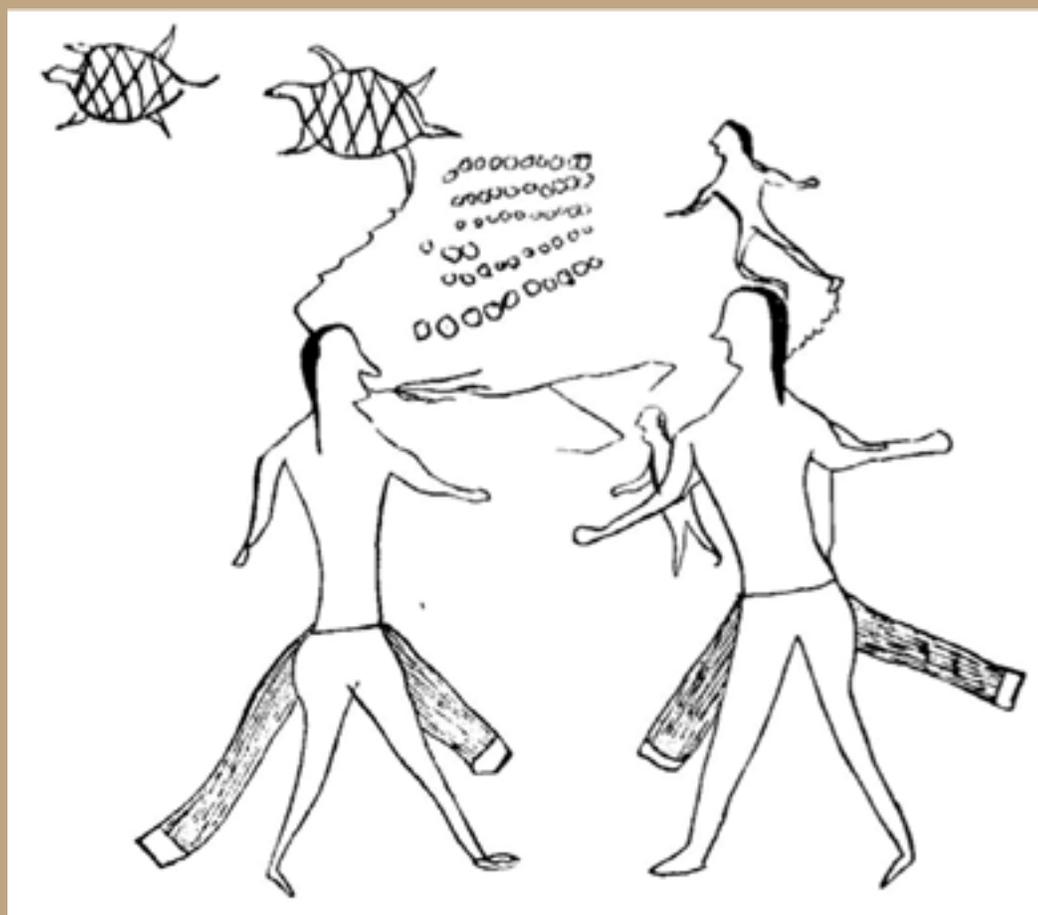


EXPRESSION

QUARTERLY E-JOURNAL OF ATELIER IN COOPERATION WITH UISPP-CISENP, INTERNATIONAL SCIENTIFIC COMMISSION ON THE INTELLECTUAL AND SPIRITUAL EXPRESSIONS OF NON-LITERATE PEOPLES

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THE MESSAGE BEHIND THE IMAGE

Message sent by an old man of the Cheyenne tribe to his son. A man named Turtle-that-follows-his-wife sends the pictographic message to his son named Little-man. Their names are indicated above their heads. The sign coming out of the mouth of the old man indicates that he is the one sending the message. The movement of the two figures towards each other indicates encounter. The series of small circles over the line that exits from the mouth of the father towards the son is a numerical indication of round objects. The pictographic message reads: 'Turtle-that-follows-his-wife sends to Little-Man 53 dollars so that he comes to visit him.' In other words, the message says: 'Come to see me, I will pay your travel expenses.' (After Mallery, 1889).

EDITORIAL NOTES

THE MESSAGE BEHIND THE IMAGE

Prehistoric and tribal people have left behind millions of images, in Africa, America, Asia, Europe and Oceania. Was their purpose just that of embellishing rock surfaces? What pushed people from all over the world to record their memories throughout the ages? This immense heritage, whether intentional or not, is full of messages to be read and understood. What are the images telling us? What are the stories that the makers intended to memorize or communicate?

Many events, many expressions of human thoughts and beliefs, many different aspects of life and culture, can add millennia to the history of mankind. Visual art is a source of history and prehistoric art suggests a new look at history since the earliest visual messages.

Traditional schoolbooks limited history to the last 5,000 years. The history of urban societies mainly concerns kings and generals from urban societies: it is a narrow perspective on the human adventure. What are the stories behind millions of images in the Serra da Capivara in Brazil or in Kimberley, Australia? What are the painted caves of Lascaux and Altamira in Europe, or those of the Drakensberg in South Africa, telling us about the history of our species? Prehistoric and tribal art is offering stories and histories of peoples and societies that traditional history had ignored.

