection Audena\Antena\the river Magra\the Cirone pass between the Pontremoli area and the Corniglio area.

### **The Moon population**

Finally, a real and proper rocky sanctuary is the so-called *Rock of the Moons*, where five images of the moon are carved in its phases, from a full moon to a black moon, from a crescent to a waning moon and to a half-moon, likely to having been a worshipping place of the Apuan Ligurian people. The high-relief that can best be seen (the first on the left in fig. 4),

contains the image of a bear, maybe to represent the Mother Goddess (Gimbutas, 1991) or in connection with the Mount Orsaro (orso= Italian word for bear), or on the basis of Anati's observation (1988, p. 46) about the prehistoric cult of aggressive animals such as the bear or the wolf. The image of the moon is still today present on the standards of many historical Lunigiana towns: Bagnone, Villafranca, Podenzana, Sarzana, Bolano, Pignone, Fivizzano and Casola in Lunigiana (where the moon is paired with the bear). The image of the moon occurs at all the six sites described in this paper, but only the *Rock of the Moons* appears as a sanctuary where the moon was worshipped with its naturalistic, conceptual and religious meanings. We can conclude that the moon was totemic for the entire population, in a land whose name even today is Lunigiana, land of the moon, the "ancient mother".

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# IBEX, CRESCENT AND SWASTIKA AS SYMBOLS OF A LUNAR GOD IN THE ROCK ART OF THE ANCIENT NEAR EAST AND CENTRAL ASIA

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The image of the ibex (*Capra nubiana*) in the rock art of Bronze Age at Har Karkom (southern Negev) was first connected by Rosetta Bastoni (1998) with the cult of the lunar god, Sin, who would be physically represented as the male adult animal with exaggerated horns. In recent years, the ritual and magic value of the ibex image is becoming more and more evident in vessel painting, petroglyphs and cult objects of the Early Bronze to the late Iron Age in a large geographic area including the Near East and Central Asia (Berggren, 2004; Rafifar, 2007; Bastoni, 2013; Mock, 2013; Sarhaddi, 2013; Eisenberg-Degen, Nash, 2014; Mailland, 2015).

This paper reports a scene engraved on the Big Rock site from the Wakhan corridor in Afghanistan (after Mock, 2013, p. 43) where the three symbols of the ibex, the crescent and the swastika are connected with a human figure with a spear (fig. 1). The engraving style is very schematic. The largest figure is in the



Fig. 1. Rock engraving from Big Rock site (Wakhan corridor, Afghanistan). The three figures of ibex, crescent and swastika, symbolizing the moon cycle, are connected with a human figure with spear. After Mock 2013, p. 43. Drawing F. Mailland



Fig. 2. Sun and moon figures in a rock engraving from Duruchen (Tsamda), Upper Tibet. After Bruneau and Bellezza 2013, p. 112. Drawing F. Mailland.

middle of the scene, an adult male ibex depicted by a long horizontal line for the body, four vertical lines for the legs and two parallel curves for the long horns. The muzzle is just a short line, but the beard is also represented. Other anatomical particulars are evident, like the hooves and the tail of the animal. Pecking is compact and very accurate. A crescent moon is represented under the body line, perfectly circumscribed in the free space between the legs. Above the body line, in the free space within the horns, a clockwise swastika is depicted in perfect symmetry with the crescent. This is the most explicit connection between the ibex figure and the lunar phases, crescent and full moon, ever found in the rock art of the Early Bronze Age. The human figure is represented in the top left of the panel (fig. 1). The human being stands with a spear in his left hand, keeping the spear vertical, but lifted up. He would not really be a hunter. There are four other ibex figures, smaller than the first one. All figures are schematic, but there are some differences among the different animals engraved. One, poorly preserved, presents a dorsal and a ventral line for the



Fig. 3. Sun as radiating disk and moon as crescent and full moon (swastika) in a rock engraving from Upper Tibet. After Bellezza 204, figure 15a. Drawing F. Mailland.

body; another one has just one heavy curve line for the horns. Another swastika, counterclockwise, is engraved in the free space of the composition, near the first one. A horizontal line over the body of the first ibex and a small animal figure on the far right side of a dog or a yak complete the scene. All the animals and the human being look towards the right side of the panel and the scene is rather static.

It is not clear from the photograph whether the figures were engraved at the same time or in different periods. Pecking is very compact and homogeneous in the panel. The differences in colour of the photograph seem to be due to different light in parts of the rock panel rather than to different patinas. Anyway, the central ibex figure appears to have been engraved at the same time as the crescent and swastika.

According to a common belief, the swastika in prehistoric art represents a solar or an astral symbol. In my opinion, it represents the full moon, in connection with the crescent. The swastika symbol represents both the moon's radiating disk and the movement of the disk in the sky. This scene is likely to represent a myth of the lunar cycle in relationship with the ibex image. This rock art has been produced by a society of herdsman, and there seems to be no relationship between the engravings and the methods of getting food, lifestyle and ordinary activities. Rather, the engraving was made to leave a message that could easily be understood by our ancestors, and we should now make an attempt at understanding at least part of this message. The moon cycle from crescent, full

moon, new moon and crescent again symbolizes the eternal opposition between life and death, and at the same time new life originating after death. Life beyond death is at the basis of all modern religions and it would have been the central belief since the origin of *Homo sapiens*. Furthermore, there is a strict analogy between the duration of the moon cycle and the menstrual cycle in women, which accounts for the belief in the moon as a protector of fertility, and strengthens the relationship between the moon and the origin of life. Finally, the transfer from human fertility to the fertility of the earth and animal breeding further strengthens the connection between the moon and life in a pastoral/agricultural society.

Interestingly, the engraving style of the Afghanistan scene is quite close to that of the RA IV-A from Negev and Sinai, according to the classification of Emmanuel Anati (2006, p. 101), with schematic figures rendered by a few lines. The scene implies the diffusion of the cult of the lunar god since the Early Bronze – or even earlier – across a vast region. Here, the swastika is the symbol of the full moon, depicted together with the crescent, as the representation of the entire lunar



Fig. 4. Rock engraving from the Sacred Rock of Haldeikish (Hunza valley, Ganish, Pakistan). A full moon (represented as a disk with a dot in the centre) is engraved in the free space inside the long curved horns of an adult male ibex. Drawing F. Mailland.



Fig. 5. Rock engraving from Iranian Kurdistan. The couple ibex-dog (meaning hunting scene without hunter) is accompanied by a crescent with a dot in the centre. After Naserifard 2015. Drawing F. Mailland.

cycle. Parallels are found in the pre-Buddhist rock art of Tibet, where the crescent and the swastika and a radiating disk represent the moon and sun in several engravings and paintings (figs. 2, 3). Parallels can be found also in northern Pakistan, where in the region of Ganish a full moon (here represented as a disk with a dot in the centre) is engraved in the free space formed by the long curved horns of an adult male ibex (fig. 4). The figure is engraved on the vertical wall of a sacred rock named Haldeikish, which in the local language means 'the place of male ibex'. Among several ibex figures, which entirely cover the rock surface, many have a dot in the centre of the free space between the horns and the body. In the upper part of the rock there are inscriptions dating to the beginning of our era, and the engravings reportedly belong to the same period, but no study of patinas has been done yet, so the ibex figures may be even more ancient. Another parallel is found in Iranian Kurdistan, as seen in fig. 5, with the couple of ibex-dog (hunting scene without hunter) represented together with a moon crescent with a dot in the centre.

The moon crescent and the full disk are depicted in connection with the ibex figure in bronze incense burners from Ma'rib in Yemen from the middle of the first millennium BCE. Again, the disk over the crescent represents the full moon and not the sun as per the interpretation of other scholars. In the incense burners, the combined triad ibex-crescent-moon disk is even more explicitly depicted on cult objects. At least two of these incense burners survive in the

collections of the British Museum (fig. 6a) and the Metropolitan Museum of Art (fig. 6b), respectively. The two objects are very similar: the incense burners were made by casting bronze in a clay core. A high front panel resembles an architectural façade and on the front a figure of an ibex stands below a round disk set within a crescent.

The ibex was separately cast and stands on a plinth that projects from the censer front. It served as a handle for the censer. The only difference between the two objects is the presence of two snakes on the sides of the lunar symbol in the American exemplar. Other objects like the two censers are reported (Muscarella, 1988), which firmly confirms the connection between the ibex image and the lunar god in the southern Arabic peninsula during the first millennium BCE.

Finally, parallels can be found in the rock engravings of Har Karkom, where swastika-like symbols are sometimes depicted in connection with ibex images. The most unusual scene where the swastika is in connection with the ibex and human beings is seen in fig. 7, where a swastika-like symbol is in front of an ibex, depicted in outline, and a human being (a man?) touches the horns of the ibex with a spear or a pole. Near the man, a woman is delivering her baby with upraised arms. The scene is completed by another, smaller ibex depicted as a linear figure on the back of the other subjects. This engraving, previously published as a possible hunting scene by Eisenberg-Degen and Nash (2014), is rather a powerful, worshipping



Fig. 6. Bronze censer from Ma'rib (Saba) in the collections of the British Museum (fig. 6a) and Metropolitan Museum of Art (fig. 6b), respectively.



Fig. 7. Rock engraving from Har Karkom (Negev, Israel). Scene of moon worshipping during parturition (see explanation in the text). (F. Mailland).

scene. Again, it represents a myth. Here, the crescent is depicted as the ibex itself, and the swastika is the full moon. The lunar cycle symbolizes life and fertility. Again, the relationship between moon worshipping, fertility and life is explicit here. During parturition, the man and woman pray to the fertility god to get favour and fortune for their baby. The gesture of touching the ibex horns is propitiatory for the man, as is the gesture of upraised arms of the female figure. While the significance of praying with upraised arms is evident, touching horns would suggest another myth. It would be as if the man can absorb some kind of energy from the animal horns. No doubt that the depicted animal is a wild one. Thus, touching its horns would be rather difficult and far from being a usual gesture. There are some other – not very common – scenes in the rock art of this period at Har Karkom, where a man is represented in the gesture of touching ibex horns, directly with bare hands, or indirectly with a spear or a pole. They could never be interpreted as

hunting scenes. The myth represented should relate to the willingness, or the attempt, to get strength, power, protection, goodwill from the god spirit hidden in the male adult ibex. Regarding the delivery, in the whole rock art of Har Karkom, there is just one other similar scene besides this one. In the other engraving, the woman is alone in the act of parturition. This is done in a standing position, as is common even today in aborigine societies.

Emmanuel Anati in his *Decoding Prehistoric Art and the Origins of Writing* (2011) gives a masterful lesson on how to consider rock art as a pre-writing done by the so-called illiterate peoples. He proposes a way to decode the messages left by the ancestors in the form of rock engravings. In this paper, an attempt has been made to understand and describe myths suggested by scenes otherwise interpreted in a more simplistic way. Describing the beliefs of a vast region of the Near East and Central Asia could help to understand the origin of modern religions. Anati (1986; 2013, among many other papers) reported the archaeological evidence for Har Karkom being the Mount Sinai of the Bible, where Moses received the tablets of the law. Bastoni (1998; 2013) postulated the origin of the name 'Sinai' as an attribute of Sin, the lunar god of the Bronze Age, depicted as the ibex with exaggerated horns. Berggren (2004) interprets the male ibex sacrifice instead of Isaac from Genesis as a sacrifice of the old god to the new one. To fully accept these theses, scholars need more proofs and also need to overcome prejudices. This paper would have added information on the cult of the lunar god Sin, its origin at least during the Early Bronze Age and its persistence until the beginning of the Christian era in a vast region of Asia.

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## DEER OFFERINGS IN THE ARCHAEOLOGY AND ART OF PREHISTORIC EURASIA

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The cult of the deer had great significance in the ideology of the ancient population of northern Eurasia. It was formed in Upper Paleolithic, developed in the Mesolithic and remained throughout the Neolithic, Bronze and Iron Ages. The main components of the cult were cosmological and totemistic myths and rites of fertility and hunting success. Sacred places were the material component of the cult.

The remnants of the cult were preserved in the culture and religious beliefs of these northern peoples until the 20th century. Their study allows us to get an idea of the main components of the cult.

Myths and rites were the main components of the cult. Deer worship was the essential side of the rituals. We can study the cult of the deer using the ethnographical evidence left to us by the people of the north. We should create a model of the cult, and compare it with the archaeological data.

There were totemistic myths about deer, an ancestor of people and animals. At first there was the deer-great mother of the universe (Anisimov, 1958, p. 104). The image of half-man half-deer was formed later. According to ancient legends, it had marital relations with a human, and became an ancestor of a tribe (Charnolusski, 1965; Mykhailova, 2008, pp. 44-67). Ancient cosmological myths talk about the deer-universe (Okladnikov, 1950, p. 288). Later on the concept of the deer-universe was divided into three parts – earth, sky and the underworld, each of which looked like a deer (Okladnikov, 1950, pp. 288-292; Dolgih, 1968, p. 217). Solar and astral myths about deer were very popular among people of Asia and Europe until the 20th century (Areshyan, 1988, p. 98; Mykhailova, 2008, pp. 44-67). These myths were depicted in the parietal art of northern Europe and Siberia in the Neolithic and Bronze Ages (Okladnikov, 1950, pp. 288-292).

The most important evidence supporting a deer cult

in traditional societies are the totemistic mysteries connected with the reproduction of a deer and hunting magic rituals. The main participant in these rituals has been the shaman.

The rites were meant as the way to regulate the relations between the sacred and the profane worlds. Arnold van Gennep was the creator of the primitive rites scheme 'separation - passage (*limen*) – reaggregation', in other words first, object isolation; second, transition; third, obtaining new status (revival) (Van Gennep, 1960). So-called rites of transition (liminal rituals) or people's life cycle rites were carried out according to his scheme. During the transition period, people experience a 'temporary death', physical testing, symbolic dismemberment and the ingestion of a human by a totem animal. This way people acquired a new social or age-related status.

The hunting rites have the same number of actions,

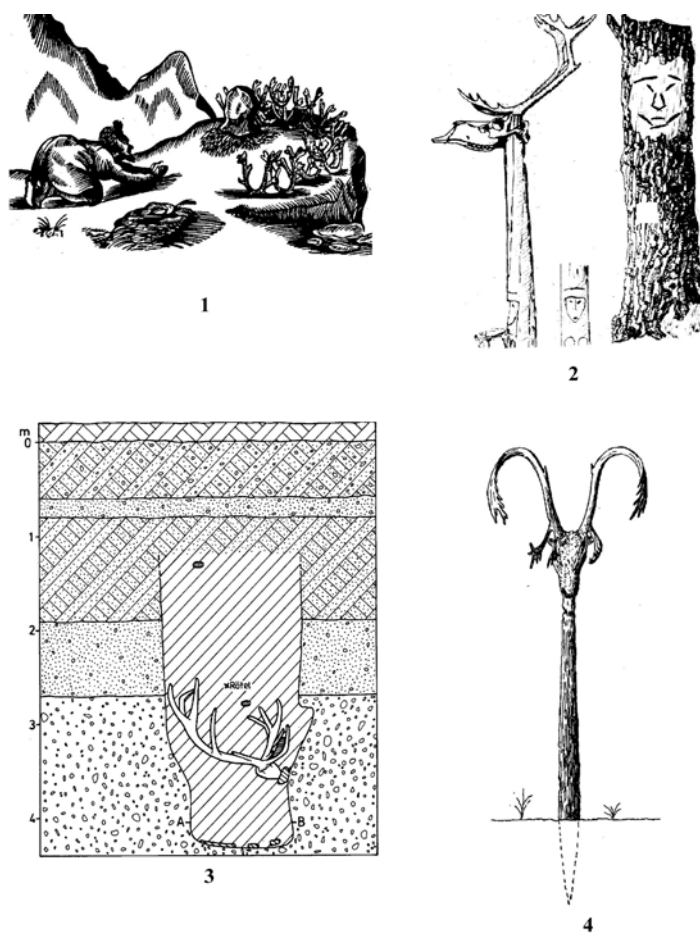


Fig. 1. Deer sacrifice: 1 – Saami sacral place, northern Russia, 20<sup>th</sup> century (Симченко, 1976); 2 – Deer skull on a sacral pole, Siberia, 20<sup>th</sup> century (Липский, 1977); 3 – buried deer antlers, Ashenstein, Germany, Copper Age (Dohle, Wagner, 1992); 4 – sacrificial pole with deer skull, Stellmoor, Germany, Upper Palaeolithic (Rust, 1943).

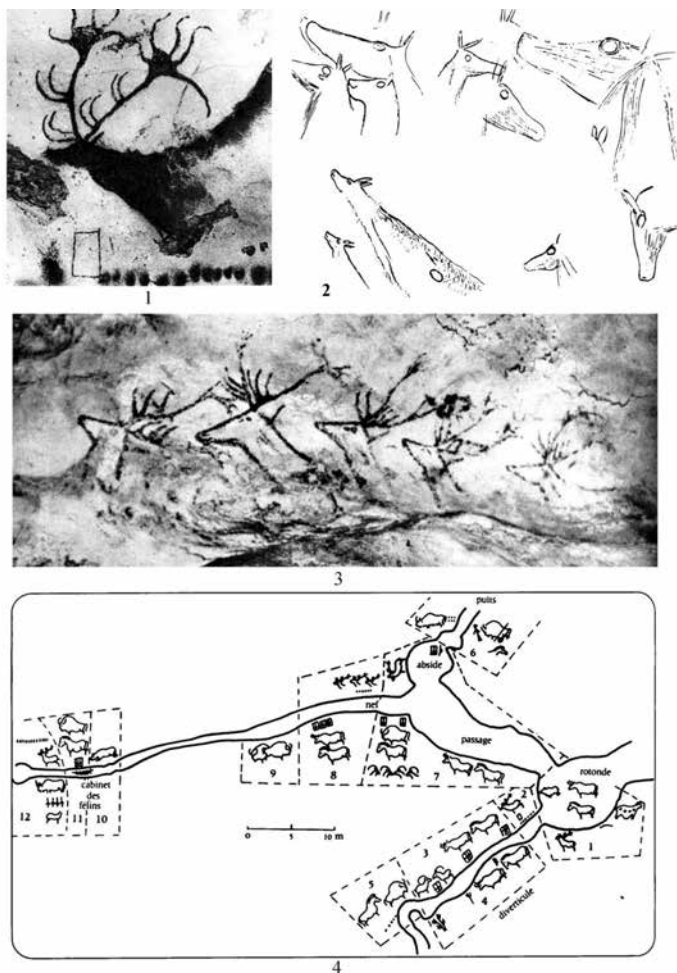


Fig. 2. Deer depictions in Franco-Cantabrian parietal art: 1, 3 – Lascaux cave (Leroi-Gourhan, 1965); 2 – El Castillo cave (Basch, 1979); 4 – plan of the Lascaux cave (Leroi-Gourhan, 1965).

connected with the natural cycle (Mykhailova, 2009, p. 269). Hunting reindeer ceremonies were as follows: first, killing the sacred deer; second, butchering and collective eating of the sacred animal (familiarization with the totem); third, returning of the remnants (antlers, skulls, jaws, scapulas, limbs) to the sacred world for the future regeneration of the deer. Fragments of the deer body were raised to the sky on a platform or pole, or buried in the ground (fig. 1, 1, 2) (Anisimov, 1958, pp. 26-37; Dolgich, 1960, p. 74). During the hunting ceremonies peoples used deer hide and antlers as a disguise. A man dressed as a deer imitated deer movements to encourage successful hunting. After the killing and eating of the deer, hunters put the bones on platforms, or put deer heads with antlers on the poles (Anisimov, 1958, pp. 26-37; Dolgich, 1960, pp. 74-80).