There were times when peoples in Europe ignored the existence of America and people from America ignored the existence of Europe. History has made some progress since. The global study of prehistoric and tribal art has become a source of a real world history for the first time in history. Visual art is the biggest archive ever compiled: millions of ima-

ges, over five continents, contain 50,000 years of human events, feelings, beliefs, traditions and myths, an immense patrimony most of which has yet to be deciphered. They are the source of a new history and they are a major challenge for present-day research: discovering ages of cultures so far ignored. It is also a most marvelous and inspiring target. It demands the joint engagement and passion of all those interested in joining this venture. What do these depictions tell us about the life, the mind and concerns of their makers? This is not just a contribution to your career; it is a contribution to culture.

This issue of *EXPRESSION* magazine is presenting a first group of papers from five continents on the project 'Reading the message behind the image', but the project is continuing: it remains open and colleagues are invited to continue contributing to it.

Describing and dating findings, objects, and mobile and immobile art are the first steps of archaeological research. For conceptual anthropology they are the means to build upon them the rediscovery of the minds, thoughts and purposes of their makers.

The common denominator of the contributions offered by papers from different parts of the world and different disciplines is the focus on the search for these meanings. Whoever has something to say is invited to continue submitting papers and ideas. Together we are creating a new kind of world history. How did human societies think, act, believe and communicate in different social and cultural settings, in different periods, ever since the earliest conceptual expressions? How similar and how different can human behavior be in various climatic, economic and social conditions? Each specific case, small or big, is a contribution to the global picture.

Daring is the most noble quality of man. Without daring the human species would have survived in only a few corners of tropical Africa. Without daring, great minds would have never existed. Civilization is the result of daring. It is possible to make errors - which sooner or later are corrected. But the progress of research is based on trial and error. Trials open up new horizons to research. Errors invite awareness and debate. Both are important for culture. The courage of trial, even when there is the risk of making mistakes, is the mainspring of evolution.

A major advantage of mankind is the expression of ideas. The most negative fault is not expressing them. Reviewers will always help authors, when necessary, to avoid diffusing unsustainable ideas. Colleagues and friends are welcome to participate and share the experience. The project 'The message behind the image' is continuing, and it is not concluded with the present issue.

E.A.

Wed Mertoutek, Hoggar, Algeria. Dancing girls. Rock paintings of Late Hunters. Commemoration of an event: what is the message behind? (Archives Anati, EA 62).

EDITORIAL NOTE

EXPRESSION magazine is published by Atelier Research Center in cooperation with UISPP-CISENP, the "International Scientific Commission on the Intellectual and Spiritual Expressions of Non-literate Peoples" of the UISPP, *Union Internationale des Sciences Préhistoriques et Protohistoriques*. The goal of **EXPRESSION** is to promote knowledge and ideas concerning the intellectual and spiritual expressions of non-literate societies. It is an open forum in conceptual anthropology, welcoming contributions. Colleagues having something to say will find space in this e-magazine, which is reaching people of culture and academic institutions in over 60 countries. Authors are fully responsible for their ideas and for the information and illustrations they submit. Letters on current topics and short notes are welcome and may be published in the section "Discussion Forum".

Publication in **EXPRESSION** magazine does not imply that the publishers agree with the exposed ideas. Papers are submitted to reviewers for their evaluation, but controversial ideas, if they make sense, are not censored. Time will be their judge.



DISCUSSION FORUM

The Discussion Forum invites readers to be active in debates of worldwide interest in conceptual anthropology.

CULT SITES AND ART

Walking along a narrow trail, on the edge of a steep valley in the middle of a deep forest, we suddenly heard noises of human presence, voices that were neither speeches nor songs, something in between. We reached a cave where a number of people were assembled in a corner and an old bearded man was standing on an upper step of the rock talking ... perhaps talking, perhaps declaiming, perhaps singing, but not to the people below. He was talking or performing or praying in front of a white rock painting showing a being with a horned animal head and a human body. This was happening about half a century ago, in a mountainous area of Malawi in the heart of Africa. We were present at a Nyau ceremony. The clan, guided by a shaman, was preparing for a performance where the actors were becoming spirits, acting as expected by the spirit painted on the rock. The cave is a sacred site where the ancestral spirits were resting and where the rock paintings indicated their presence.

In another occasion, this time in Tanzania, we were prevented from reaching a painted rock shelter. A process of the initiation of girls was taking place and the area was taboo for all those not involved in the event.

Where rock art sites are still in use we can learn something of their function, but when the art is thousands of years old we can only figure out what may have happened there and what was the function of the site.

The relationship of art and cult sites is still a source of inspiration in richly decorated Buddhist temples or Christian cathedrals.

The visual art stresses the historical facts and the myths related to the cult and to the sanctity of the site or of the beings worshipped. It is the visual memory that justifies the function of the site. Was it the same in prehistoric times? In front of rock art sites, in the Camonica Valley in Italy, or in Kakadu in Arnhem Land, Australia, or in the Drakensberg caves in South Africa, or in the Altamira cave in Spain, the presence of prehistoric art awakens a sense of sacredness, we feel that these were and are special places but ... what happened there? What can we say about the relationship between the surviving works of art and the function of the site? The project 'Cult sites and art' invites colleagues and friends, who can contribute facts, testimonies and ideas about the function of art in prehistoric and tribal sites and their possible relations with myths, beliefs and cult practices to contribute to the understanding of the functions of these sites.

What do colleagues and friends who invest time and energy in describing these works of art have to say about their meaning and function? General ideas and proposed interpretations will be evaluated. The function of decorated caves and open-air rock art galleries produced by prehistoric and tribal people demands explanations, which would be welcome. But also the interpretation of a single object or of a single figure may constitute a valuable contribution.