There were also totemistic rituals for deer reproduction. During those ceremonies participants dressed as a deer,

imitated deer coupling, then killed and ate the sacrificial animal, and buried bones and antlers in sacred places for the future regeneration of the deer (Uspensky, 1979, pp. 36-40). Some Siberian people made models of coupling animals or parturient does (Anisimov 1958, p. 33). Saami stored the deer antlers in caves (Charnolusky, 1966, pp. 310-311; Charusin, 1890, pp. 340-383), as caves were symbols of a woman's abdomen.

A great number of archaeological sites of Eurasia can be interpreted as sacrificial places connected with the cult of the deer. In some of the Paleolithic caves of the Franco-Cantabrian zone numerous depictions of deer and deer heads can be found (fig. 2, 1-3) (Quiros, 1991, p. 85; Leroi-Gourhan, 1965, pp. 254, 281, 355, 357). The process of the depictions was part of the ritual activity of primeval hunters. The evidence of rituals is the refreshing and repeating of the deer pictures. The deer depictions marked the entrances, borders of chambers and the remote places of the caves, the places of great sacrificial importance which served 'the borders of the worlds' (fig. 2, 4) The deer had the role of mediator between people and 'others' (Mykhailova, 2008, pp. 30-40).

There are accumulations of shed deer antlers in the Palaeolithic caves of Scotland (Reindeer Cave), Germany (Ashenstain) and the northern Urals (Lawson, Bonzall, 1986, pp. 1-7; Tromnau, 1991, pp. 22-38; Guslitser, Kanivets, 1965; Mykhailova, 2007, pp. 191-203). They can be evidence of totemistic rituals. The Palaeolithic skull of the deer in the pool at the Stellmoor site is similar to Siberian sacrificial places (fig. 1, 4) (Rust, 1943).

The deer frontlets of the Mesolithic time could be used either as disguise for deer hunting or for totemistic rituals. They were found in Bedburg-Kenninghoven, Berlin-Birsdorf, Hohen-Vicheln and Plau. Twenty-one deer frontlets were found at Star Carr in the UK (Street, 1989, pp. 44-53; Clark, 1954, p. 169; Mykhailova, 2006, pp. 190-191).

Deer antlers were found in the cemeteries of the Mesolithic era at Scateholm, Vedbaek (fig. 3, 1, 2), Mollegabet in Scandinavia and Teviec, Hoedic (fig. 3, 3) and Beg-er-Ville in Brittany (Pequart *et al.*, 1937; Albrehtsen, Petersen, 1976, p. 28; Larsson, 1989, p. 373). There is a Mesolithic burial of a woman with a child between her knees and roe deer antlers, that was

excavated at Bad Durrenberg in Saxonia. The woman was called 'Shaman-woman' (Meller, 2003).

The antlers found in the cemeteries can be the sign of a deer as the totem which human beings obtained after its death. These humans were, most probably, shamans (Mykhailova, 2006, pp. 194-195).

In the Neolithic period there were big accumulations of deer remnants in northern Eurasia (Bader, 1954, pp. 241-254; Chernov, 1955, pp. 291-321; Mykhailova, 2008, pp. 220-232). Hunting and fertility rituals were depicted in the parietal art of northern Eurasia (Evers, 1991, p.61; Helskog, 1984, p. 4, fig. 6, p. 22, fig. 12, c. 411).

In the Neolithic the economic situation in Europe changed. The migration of peoples from the Near East to Europe was known to occur. That stimulated the transition to agriculture in Europe. The ideological system also changed. The fertility of the earth became the main feature of the religion.

After the transition from hunting to agriculture the cult of the deer was transformed, and got a new sense. The deer became the symbol of fertility and prosperity. The deer was directly connected to sun, life and power. The important attributes of the deer were accompanied by the solar symbols, the tree of life and power symbols.

In the Neolithic and Chalcolithic of eastern and central Europe specially buried remnants and the entire skeletons of deer were found.

**Haivoron-Polizhok.** Burial remains of deer were excavated at the Neolithic settlement of Haivoron-Polizhok near the South Bug river in Ukraine. Remnants of four individual red deer were buried in the pit at the edge of the settlement. Burial consisted of fragments of skulls, leg bones and vertebrae. According to V. Danilenko, it was a reflection of magical action aimed at the revival of the slaughtered animal, well-known from the ethnographic literature (Danilenko, 1969, p. 221). Such a composition of the sacrificial bones (skull with antlers, feet and vertebrae) are also typical of offering places in northern Eurasia.

**Hodmezovazareli.** Among the materials excavated at this settlement in Hungary, related to the Keresh culture (fourth century BC), a roe deer skeleton placed on its side was found in a pit (Behrens, 1964, p. 62). Images of deer with great antlers or people together with deer were widely spread among the ceramic

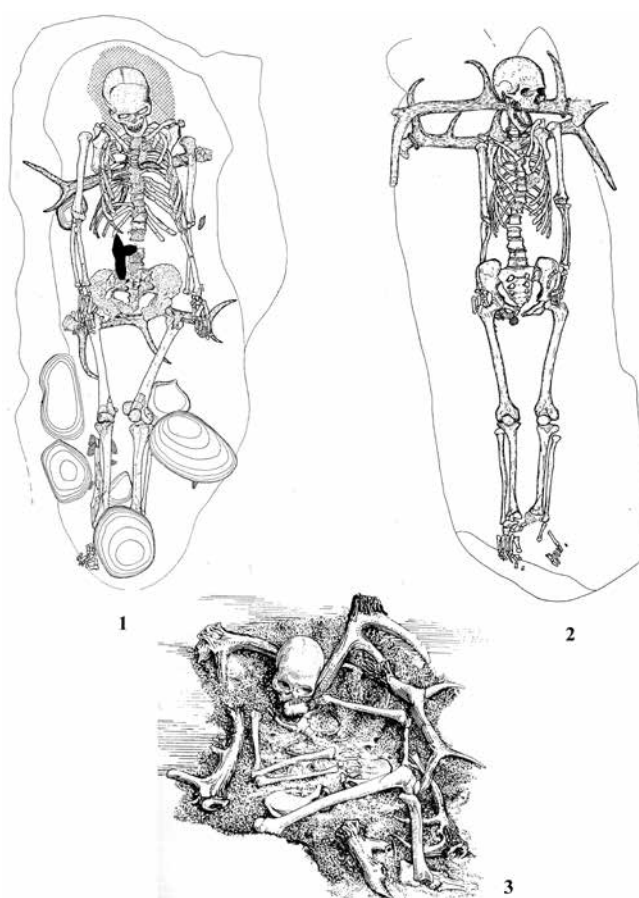


Fig. 3. Mesolithic cemeteries with antlers: 1, 2 – Vedbaek, Denmark (Alberthsen, Petersen, 1976); 3 – Hoedic, France (Schulting, 1996).

objects of the Keresh culture Titov, Erdeli, 1980, p. 104).

**Vuchedol.** An entire deer carcass was found specially buried in a pit in the Chalcolithic settlement of the Vuchedol culture. A ceramic deer figurine with a hollow in the upper part was found near the deer (Jurisic, 1990, pp. 17-37). It looks like numerous cult vases in the shape of deer, or with deer depictions, from the Balkans region, Caucasia and the Near East (particularly, Karanovo in Bulgaria (6000 BC), the Kerameikos cemetery in Greece (1000 BC), Hacilar in Anatolia (7000 BC). (Raduncheva, 1971, p. 112; Gimbutas, 1991, fig. 180-182; Rzaeva, 2011, p. 198). Most probably these vessels were used for sacrifices.

**Lenkivtsi.** The skull of a deer was found in a hollow of this settlement belonging to the Tripilla culture (early fifth century BC). It was elevated at the eastern part of the hole, with traces of fire. The images of deer on Trypillian ceramic objects and figurines indirectly indicate the existence of deer cult derivatives, for example, a figurine from a later Lenkivtsi layer



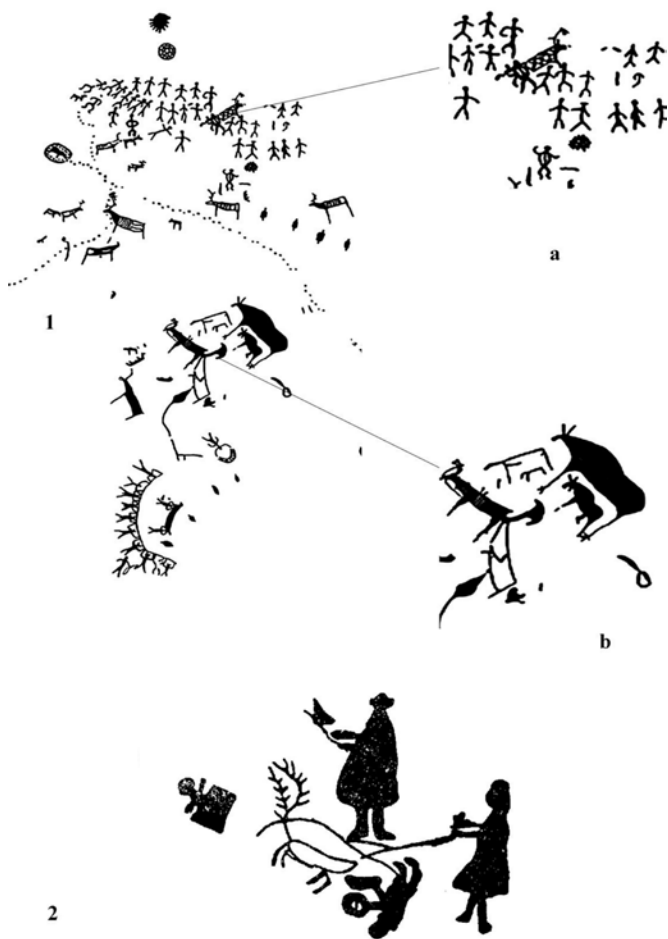


Fig. 4. Depiction of the deer offerings: 1 – Rock carving from Alta site, Norway, Neolithic (Tansen, Johansen, 2000); a) – dismembering of the deer, b) – fertility ritual, doe with calf and model of parturient animal; 2 – depiction of the deer sacrifice, Siberia, 20<sup>th</sup> century (Иванов, 1954).

(Burdo, 2005, p. 47).

**Alsleben.** This sacrificial place belonging to the Baalberh Eneolithic culture period (4790±90 BP) consists of three pits. The bottom of pit number 2 was covered with stone tiles. It also contained a Trihtenbeher culture vessel with internal handles (fig. 1, 3). A significant number of animal and human bones were also found at the bottom of the pit 30 cm above a layer of bones and large deer antlers. The shape of the pit was made to fit them. Research suggests that the lower part of the hole's contents point to human and animal sacrifices. While reusing the pit, great antlers were sacrificed (Dohle, Wagner, 1992, pp. 51-69).

In our opinion, one should pay special attention to the presence of fragmented human and animal bones and antlers. We can find similar sacrificial pits in the Celtic and Lausitzer cultures (Bronze and Iron Ages),

where there were people's and animals' bones, antlers and a wooden deer model (Fellbach-Schmidten), which probably served to replace a live animal (Русакова, 2002, с. 32). We can assume that the sacrificial complex of Alsleben is a kind of prototype of the sacrificial pits of the Bronze and Iron Ages.

**Cernunnos.** The image of Cernunnos, the antlered god, was found in the Bronze Age and became popular in Celtic times. Cernunnos was a god of fertility, male power and wealth (Ross, 1967. p. 176-197).

So, in Neolithic times, deer or elk hunting kept a leading role in the economy in Siberia and northern Europe. The rituals of reproduction are the most essential components of mythical and ritual activities. At the same time, the population of eastern and central Europe was moving towards agriculture. The ancient rites of burying deer remains for the purpose of reviving the deer, were kept as derivatives, but obtained a new content. Known from the ethnographic literature, parts of animal carcasses and human bodies were used as elements of sympathetic magic, associated with fertility (Thackeray, 2005, p. 12). Deer remains which were used to embody regeneration in hunting societies now had to ensure the harvest. After reviewing of the ethnographic materials of southern Africa, we discovered the existence of the imitative magic of Bushmen hunting rites. During those rituals hunters imitated the slaughter of the sacred antelope, and then buried its remains to ensure rebirth (Thackeray, 2005, p. 12).

In the Mexican tribe of Huichol, which specializes in maize harvesting, the deer plays an important role in ideology. It is associated with peyote, a psychedelic, which Huichol used during shamanistic rituals. During the rituals that would ensure the maize harvest, Huichol killed a sacred deer, put it on an embroidered tablecloth, then prayed to it and burn deer bones for its regeneration (Furst, 1977, p. 25).

In this way we see that deer remains of the Neolithic and Bronze Ages in Europe serve as an evidence of the sacrificial rituals of deer. The image of the deer as the symbol of revival persisted until the 20th century. The deer is a symbol of Christ's resurrection on West Ukrainian Easter eggs (*pyranki*).

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# ENGRAVINGS OF SACRED, IDEOLOGICAL OR SYMBOLICAL SIGNS IN IMAOUN, A PREHISTORIC TRIBAL MEETING PLACE IN SOUTHERN MOROCCO

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## Situation of the site

Imaoun lies some 50 km north of the long and important River Draa, in sub-Saharan Morocco. With nearly 750 engravings it is one of the most prolific rock art sites of southern Morocco, where sites on the whole contain between 50 and 300 engravings.

## Situation of the engravings

The rock engravings are situated on a low sandstone ridge, one of many that stand out from the surrounding alluvial plain. It stands in the middle of a complex hydraulic network making up the Oued Akka; in times of heavy rain, water flows all round the ridge, turning it into an island.



Fig. 1. Main motifs (not to scale and technique not rendered)



Fig. 2. Large complex cross

The ridge, roughly banana-shaped, is 800 m long by just under 200 m at its widest, running NW/SE. It presents an abrupt, rounded northern face, standing some 9 m above the plain, and an equally steep western face rising to 15m at its highest point (about the middle). Both faces are made up of large blocks forming rough steps, chaotic to the west, more regular in the north. A level stretch, here called the plateau for convenience, slopes gently down from the northern and western façades to the plain to the east, with engravings becoming sparse as one goes south. On the plateau, the engravings are seldom more than 15m from the western edge, dying out almost completely to the east. The engravings on the northern and western façades have been carved on the vertical faces of the sharp-edged blocks. Those on the plateau occur on the top or sides of small, flat, smooth, ground-level blocks.

## The engravings

A total of 740 engravings was recorded in 1995 and 1996 (Searight, 1996) after a visit to the site in 1993 had led to the conviction that it was quite different from the seven others in the immediate neighbourhood (Salih, Heckendorf, 2000). This figure is certainly too low, for many images on the plateau were too eroded to be counted. In contrast, those on the western face were easy to see and it is unlikely that many were overlooked.

Both pecked and polished techniques were used. Many images are both pecked and polished. Patination varies from complete (the same colour as



the supporting rock) through medium to fresh. In general the engravings are small: 30–50 cm. No image larger than 1 m was noted. Judging from the patina and general style, most of the engravings are more or less contemporary, though a few are lightly patinated and undoubtedly more recent.

A total of 415 engravings (56%) are non-figurative; 202 show domestic cattle (27%). The remaining 123 (16%) include unidentified animals, a handful of anthropomorphs, some wild animals, a few totally enigmatic images, three chariots, five Libyco-Berber hunting scenes and two inscriptions in Arabic. The engraved cattle resemble those on other south Moroccan bovidian sites. Their horns are shown pointing forward or rising and open. Some animals have coat markings indicated by reserved patches. They are generally alone, but occasionally in groups of two, three or more.

Apart from some late engravings, the body of the engravings – abstract figures and cattle – are probably contemporary and could date to around 2000 BC or a little later. The drought that was setting in was not so severe as to stop the herding of cattle, especially in an area like Imaoun where a network of water sources existed.

### The non-figurative designs

The 415 abstract motifs recorded represent varied geometrical forms. More than half (51%) are ovals, simple or concentric circles equipped with various attachments, filled with parallel lines, crosses or cupules. Contiguous or tightly packed together circles are frequent. Far fewer are spirals (12%), simple or



Fig. 3. Undulating lines, with other engraved rocks visible behind



Fig. 4. Complex curvilinear motifs

complex crescents (9%), serpentiforms, undulating lines and meanders. Seven crosses within enveloping lines complete the range of curvilinear figures. The remaining geometrical figures (11%) are made on a basis of straight lines, on which curves are sometimes grafted: zigzags, rectangles filled with parallel lines and combs with straight or curved backs

It can be seen that there is a wide variety of images. To be sure, many of them are found on other sites; the spiral is a worldwide motif. The engravings are frequently very close to each other on the plateau, sometimes covering the whole rock surface available. Attention can be drawn to a large complex cross (90 x 75 cm) engraved on the plateau. The other crosses on the site, and indeed on other sites in south Morocco, never reach this size.

In connection with the preponderance of curvilinear motifs, it may be useful to note that many of these designs are similar to those experienced by people (shamans, for instance) in an altered state of consciousness. It is not necessary in this paper to go into the use of trance-inducing plants, for instance, to produce these images (the use of hallucinogens has been discussed in Searight, 1997); what is important here is the undoubted importance of these abstract designs for the people using the site.

It was not necessary for the people coming to this distinctive site – either on special occasions or as individuals – to know how they were made or to understand the meaning of the images, their symbolic charge. The potency of the image lay in its existence. Moroccan women getting tattooed today do not know what their tattoo means or even wonder if it has a meaning at all: what is important for them is the fact

that they can touch the mark, it is there to protect them from evil spirits, to fulfil their wishes, dispel their fears. This was probably the case at Imaoun with its multitude of images, all doubtless with a meaning. This can explain the importance of the site.

### **Threefold significance of the site: quantity, theme, distribution**

The rock art site of Imaoun is significant for three reasons: the quantity of images, their subject matter and their distribution. The site contains an unparalleled amount of engravings, twice as many as other sites of comparable dimensions in the region where sites on average have between 200 and 300 engravings.

As far as the themes are concerned, more than half of the images are abstract figurations, a proportion totally unknown elsewhere. It can reasonably be proposed therefore that this abundance of non-figurative engravings shows that the site had a special function that required it to stand out from other sites. While many of these motifs occur sporadically on other sites, they are never so concentrated and numerous as at Imaoun.

### **Spatial distribution of the engravings**

Looking at the position of the engravings on the site, a study of the spatial distribution of the images shows that 323 non-figurative engravings are on the plateau (70%), which holds only 67 domestic cattle (14%). The remaining 108 cattle are engraved on the western face, where only 9 non-figurative images are found. In other words, there is a clear spatial separation between the two themes: the non-figurative, ideological or symbolic signs images are overwhelmingly dominant on the plateau, open to the sky, while the mundane, everyday domestic cattle are engraved on the steep, vertical, western face of the ridge, facing their grazing grounds. The northern façade (the highest and most striking part of the site) contains 83 non-figurative engravings against 27 cattle images.

### **Conclusion**

Considering the quantity of engravings, the variety of the abstract images, the care with which they have been pecked, then often polished, their separation from the cattle representations, it is proposed that the Imaoun ridge had a particular importance as a

sacred location where the rock art played an essential role. It was very possibly a meeting place for the local populations, who came together periodically, perhaps to discuss affairs related to cattle, but essentially to partake of ceremonies. The rock art served as a link and a reminder to the local tribes, who refreshed their knowledge and passed on the traditions to the younger generations. It was also probably considered to be a sacred site to which individuals came for solutions to their problems, as Moroccans visit marabouts today.

It seems therefore highly likely that a belief in some supernatural power is manifest at the rock art site of Imaoun.