EXPRESSION magazine is planning an issue on this topic. Colleagues are invited to present their case or their query, before August 20, 2017, to the project '*Cult sites and art*', EXPRESSION magazine, email: <atelier. etno@gmail.com>. Early proposals, request of information or queries are welcome.

Several of the past 15 issues of EXPRESSION magazine focus on specific themes defined 'project'. They are topics about conceptual anthropology.

The results of the adopted system are evident from the responses received and published in the succession of the issues during these first four years of life of the periodical.

MAGDALENIAN ENGRAVED BONE INTERPRETATION

John H. Robertson
Mount Royal University, Calgary,
Alberta, Canada

Anati (Expression 14, 2016) published an engraving on an eagle scapula fragment that may have served as a flute. This brief note agrees with most of Anati's interpretation, but with a different conclusion. It is claimed here that the bone flute served as a heuristic device for boy's initiation ceremony.

A major feature of hunter-gather culture is a distinct division of labour. Immature males remain with their mother until about the age of 6 to 10 years old when the boys request they be considered as young men. After undergoing an initiation rite the boys switch from association with mothers and aunts to fathers and uncles.

This initiation ceremony is extremely important to the young boys as they begin to assert themselves as men and

hunting becomes one of their main contributions to the community. The engraving shows a horse with humans behind and flying Vs in front. The horse is a stallion. We know this from two aspects: 1) looking at the horse and 2) the fish at the front of the horse has the arbolet (maleness) ideogram incised on its back which tells us this is a male horse. At the back of the horse is a group of enthusiastic people, and here lies an interesting issue. The artist who engraved this scene shows great skill in representing the horse and even the fish, yet the people are drawn in a very primitive, simplistic form.

As shown in Anati's paper, the same kind of crude human forms from the Magdalenian Period is present in different sites. Why is this? I suggest the artists of 20,000 years ago were precise when drawing animals because there is a wide variety of animals and the artist wants to ensure that viewers understand which animal is represented.

But everyone knows what humans look like so the artist could use the human form to express emotion. The humans do look like they are trudging along, having different sizes, look more animated, possibly representing young boys on their first horse hunt.



Fig. 1: Eagle bone engraving from La Vache site, Ariège, France, Magdalenian Period. (The same image is repeated in Anati's article in the following pages).

The job of the boys is to drive the horses in a particular direction leading to a trap.

Between the boys and the horse is the image of a bear facing forward. Bears are dangerous and in this depiction the boys are warned to not get too close as stallions have a vicious kick. At the front of the stallion is a small, young horse with two lines between the stallion and the young horse. These two lines normally refer to "lips" and "female" but in this case the two lines may refer to "protection". It is possible the message here is: if horses become aware of human hunters, the horses run away and the hunters go home empty handed. But if the hunters capture a young horse the stallion will not run away in its attempt to protect the young fold. That will allow the hunters the time to throw spears (the flying Vs) killing the stallion from a safe distance.

This bone flute from 20,000 years ago may be a semiotic record instructing young boys about horse hunting and it may have been used over a number of generations. The engraved, bone flute puts to sight and song educational details young neophytes must remember during the heat of action.

HOW TO CONCEIVE YOUR PAPER

Please consider that the magazine is reaching readers from various disciplines of the human sciences in over 60 countries of five continents and should be of interest to all of them. The language is English, using the American spelling. We recommend authors to present

papers pleasant to read, avoiding dry scientific reports or inventories. The readers are cultured people involved in the various sectors of the human sciences. The average size of each paper should be 1,500 to 3,000 words. Illustrations are welcome: please calibrate the resolution to 300 dpi with a base of 14 cm, providing pertinent, explanatory captions, including source where relevant. All the material presented, texts and illustrations, should be free from copyright and any other obligation, and possibly not yet published elsewhere.

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FORTHCOMING DEBATES

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

1- **WOMEN:** their role in prehistoric and tribal art.

2- **ART AND ECONOMY:** relations between economic conditions and art creativity.

3- **MYTHS AND MEMORIES:** stories told by pictures.

4- **SOCIAL STRUCTURE AS REVEALED BY PREHISTORIC AND TRIBAL ART:** how depictions reveal social relations and social organization.

5- **NEW HORIZONS OF RESEARCH:** the role of conceptual anthropology.

6- **DEFINING THE DOMINANT THEME** of prehistoric and tribal art assemblages. Defining the conceptual motivations in the diversity of thematic typology.

7- **DEFINING PERSONAL IDENTITIES OF ARTISTS** in prehistoric and tribal art.

8- **ART AS A SOURCE OF PSYCHOANALYSIS OF PREHISTORIC COMMUNITIES:** the choice of the themes to be represented and the associative system or syntax of the depictions reveals conceptual and social trends.

9- **BURIAL CUSTOMS AND PRACTICES** as expressions of beliefs in afterlife.

10- **IMAGES OF WARFARE AND FIGHTING IN PREHISTORIC AND TRIBAL ART: THEIR COMMEMORATING ROLE.**

11- **SEAFARING DEPICTIONS: RECORDING MYTHS OR EVENTS?**

Proposals for papers and suggestions on these and other issues are welcome. The Discussion Forum invites readers to be active in debates of worldwide interest in conceptual anthropology.

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DECODING PALEOLITHIC ENGRAVINGS ON BONE

Emmanuel Anati (Italy)

Atelier Research Center for Conceptual Anthropology

Abstract

In the framework of the project “*Decoding Prehistoric Art*”, this paper describes the deciphering process following the methodology of conceptual anthropology, and presents examples of decoding graphic markings on Paleolithic bones from Western Europe.