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# COMMUNICATING WITH THE GODS: SUPERSTITION ON FUERTEVENTURA AND LANZAROTE

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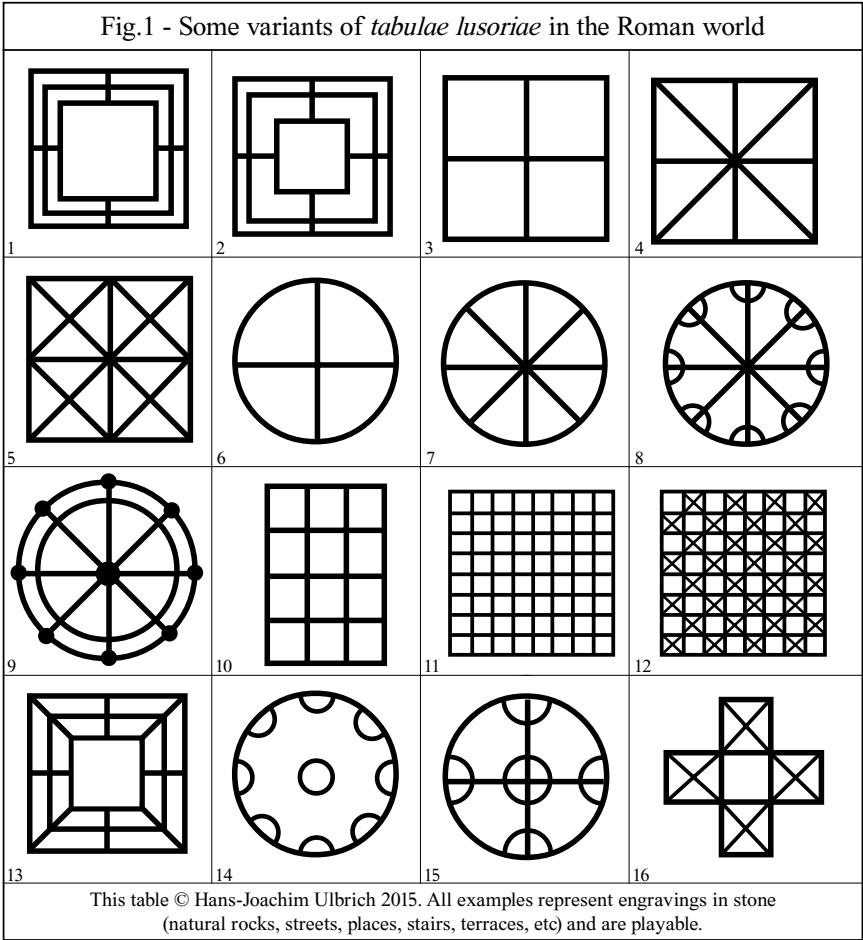
To understand the special forms of superstition which were practised by Lanzarote's and Fuerteventura's aborigines, the Mahos, we first have to take a closer look at the eastern Canary Islands during the centuries around Christ's birth.

## Geographical and historical background

In ancient times the demand for purple dye, the royal colour, was immense. It was also one of the reasons to explore the northwestern African coast: We remember, for example, the Insulae Purpurariae, small islands and reefs near Mogador (today Essaouira, Morocco). But already before the beginning of the Christian era the animal source, the marine Muricidae snails, *Bolinus*

*brandaris*, and *Hexaplex trunculus*, formerly known as murex, began to become scarce in many Mediterranean regions. Clever Phoenician, Roman and Punic businessmen searched for a vegetal replacement and found it besides some unproductive plants in dying lichens, in Macaronesia mainly *Roccella tinctoria*. Therefore exploration and collecting also took place in the direction of the newly found respectively supposed islands near the African coast (Ulbrich, 2004a). Other red pigments which were used in the kitchens, for example for sauces and nutritional preserves, and in the fishing business of southern Iberia (Bernal and Domínguez 2012) apparently did not qualify as a substitute for purple.

Fuerteventura and Lanzarote, both arid, are the most northern and eastern of the Canary Islands. Their smallest distance to the continent is around 100 km (Cape Juby, Tarfaya, southern Morocco). Most likely they were the first of the seven big Canary Islands which were exploited by these entrepreneurs. And we have evidence for that, which is the epigraphy with Libyco-Berber, Latin and Neopunic scripts.



## Antique scripts on Lanzarote and Fuerteventura

During the last 300 (or 500 / not cleared) years BCE small waves of proto-Berber colonists, either alone or accompanying Punic, overlaid prehistoric non-Berber people on the Canary Islands. My hypothesis is that the Berber increase got a push especially on Lanzarote and Fuerteventura when the entrepreneurs sent Berber labourers to these islands to collect lichens during the period 100 BCE–430 CE. There is no doubt that these visitors could write in Libyco-Berber and/or Latin and/or Neopunic script(s). They were acculturated by the ruling Roman and partly Punic classes on the continent, from the early province Africa, installed 146 BCE, to the later Mauretania Tingitana and Mauretania Caesariensis, whose merchants' expeditions to the Canaries were probably terminated by

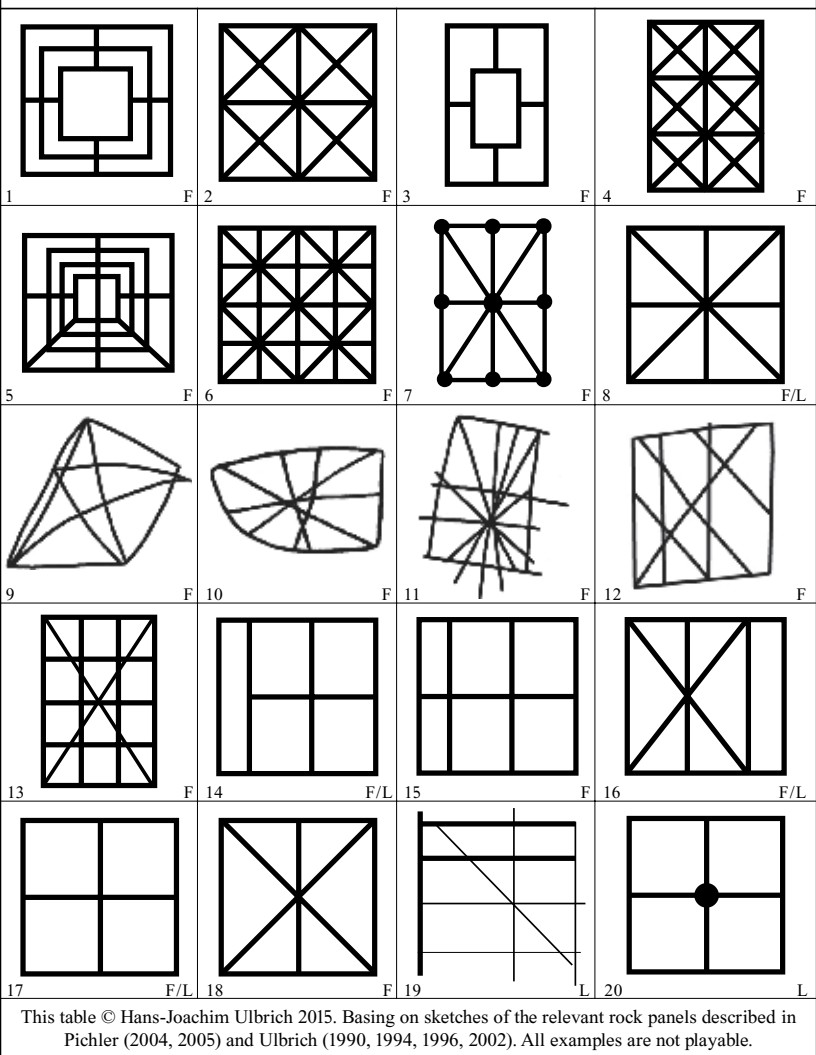
the intrusion of the Vandals in 429/430 CE. Furthermore, it is a fact that Latin rock inscriptions occur on the Canaries only on Fuerteventura and Lanzarote (here abbreviated F/L). The lichen collectors used mainly the basaltic rocks to engrave their names. But we can strongly suppose that they also taught the islanders to write and that they mixed with them by marriage, meaning that some of them did not return to their African homeland. We have to consider also the long intervals between the ships picking up the raw lichens. In any case the Roman culture and the ability to write in Latin script had reached the eastern Canary Islands and their aborigines.

We should now have a short look at the scripts used then on the two islands (applying the current terms of the Institutum Canarium, Vienna):

- Libyco-Berber (LB) - Proto-Berber script used in northern Africa and on the Canaries (several versions)
- Latino-Canarian (LC) - Special form of the Latin cursive used only on F/L (three versions)
- Berbero-Latin - A mixing of LB and LC only on F/L (several versions)
- Neo-Punic - Only very few examples on F/L (Ulbrich 1999, 2004b)

LB and LC scripts are by far the most common on the rocks of F/L, so it is not too daring to say that the people who were in command of these scripts had the greatest impact on this pelagic culture. The spoken language seems to have been at that point of time a kind of pidgin which consisted of Latin, Berber and Phoenician/Punic words (Ulbrich 2004b: 40); these were 'written' confusedly in all three main scripts on the rocks. Very old words originating from the first prehistoric, non-Berber colonists were in the minority. It is also clear that the influence of the visitors was not restricted to scripts and languages alone; other cultural aspects were surely transferred too. And that leads us finally to the superstitions of the islanders and the magic which was attributed to some signs and pictograms.

Fig.2 - Graphical variants of *tabulae lusoriae* on Fuerteventura and Lanzarote



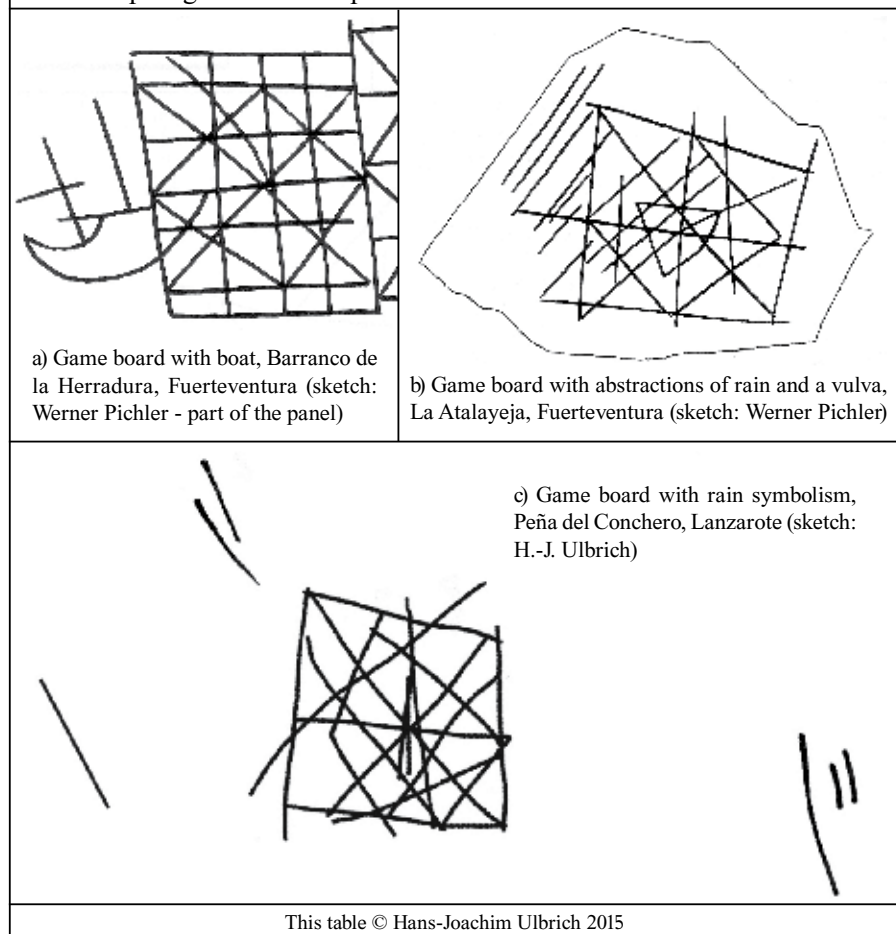
### The role of the *tabulae lusoriae*

To say it somehow unprecisely: the invention of tabular games with pieces, which in the Roman world were summarized as *tabulae lusoriae*, in most cases cannot be attached to a certain point of time or to certain persons. Generally seen it is a worldwide phenomenon, although some European forms have a Roman or Arabic origin. The names and graphic versions are countless: Three/Nine/Twelve Men's Morris (English), *mérelles* (French), *alquerque* (Spanish), *Mühle* (German), *filetto* (Italian), *feldja* (Algerian Berber), *naukhadi* (Indian), *shax* (Somalian), etc. For an overview see Bell (1960) and Uberti (2012); for a graphical impression see Fig. 1.

This kind of diversion was very popular in all strata of the Roman and Phoenician/Punic societies. No



Fig. 3 - Ancient game boards combined with other symbolically used pictograms on rock panels of Lanzarote and Fuerteventura



- Often totally confuse structure (as in fig. 2: 9, 10, 11, 12, 13, 19).
- Engraved on vertical or sloping panels.

### Superstition and religion

There must have existed a purpose of the games which lies beyond simple diversion and fun. Authors were most likely the islanders, as we will see; the collecting crews and their game playing respectively their real game boards delivered the graphical patterns. The aborigines realized that certain games could be played as hazard, which although forbidden under Roman law was popular in the private world. Why then not copy and use the patterns as symbols for luck, happiness and prosperity without playing the game? The situation of the aborigines with frequent droughts and occasional locust plagues advanced such superstitions. Magic symbols which could be presented to the gods, begging for good luck in weather, harvests, cattle and last

wonder that household servants, seamen and soldiers especially liked to play the different board games when not on duty. There can be no doubt that on the ships which transported the lichen collectors *tabulae lusoriae* were played intensively. And it should also be clear that the collecting crews continued to play them while stationed somewhere. Why then do we find games of this kind carved into the rocks of F/L, but mainly not in a manner which would allow people to play them? Pichler (1996, p. 137) states that at least 70% of the games on Fuerteventura are not playable; for Lanzarote I can say that none of the game graffiti is playable.

After examining the rock art sites one can establish several reasons why most of these engravings had no practical object:

- Positions for the players too uncomfortable.
- Boards too small to be played.
- Design not executed according to the rules of a game.

but not least children were certainly highly welcome. For Fuerteventura Pichler (1996, p. 149) noted corresponding symbols – games and pentagrams – influencing the future to the good.

Who were the gods to be worshipped? Chroniclers of the Spanish *conquista* reported for F/L that the aborigines prayed to the sun and the stars; but there is strong evidence that also – and in particular – the great Mediterranean mother goddess belonged to the pantheon.

My hypothesis is supported by the fact that the game symbols appear not only alone but also in combination with other symbols and pictograms, e.g. those for rain (part of the so-called linear-geometric rock art style of F/L), sexual organs (vulvae, perhaps phalli too) and boats (see fig. 3). Another point is that the Mahos thought that potentiating in the form of doubling and multiplying symbols or their elements led to a higher magic value for a graffiti (see fig. 2: 9, 14, 15, 16 with

an added compartment/rectangle).

It is striking that Fuerteventura has distinctly more game boards and more variants of these on its rocks than Lanzarote. Is that a hint that Fuerteventura had more visitors and more aboriginal people in ancient times? Was Fuerteventura richer in dying lichens? The discussion of these questions must be left for a forthcoming article.

The Mahos were evidently great followers of pragmatic syncretism. The use of apotropaic elements in their rock art was practised long before the appearance of Roman-accultured visitors from North Africa. So some more symbols with magic positive effects on the daily fight for survival would fit perfectly in a development of faiths and superstitions which had already lasted for over 3,000 years.

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## THE ROLE OF ROCK ART CLUSTERS IN MYTHOLOGY, RELIGION AND MAGIC: THE CONCEPT OF THE KNOWLEDGE SPIRAL

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The article proposes the concept of rock art cluster modelling for knowledge relationship (studying, interpretation, and learning) between the teacher (nature) and the pupil (prehistoric man). The concept allows us to expand the role and influence of rock art on the formation and development of mythology, religion and magic. It allows us to present rock art in the form of clusters of knowledge (natural philosophy and metaphysics), tied to territories. We identified three main types of Armenian rock art clusters: the simple cluster, the mega cluster and the hyper cluster (Vahanyan, 2014; Vahanyan, Vahanyan, 2013;

Vahanyan, Vahanyan, 2010; Vahanyan, Petrosyan, 1991).

A simple rock art cluster is a set of petroglyphs around a small lake, which is usually located on the slopes of volcanic mountains or on the top (craters). On Geghama Ridge in Armenia in the vicinity of the volcano is Lake Akna (Aknalich), which means 'eye' in Armenian. On Geghama Ridge is a frozen volcano, Mount Azhdahak. In the crater of the volcano there is a lake with many petroglyphs and ancient stone monuments (*vishapakars*). A mega rock art cluster is a set of simple clusters located around a large lake or sea (for example, near Lake Sevan, Lake Van and Lake Urmia, around the Black Sea and the Caspian Sea in the Caucasus).

A hyper rock art cluster is a collection of mega rock art clusters, petroglyphs located around the mountains of Ararat and the Caucasus mountains. Typical examples of clusters are shown in Figures 1, 2 and 3.

In the rock art clusters we have identified visual databases of coded explicit and tacit knowledge represented in mythology, religion and magic. Using visual language, the language of rock art (Anati E., Fradkin A., 2014) and the language of the rock art clusters (knowledge clusters), we make it easier to study the explicit and tacit knowledge perceived than the verbal language of myth, religion and magic.

There are four types of process for creating new knowledge for studying the myths, religion and magic of ancient people, for example Greeks and Armenians, whose ancestors spoke in a common language (Khorenatsi, 1990): socialization, externalization, combination and internalization (Nonaka, Toyama, Konno, 2000; Nonaka, von Krogh, Voelpel, 2006; Collins, 2001; Sanchez, 1996).

### Socialization

This process focuses on tacit to tacit knowledge linking. Tacit knowledge goes beyond boundaries and new knowledge is created by using the process of interaction, observing, analyzing, spending time together or living in the same environment. The socialization is also known as converting new knowledge through shared experiences. The clusters of rock art gain new knowledge from outside their boundaries by interacting with other clusters of rock art.



Fig. 1. The mega and hyper clusters of the Armenian Highland (photo by K. Tokhatyan).





Fig. 2. A simple cluster of Armenian rock art (photo by K. Tokhatyan and A. Kolyan).

### Externalization

This process focuses on tacit to explicit knowledge linking. It helps in creating new knowledge as tacit knowledge comes out of its boundary and became collective group knowledge about the clusters of rock art. With this process we can say that knowledge is crystallized. The process of externalization is often driven by metaphor analogy and models.

### Combination

Combination is a process where knowledge of the clusters of rock art transforms itself from explicit knowledge to explicit knowledge.

### Internalization

By internalization explicit knowledge is created using tacit knowledge, and it is shared across the clusters of rock art. When this tacit knowledge is read or practised by individuals, then it broadens the learning spiral of knowledge creation. The cluster of rock art tries to innovate or learn when this new knowledge is shared in the socialization process. The clusters of rock art provide training programs for people at

different stages. By reading these training manuals and documents people internalize the tacit knowledge and try to create new knowledge after the internalization process.

For example, the Greek Prometheus was chained to a rock in the Caucasus mountains. The Greek Argonauts looked for the Golden Fleece in the Caucasus, Colchis. The gods from Asaland and Vanaland, located near the Black Sea and Lake Van, are the inventors of runes and other cultural values.

Only in the Armenian clusters of petroglyphs were there identified traces of all kinds of forms of written culture. In the area of Lake Van the legendary Hay built the first temple of knowledge. According to legend, the first priest of this temple was his grandson Cadmus (Cadmus or Kid). Cadmus, the grandson of the legendary Armenian hero Hay (Khorenatsi, 1990), is the legendary inventor of the Phoenician and Greek alphabets. We identified the cultural connection between Armenian rock art symbols and the visual



Fig. 3. Armenian rock art (photo by K. Tokhatyan)



culture of Old Europe (Stereo and Vince).

The present author constructed a table of the world's iconic, mythological and religious symbols using Armenian rock art clusters. The principles of natural philosophy and metaphysics are shown in Armenian clusters of petroglyphs in various forms, in particular all known forms and types of the cross and the swastika, the eight-pointed star and other geometric figures (circles, oblique, straight and winged cross, triangle, square, etc).