The Graphic Function

What was the function of graphic signs in prehistoric times? From what we know of present day hunter-gatherer peoples, they are not producing art just to embellish pieces of bone or rock surfaces; also it is unlikely that they produced art with the intent of displaying their masterpieces in art galleries. Among non-literate people, in prehistoric times and in recent tribal societies, both rock art and mobile art on objects had, and have, a role in transmitting and memorizing information, events, myths, beliefs and concepts. The initial theoretical hypothesis was that such artifacts are pictographic and/or ideographic records of life and thoughts of non-literate societies. Those belonging to the Paleolithic Period precede the beginning of formal writing by many thousand years.

The project of deciphering the messages behind prehistoric art started as the publication of a series of articles on the *Decoding of Rock Art* (Anati, 1997, 2003b; 2008c). Sites of rock art in Australia, South Africa and Brazil have millions of graphemes that have accumulated during millennia. They are the archives of memory and the spiritual heritage of generations. They use visual semiotic systems to transmit meanings. Similar figures and signs appear on mobile art

objects in bone and other raw materials.

One of the main challenges of prehistoric art research is decoding so as to read the messages left behind by human beings. They were understood ages ago and should be understood today. For thousands of years, before conventional writing, people had conventional symbols and used graphic systems to represent and convey ideas and concepts. The first step of decoding is attempting to understand the conceptual analogical system used in such messages. An updated report on the decoding project is presented in *Decoding Prehistoric Art and the Origins of Writing* (Anati, 2015). We shall refer to this research in various statements and assumptions expressed in this paper.

Phonetic and Semiotic Graphic Communication Systems

The phonetic system of writing, for the last 5000 years, has revolutionized the ability to communicate ideas and concepts, providing names and definitions with unequivocal precision. The semiotic graphic compilations of the last 50,000 years convey ideas rather than words. Semiographic writing was and is readable in every language. Phonetic-graphic writing restricted the possibility of communication to a specific linguistic or ethnic area. The decoding of semiographic writing reveals that it had – and has – a wide range of verbs and attributes, and includes conventional rules of both grammar and syntax.

Recent tribal peoples send semiographic messages through message sticks, which are perfectly read and understood by the receiver. Such sticks are made of different materials, such as bone, stone and wood, and also bark, leaves and other materials that tend to deteriorate and have a short life. Mainly durable materials such as bone, ivory and stone are preserved for ages. Some tribal people still practice Stone Age technologies and are defined as non-literate.

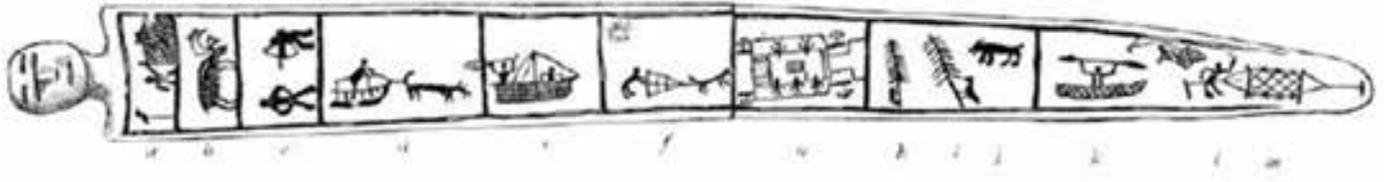


Fig. 1. A shaman stick from Alaska, Eskimos. Narration record of a journey, on ivory (after Mal- lery, 1889, p. 541).

But these sticks are a form of writing. They are to be read and understood efficiently in their societies. Groups of Australian Aborigines, Ba- Twa Pygmies of the Congo basin, Swami of northern Finland and Inuit of Arctic Canada convey precise messages to their potential reci- pients in this way.

Message sticks written with conventional ideo- grams and pictograms have been used all over the world for ages. Sequences of signs on Pa- leolithic objects of bone or stone, many thou- sand years old, similar to more recent message sticks, are likely to have had similar functions (Graziosi, 1960; Marshack, 1970; Mountford, 1956).

The graphic methods of conveying information reveal widespread common features among

different populations from different continen- ts. It can be postulated that they are non-verna- cular systems, at least in part, and have global values. They reflect common schemes in their elementary cognitive structure. The ability to interpret and to transmit graphic information appears to be a global human skill, part of the intellectual abilities of the species, acquired at a certain level of human evolution. This con- ceptual background to the decoding process is explained and discussed in the above-mentio- ned book (Anati, 2015).

The challenge is that of reading messages writ- ten before the introduction of phonetic and proto-phonetic writing, understanding their content as regards thoughts and feelings, disco- vering the minds and souls of early men, thus adding to history millennia of prehistory.



Fig. 2. Paleolithic alignments of signs engraved on bone from France: a. Gourdan, Haute-Garonne; b. Le Placard, Charente; c. Lorthet, Hautes-Pyrenées; d. La Madeleine, Dordogne. They appear as deliberate sequences, 25,000–15,000 years old, similar to message sticks of recent tribal groups (tracing after Graziosi, 1960).



Fig. 3. Bacho Kiro, Bulgaria. Bone fragment with zigzag engravings from a Mousterian level (Middle Paleolithic) dating back c. 50,000 years ago. (After Anati 2007a; see also Anati, 2015).