In the Greek mythology Cadmos means 'east', that is the territory where there is light (knowledge). In the Armenian old song about the birth of the first man Vahagn (Khorenatsi, 1990), the God of Thunder, the Dragonslayer Vahagn, is the deity of the sun, light and fire, described as a result of the interaction of four forces of nature. The word 'van' (Van, One, Wan, is associated with water as a source of life (*wasser*, water, *aqua*, swastika), as a simple cluster of rock art. Among the ancient names of the cities of Armenia – Vaspurakan, Van, Tatvans, Mihravan, Tornavan, Yerevan, Nakhichevan Zarehavan, Vanadzor, Ijevan – we can find the 'water', 'van'. According to some scholars, Eden is located between Lake Van and Lake Urmia. Vaspurakan (Armenian 'garden, park of water, lakes and rivers') is the biblical Garden of Eden, according to legend. In the Bible Eden is the source of the four sacred rivers.

The capital of the ancient kingdom of Mitanni (about 1500 BC), was located in Vashshukkani (Vassokkanne or Vaspourakan, a region around Lake Van). The population of Mitanni spoke in a language that had spread in Asia Minor, as well as in the kingdom of Urartu from Lake Van (Sanchez, 2014).

Thus, the function of the Armenian rock art clusters is the function of the spiral of knowledge, which has preserved and transmitted explicit knowledge. The hidden knowledge becomes a source of mythology, religion and magic.

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# THUNDER GODS IN PREHISTORIC ART, MIMICKING THUNDER FOR RAINMAKING RITUALS AND THE PSYCHOACOUSTICS OF REVERBERATION

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Archaeoacoustics is a fairly new field of multidisciplinary study. In this paper it is used as a non-conventional means to approach the relationships between prehistoric rock art and ancient beliefs in the supernatural. This paper specifically addresses the role of religion and myth in rock art, and uses sound as a tool to reveal the possible functions of rock art in expressing spiritual matters. The basic premise is that complex auditory phenomena were mysterious to ancient peoples unaware of acoustical properties. Sound wave reflection can give the illusion that voices are coming out of solid rock, hence gave rise to many myths around the world that explained echoes as the voices of echo spirits calling back from within the rock. Deep caves can produce so many echoes that they blur together into reverberation sounding like the rumbling of thunder, which was explained in different regions of the world by myths of galloping hoofed animals, thunderbirds, rattlesnakes, etc. The



Fig. 1. The Bhimbetka rock shelters in central India are painted with thundering herds of stampeding hoofed animals, consistent with the thunderous reverberation in these shelters, and evoking Indo-European thunder god myths that explain thunder as supernatural hoofbeats. In this case an anthropomorph riding a hoofed zoomorph and holding a staff is very similar in appearance to ancient traditional depictions of Indra the thunder god riding an elephant and wielding a thunderbolt. (Photo by S. Waller)



Fig. 2. In the Pecos region of Texas, a figure resembling a thunderbird is painted in a rock shelter at which one can hear thunderous reverberation. (Photo by S. Waller)

observations that rock art is typically located in places with remarkable echoes and thunderous reverberation (Waller, 1993) led the author to hypothesize that much of rock art was motivated by sound reflection misinterpreted as sounds from the spirit world. There is a strong relationship between mythical thunder god descriptions and images portrayed in prehistoric rock art (Waller, 2012a). Furthermore, employing these reverberant contexts for mimicking thunder as part of rainmaking rituals to supplicate the thunder gods has economic as well as spiritual applications. Psychoacoustic studies have shown the brain is susceptible to auditory illusions (Waller, 2014), in which a given sound is misinterpreted as a different sound from a different source. Echo myths are a prime example of how an auditory stimulus, in this case sound reflection, was so mysterious to ancient people who did not understand sound wave physics that it was perceived as the answer of spirits. Quantitative sonic measurements of echoes and reverberations (Waller, 1993; 2000; 2012b) have shown a correlation between sound reflection strength and the places selected by ancient artists. In addition, the subject matter of the art is often related to the descriptions of echo spirits and/or thunder gods contained in myths and oral legends. Thus sound can help explain both the context and content of much of rock art (Waller, 1993b; 2006).

A variety of theories have been put forth attempting to explain the motivation for the perplexing context and/or content of the rock art that is found around the world. Most of these theories have proved unsatisfactory





Fig. 3. Sheep petroglyphs are common throughout the American southwest, such as this figure carved in an echoing canyon in Utah. Sheep have been associated with rain, and legends from the Great Basin explain echoes as witches hiding in the bellies of sheep and snakeskins, mocking passersby. (Photo by S. Waller)

since they fall short of explaining the variety of rock art complexities. In this paper an interdisciplinary attempt is made to harmonize various major theories (Waller, 2009), in such a way that a wider range of rock art characteristics is covered than any one theory alone. The various theories of rock art motivation can augment, rather than conflict with, each other, including hunting magic, totemism, structuralism, acoustics, shamanism and the neuropsychological model.

The ways in which these different theories can be harmonized is explored below in a manner similar to the famous parable of the elephant and the blind men, which has often been used to illustrate the nature of perception relative to religious beliefs. Each blind man in the parable thought he had the answer to what an elephant was like -- snake, wall, or rope depending if he touched the trunk, side, or tail -- and indeed each man's perception contained partial truth, but no man had the complete concept. In the case of rock art studies, it is the sense of hearing that now has been found to be pertinent, and this paper explores how opening our ears to sound can help put the pieces of the puzzle together, revealing the importance of the role of spiritual beliefs in rock art.

In the theories below, the reader is referred to summaries by E. Anati (2003) for a listing of primary sources. The various rock art theories that have been proposed are examined from the perspective of the spiritual significance of sound as revealed in echo and thunder myths.

## Art for art's sake

The first impressions of prehistoric cave art were derived from the function of classical art in modern civilization. The leisurely pursuit of art for no purpose other than decoration can be considered the null hypothesis. It explains neither the characteristic contexts of rock art, nor the restricted subject matter, and so can be confidently dismissed and relegated to historic interest only.

## Resonance

This proposal (Reznikoff, Dauvois, 1988) that deep cave art placement corresponds to places with resonance is an important observation that emphasizes the significance of the acoustic characteristics of locations the artists chose. Although resonance by itself would not apply to open-air rock art, and there was no explanation put forth about why resonance would have been considered significant, this observation is an important clue.

## Sympathetic or hunting magic

The subject matter of deep cave paintings in Europe is >90% hoofed animals, yet these have been shown not to correspond to the animals hunted for food. The species depicted have more in common with the descriptions of thunder gods contained in Eurasian myths that explain the cause of thunder as hoofbeats. Clapping in certain chambers of certain caves can result in percussive echoes blurring together into thunderous reverberation. It raises the possibility that the thunderous reverberation was perceived as being caused by the same supernatural galloping hoofed animals that were believed to cause thunder in the



Fig. 4. A spiral petroglyph in the shape of a snake complete with a rattle tail was pecked at an echoing rock art site in New Mexico. This carving recalls southwestern Native American myths explaining thunder as the rattling of the tail of a giant rattle snake. (Photo by S. Waller)

sky, as described in numerous ancient myths. In the Americas, the thunder gods included thunderbirds, snakes, sheep and Tlaloc/Chaac; in Australia there are the lightning brothers and thundering kangaroos (thumpers). All these are common rock art motifs; see figs. 1–4 for examples of rock art for which the context is reverberant locations, and the content is related to thunder gods. The relationship between reverberation and thunderstorms thus raises the possibility that highly reverberant sonic environments were used in sympathetic magic rituals in which hoofbeat-like percussive sounds were made not just for the practical reason to conjure up hooved animals for food, but for the spiritual reason to create thunder in mimetic magic as supplication to thunder gods (which also led to practical benefits relating to fertility as a result of rain).

### **Cave cathedral or sanctuary**

The sonic environment of caves is one feature that can give these places a special, even otherworldly, aspect to this day. It is difficult for us today to separate this feeling from the feeling of sacredness one perceives in great reverberating cathedrals and temples, because of the direct association of the architectural acoustics with the intended known religious purpose of those structures. Thus it would be difficult to determine if ancient people lacking that association would also have had the same spiritual response; i.e., to ascertain if it is a natural response. There is reason to justify that the response of the ancients was greater because the extra reflected sounds were completely mysterious.

### **Fortuitous to intentional**

Evidence that stalactites and rock gongs were struck to produce musical notes includes pounding marks and other demarcations. Over time, these marks could have come to be associated with the sound, and the fortuitous patterns formed may have naturally inspired representations of objects.

### **Totemism**

The theory that rock art represents spirit helpers is in agreement with acoustical motivation, since a wide variety of sounds can echo off rock surfaces and could be interpreted as various spirits, as shown by the wide differences in descriptions of echo spirits and thunder gods in myths around the world.

### **Structuralism**

The data amassed by A. Leroi-Gourhan (1967) showed relationships between the various species depicted compared with shapes of the portions of the caverns in which they were depicted, resulting in an apparent grand scheme of Palaeolithic cave decoration. Unfortunately the pattern did not hold up for caves discovered afterwards and thus was not predictive. It is interesting, however, that while the shape of a space is one important determinate of its acoustics, another equally important factor is the sound absorption coefficient of the surfaces. This factor seems now to have been the reason that the hypothesis based on cave shape as the sole determinate of cave art placement was disproved. While stone in general gives good sound reflection, because sound reflection is better from some surface textures than others, there is only a loose relationship between reverberation and cave shape. If indeed the cave art was motivated by sound, this could explain why only a loose relationship was found between cave art and cave shape.

### **Gender and sexual symbolism**

Another outcome of Leroi-Gourhan's studies was the finding of branched signs that had previously been interpreted as weapons, but which he interpreted as male fertility symbols. The realization that similar branched signs are known to have represented thunderbolts (Waller, 2012a) can help resolve this dichotomy, since branched signs are found in caverns with thunderous reverberation, and thunderbolts were widely perceived as literal weapons that virile thunder gods hurled to fertilize the earth, thus were also male fertility symbols.