The Chronological Setting

Summarizing previous studies (Anati, 2015) the earliest reliable dates for the presence of figurative art, ca. 50,000 BC, come from Australia. Similar dates are theoretically probable for the early presence of figurative art in Africa and Asia, though these have not been confirmed. The earliest datable figurative graphic creations from Europe are just over 40,000 years old. We do not know if older images were produced before, on perishable materials such as wood, sand, leaves and bark, on ground surfaces or even on the human body. What survives is on a durable support. If this kind of expression did exist previously, on decaying materials, no information is available at present.

There is evidence for the presence of non-figurative graphic signs in Africa, Asia and Europe previous to the earliest known figurative art (Anati, 2015). As discussed in the above-mentioned study, the use of graphic signs as a sort of writing to convey or memorize information preceded figurative art. A previous common assumption is thus reversed: writing is not an outcome of visual art, but on the contrary, visual art may derive from early attempts at writing.

Considering the possibility of missing evidence is a necessary part of an overview. What messages might early hunters have marked on palm leaves? What we have today is what has been preserved. These remains are numerous from various continents, and comparative

studies make a major contribution to their decoding. In the present paper we shall present the tentative interpretation of a few examples on Paleolithic bone objects from Western Europe.

The Decoding System

Before going into the reconstruction of specific semio-graphic assemblages, we propose some reflections on the decrypting system. The basic method of decoding prehistoric messages is the same used in the deciphering of any previously unknown script: assembling all the available items from the same time and area and comparing recurring associations of graphemes. This first step permitted the definition of a recurring meaning of a number of pictograms and ideograms (as specified in Anati, 2015).

Defining recurring patterns of grammar and syntax is essential. The grammar is defined by the typology of graphemes, figures and signs, which are of three main types: pictograms, ideograms and psychograms (Anati, 2015). The syntax concerns the types of intentional associative systems of the graphemes. They may be association, sequence or scene, and each one of these categories has various internal categories (Anati, 2015).

It may not be surprising that prehistoric semiographic messages turned out to follow a logical system rather similar to that of more recent tribal semiographic scripts, like those of American native peoples recorded by G.

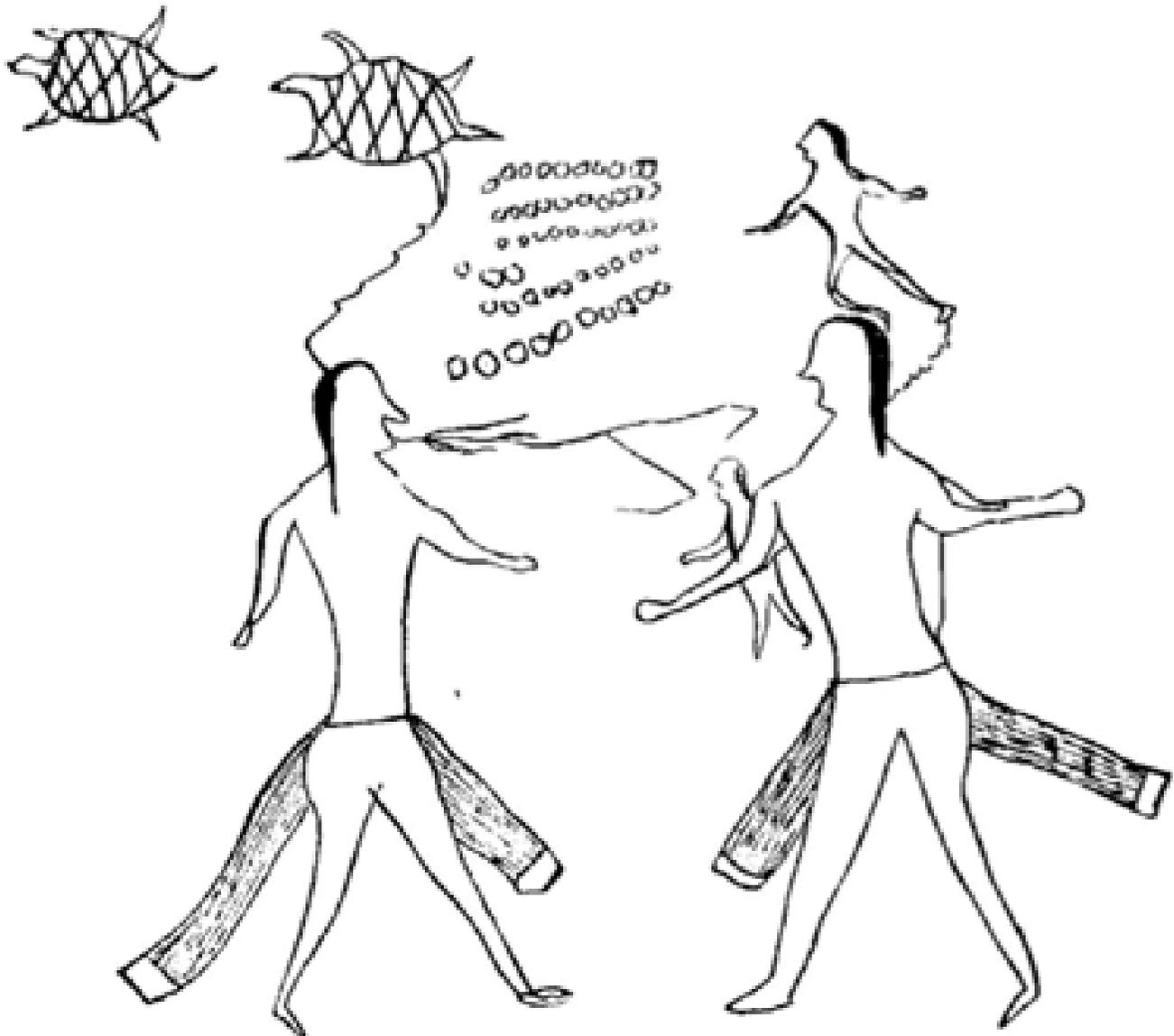


Fig. 4 Message sent by an old man of the Cheyenne tribe to his son. A man named Turtle-that-follows-his-wife sends the pictographic message to his son named Little-man. Their names are indicated above their heads. The sign coming out of the mouth of the old man indicates that he is the one sending the message. The movement of the two figures towards each other indicates encounter. The series of small circles over the line that exits from the mouth of the father towards the son is a numerical indication of round objects. The pictographic message reads: 'Turtle-that-follows-his-wife sends to Little-Man 53 dollars so that he comes to visit him.' In other words, the message says: 'Come to see me, I will pay your travel expenses.' (After Mallery, 1889).



Fig. 5. American Indian pictographic writing, recording a political and social event. It represents two individuals, one with a gun and the other with bow and arrows. On the head of each appears his identification ideogram. One has three stars and the other a cloud. The pictographic message reads: 'Mr. Three Stars (referring to General Crook, whose degree is acknowledged from three stars on his pad) has talked to Red Cloud, in order to fight.' The reference is to a historical fact, an agreement that took place in 1876 between General Crook of the American army and the Indian chief Red Cloud to fight against the Cheyenne tribe. (After Mallery, 1889).

Mallery well over a century ago (Mallery, 1889). In fact this kind of documented reading has provided useful hints, contributing to the decoding of prehistoric documents.

The Decorated Antler from La Madeleine

An example of partial decoding is that of an engraving on antler, from the site of La Madeleine in Dordogne, France. It has a well-conceived, intentional sequence of graphemes. It is possible to identify each single item of the sequence, but the ultimate message of the sequence is not yet clear (Fig. 6).

The composition has at the centre two phallic figures, different from each other in shape and size, oriented in opposite directions. The smaller one, the left one, penetrates an orifice, which may represent a vulva, and has some small lines emanating from the gland, which may represent ejaculation. Further to the left, the last visible figure is that of an oval shape, 'eye' or vulvar ideogram (female ideogram). The right side ends up with a fishbone or *arbolet* (male ideogram). The two extremes of the sequence indicate 'female' on one side and 'male' on the other side. The larger phallus seems to have a gland sub-incision. It faces the nose and mouth of a bear. A small ideogram connects the phallus to the bear. The enclosed typological scheme presents the identification of the various elements as pictograms and ideograms in their sequence from right to left.

The main subject appears to be the pictogram 'bear's head', on the male side, likely to represent a name or a totemic symbol of individual, clan or locality. The sequence is between two ideograms, female on one side and male on the other. A relevant element may be the opposite direction of the two phalluses. It could indicate two alternatives: one way or the other. Figures are likely to have metaphoric meanings.

What did this composition intend to record or convey?