### **Mythological; hermeneutics; literary textual interpretation**

The theory that rock art represents supernatural beings described in myths is entirely consistent with the acoustical theory of rock art motivation. There is a wide variety of explanations for the phenomena of echoes and thunder in myths around the world, yet there are also common themes and similarities, just as there are common themes and similarities in the subject matter of global rock art.



## Phenomenology

Acoustics fits in perfectly with the concept that rock art was inspired by mysterious phenomena that were inexplicable to ancient cultures.

## Shamanism, neuropsychological model and entoptics/phosphenes

Rhythmic percussion is a common means for trance induction, and sound reflection can augment this sonic experience to facilitate a trance. It is well known that sound can produce images and visions in the mind's eye.

## Sacred landscape; territorial markers

Acoustic characteristics, while not visibly obvious, are an important property of the landscape; indeed the term 'soundscape' has been coined to underscore the importance of sound in the environment. Systematic acoustic studies have shown a correlation between sound reflection and rock art placement, which is consistent with the hypothesis of sound reflection as a motivation for the placement of rock art.

## Celestial interpretations; calendrical; archaeoastronomy

The connections between thunder in the sky, thunder gods and thunderous reverberation from rocks leads to a possible connection between rock art and supernatural sky beings. Also, many cultures believed celestial bodies travelled underground when they set in the west so they could rise again in the east. Any sounds heard to come from within the rocks could thus easily have been associated with these sky beings traveling underground. There are a variety of myths from Europe, Asia and the Americas that describe thunder gods living in caves, which is consistent with interpreting reverberation as thunder.

## Summary

While archaeoacoustics may not hold the complete explanation of rock art motivation, it can serve to harmonize, rather than conflict, with other theories that have been put forth (except for art for art's sake). Acoustics, through the illusion of sound reflection mimicking spirit voices and thunder gods within the rocks, directly ties together the concept of the supernatural and prehistoric rock art. Furthermore,

sound production in highly reverberant spaces appears to have been an important part of rituals to communicate with these supernatural beings that could be heard but not seen.

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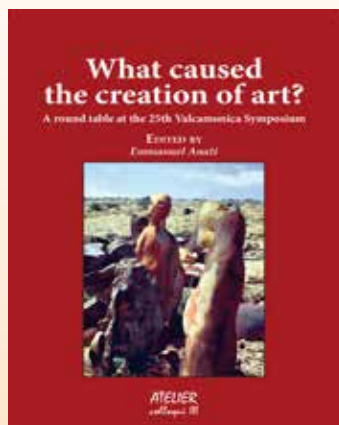
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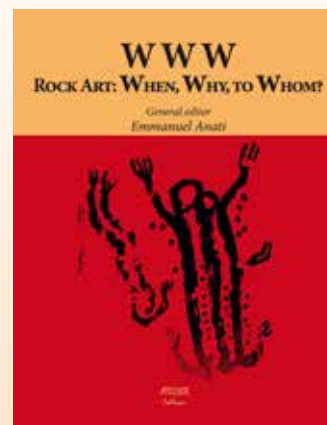
Anati, E. (ed.) 2013. *What Caused the Creation of Art? A Round Table at the 25th Valcamonica Symposium*, Capo di Ponte (Atelier), 44 pp. € 10.

'What caused the creation of art?' People from different disciplines and different cultural backgrounds present contrasting views. And yet, the same question has bothered thinkers for generation.



Díaz-Andreu, M. 2015 *One life in one day, an interview to prof. Emmanuel Anati*, Capo di Ponte, (Atelier), 104 pp. 51 pls. € 20

In the gardens of the campus of Burgos University, while delegates were moving from sessions and lectures to coffee breaks and back, Margarita Díaz-Andreu recorded, for hours, the words of Professor Emmanuel Anati. It was the 5th of September 2014 and when the electric lights of the evening replaced the sunlight, a life-long story was drafted.

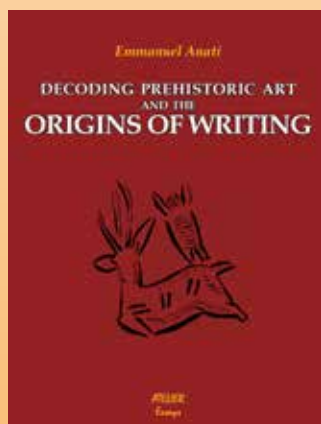


Anati, E. (ed.). 2015 *WWW. Rock Art: when, why, to whom?* Capo di Ponte, (Atelier), 218 pp. 184 pls. € 40

How come that Rock art is widespread in five continents? Some sites, in South Africa, Australia or Brazil, count well over one million figures. They were produced over centuries and millennia. What made generations persist in this tradition of marking the stone surfaces with the records of their minds? Why did they invest on it such immense time and energy? Fifty authors from five continent face the query: when, why and to whom?

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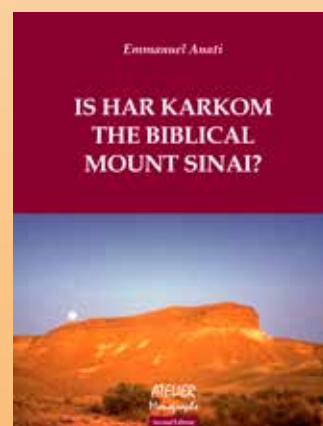
Anati, E. 2015. *Decoding Prehistoric Art and the Origins of Writing*, Capo di Ponte (Atelier), 152 pp. 83 pls. € 20.

This text examines the cognitive process that led to the invention of writing and highlights constants of memorization and associative synthesis held in the mind of Homo sapiens for thousands of years. Some examples of decoding prehistoric art propose a new vision for the beginning of writing.



Anati, E. 2014. *The rock Art of Spain and Portugal, a Study of Conceptual Anthropology*, Capo di Ponte (Atelier), 104 pp. 87 pls. € 20.

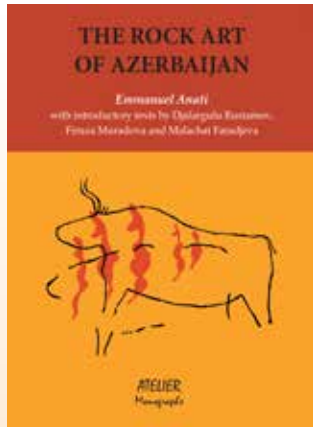
An analytical synthesis of the rock art in the Iberian peninsula from the conceptual anthropology approach. The major concentrations of rock art are considered as expressions of their different cultural and social patterns.



Anati, E. 2013. *Is Har Karkom the Biblical Mount Sinai?* (II ed.), Capo di Ponte (Atelier), 96 pp. 53 pls. € 20.

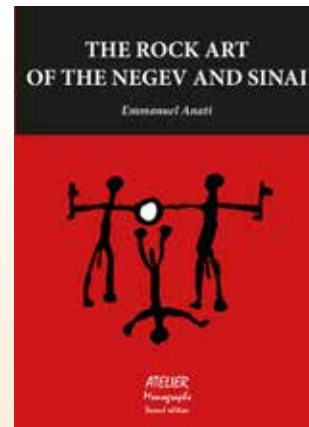
Remains of ancient sanctuaries and camp-sites tell the story of a hitherto unknown mountain in the heart of the desert of Exodus. Is Har Karkom the biblical Mount Sinai? To what point can we consider the biblical narratives as a source of historical documentation?

MONOGRAPHS



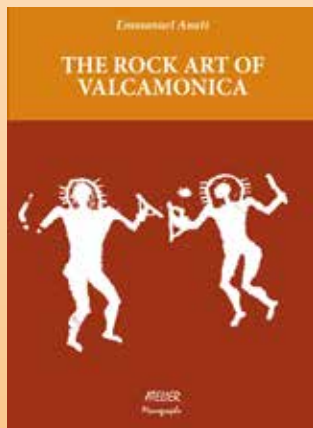
Anati, E. 2015. *The Rock art of Azerbaijan*, Capo di Ponte (Atelier), 156 pp. 190 pls. € 20

In the course of centuries, Azerbaijan, was a great centre of rock art. This gateway of Europe, between the Caucasus Mountains and the Caspian Sea, was a major way of migrations from Asia to Europe. New chapters in the history of art are revealed by beautiful design and stylisation.



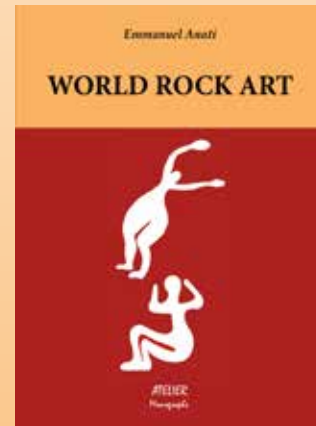
Anati, E. 2015. *The Rock Art of the Negev and Sinai*, second edition, Capo di Ponte (Atelier), 242 pp., 190 pls. € 25.

The present volume is concerned with a new theme of archeology and anthropology: the rock art of the Negev and Sinai, which never had before a general analysis in English. It elaborates on articles and a book written in the last 60 years, to produce a synthesis and an overview.



Anati, E. 2015. *The Rock art of Valcamonica*, Capo di Ponte (Atelier), 260 pp. 153 pls. € 20

Valcamonica, in the Italian Alps, with over 300,000 images engraved on rocks, is the major rock art site in Europe. It is the first "World Heritage Site" listed by UNESCO in Italy and the first rock art site listed in the world. Its study reveals the largest archive left behind by the ancient inhabitants of Europe. After having excavated, traced, described and analyzed it for over half a century, the author presents this synthesis bringing new light on 10,000 years of history. The present work represents a turning point in the methodology of archaeological research. Europe acquires back millennia of its forgotten history.



Anati, E. 2015. *World Rock Art*, Capo di Ponte (Atelier), 208 pp. 193 pls. € 20

This book is a fundamental introduction to rock art studies. It marks the starting point of a new methodology for rock art analysis, based on typology and style, first developed by the author at the Centro camuno di Studi Preistorici, Capo di Ponte, Brescia, Italy. He can be seen the beginning of a new discipline, the systematic study of world rock art.

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