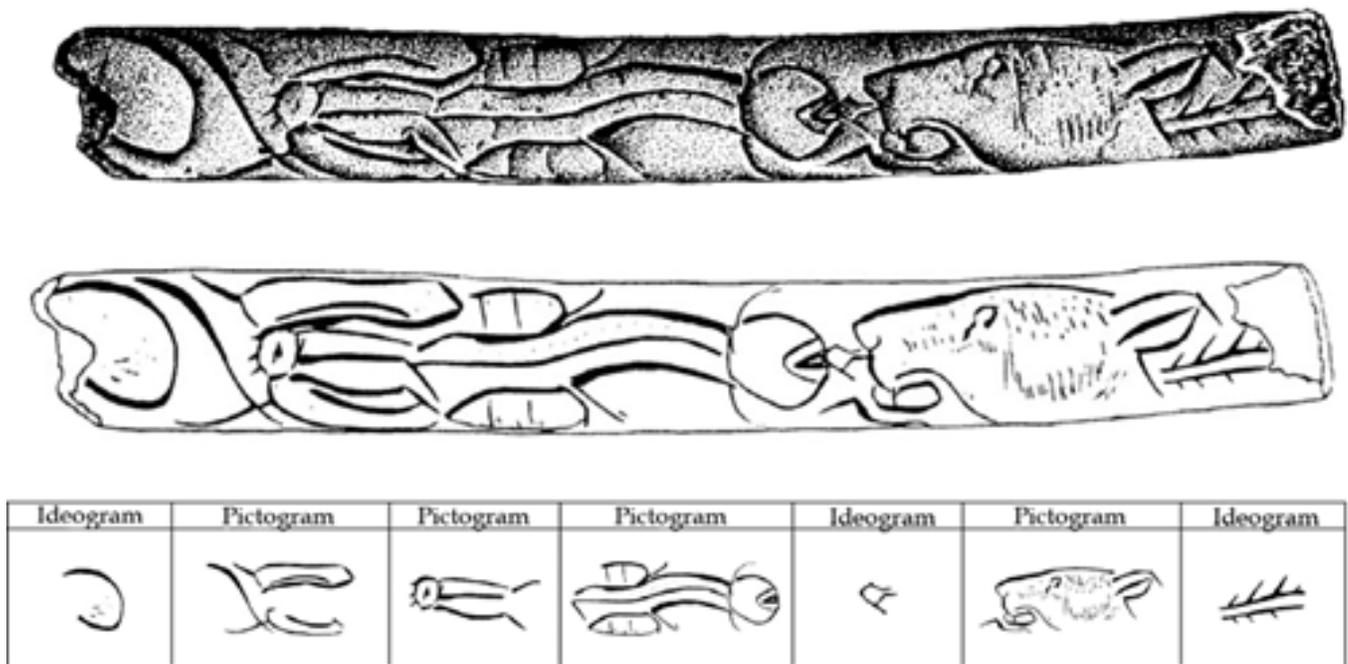


Fig. 6. La Madeleine, Dordogne, France. Tracing and outline of engraving on antler. The composition has at the centre what seem to be two phallic images oriented in opposite directions. On the left the phallus penetrates an orifice, which may represent a vulva; to the right the larger phallus faces the nose and mouth of a bear. At the left the last visible figure is that of an oval shape or a vulvar female ideogram; the right side ends with a fishbone or arbolet (male ideogram). The various elements are identified as pictograms and ideograms in their sequence from right to left. The main subject appears to be the pictogram 'bear's head', likely to represent a name or a totemic symbol. What did this composition intend to record or convey? Several hypotheses may be possible. Probably the solution could be in the meaning of the small ideogram located between the mouth of the bear and the phallus facing it. (after Anati, 2007a; see Anati, 2015).

The Prey and the Predator

A recurring pattern of Western European Paleolithic art is the association of two animals side by side, the body of a deer or fawn and the head of a predatory carnivorous animal, sometimes with open jaws. More than 10 associations of this kind are recorded in France and Spain, both on bone and antler objects and in rock art. The two subjects are associated with ideograms that vary from case to case. They are likely to tell a story, which must have been popular 20,000 years ago in an area on both sides of the Pyrenees, spanning over 500 km. (Fig. 7

and 8).

Following a frequent Paleolithic habit, the two animals are likely to be metaphors of male and female; the tale highlights the coexistence of two animals, which traditionally are prey and predator, the one being the food of the other: they succeed in living side by side. Is it the description of a myth or a didactic tale? The allegories of prey and predator also show a kind of concept of the social structure and a vision of relations between men and women. Relations between the two genders are one of the main themes of Western European Paleolithic

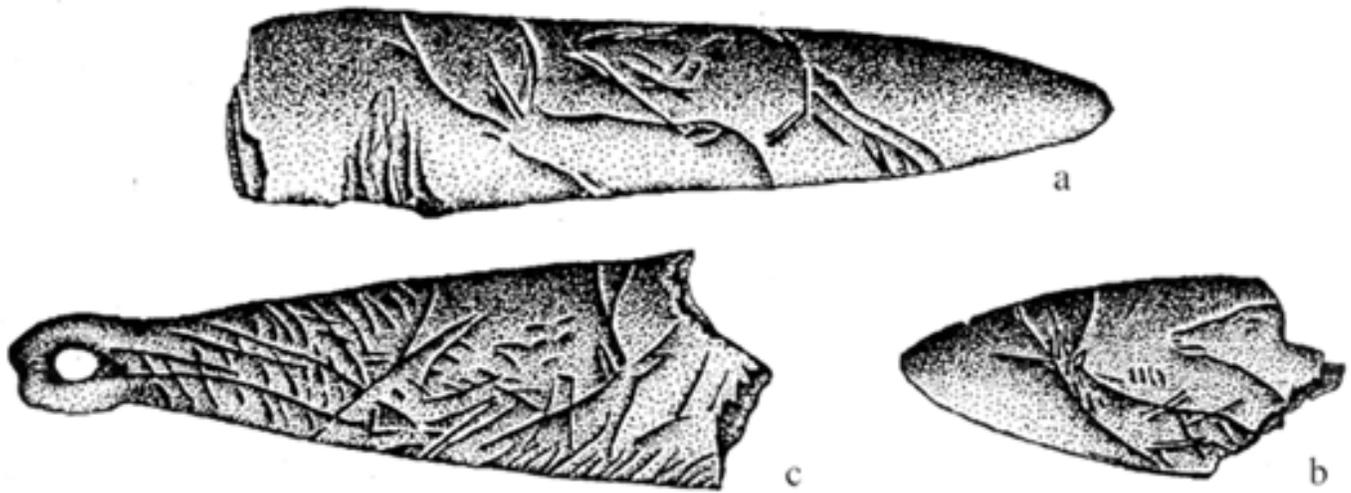


Fig. 7. Repetitive coupling of pictograms on three bone fragments from three different provinces of the Franco-Cantabrian area: a. Mas d'Azil, Ariège, France; b. Lorthet, Hautes-Pyrenées, France; c. El Pendo, Santander, Spain. Upper Paleolithic, Magdalenian period. All three represent the muzzle of a carnivorous animal next to the body of an antelope in semi-profile. In all three cases the muzzle of the antelope does not appear. The carnivore is marked by the sign of a bâtonnet, a male ideogram, while the antelope is marked by a female ideogram of two lines called lips. Ideograms of numeric value are associated (after Anati, 1989b; see Anati, 2015).



Fig. 8. Gourdan, Haute-Garonne, France. Engraved bone showing an antelope and the head of a carnivore. On the body of the antelope appear the two parallel lines, defined as lips, which are repeated three times. Upper Paleolithic, Magdalenian period (tracing by Anati from photo by Bosinski, 1990).

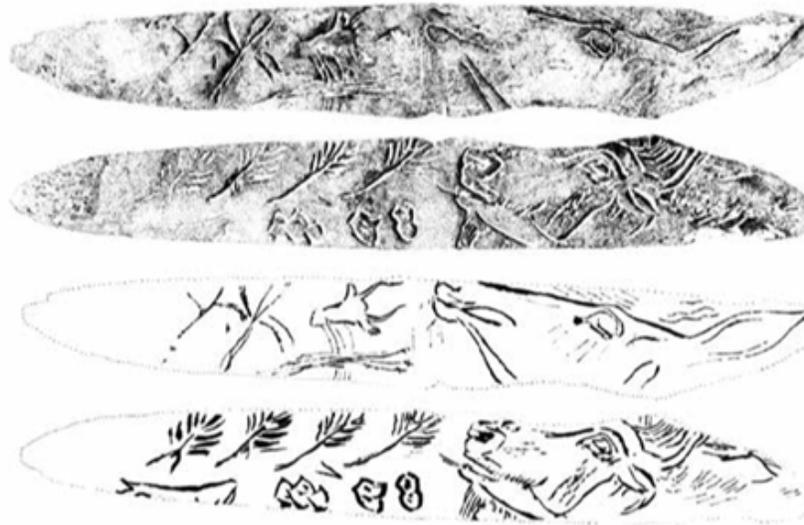
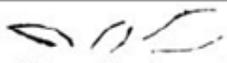


Fig. 9. La Vache, Ariège, France. Tracing and schematic drawing of the two sides of a bone knife, Upper Paleolithic, Magdalenian.

Each of the two sides shows a subject, the head of an animal, accompanied by a sequence of symbols (Anati's archives).

<p>Side A</p>  <p>Subject: gazelle or doe (female)</p>	<p>Side B</p>  <p>Subject: buffalo head with his tongue licking</p>
 <p>Attributes? Wavy lines, water, fertility; parallel lines, numeric ideogram</p>	 <p>Attributes? Series of lines that repeat the shape of the horn; group of signs between which an ideogram of eye</p>
 <p>Vulvar symbols, mouth; vulvar symbol, "lips"; vulvar symbol, "lips" repeated on the ear</p>	 <p>ideogram: "arbolet" leaf-type (male)</p>
 <p>Ideogram: diagram of frontal view of ibex or chamois (male). Likely counterpart of the binary system</p>	 <p>Ideogram: fish (?). Likely counterpart of the binary system</p>
 <p>Ideograms or psychograms: body emanating rays; "arbolet" (?); "arbolet" (?)</p>	 <p>"V" ideogram (vulvar)</p>
	 <p>Ideogram: nut or seed. It is repeated in three forms: single, double and triple. It has been hypothesized that can represent sounds or noises.</p>

documents examined so far.

There are repetitive associations of animals in Paleolithic iconography, implying metaphoric narratives. They may have inspired storytellers for generations, maybe until much later tales like Aesop's.

La Vache Two-faced Bone

An object of bone from the excavations of La Vache cave, in Ariège, France, from a Magdalenian horizon, about 20,000 years old, has sequences of signs engraved on both sides (Fig. 9). Their order does not appear to be casual. On each side the main subject is an animal head (pictogram), a gazelle on one side and a bison on the other. According to the orientation of the animal figures, the reading of the sequences

of the ideograms goes from right to left. We may guess the meaning of some of these ideograms. Some of them represent vegetal goods, others carnivorous goods, and most of them are likely to concern food. Even without going into a detailed deciphering of the meaning of each ideogram, the bone appears to be a document describing a transaction, an exchange of items, between the gazelle clan or totem and the bison clan or totem. Ideograms indicate the exchange goods and their quantity. From this small piece of bone, we might infer that this kind of trade existed already 20,000 years ago and that a 'written' document formalized the deal. It is surprising to see how similar this document is to analogous trading documents over 15,000 years later, from the beginning of formal writing.

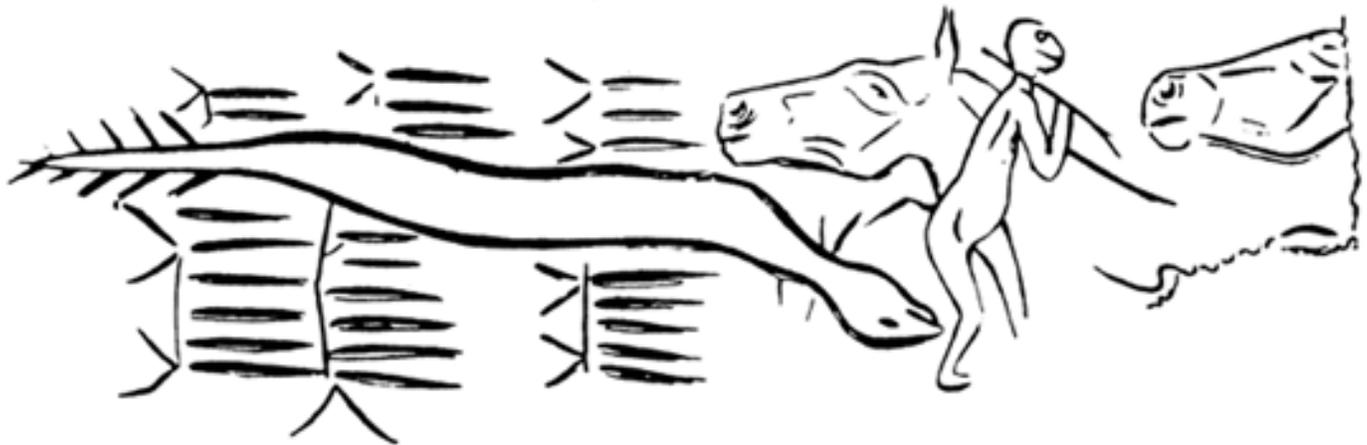


Fig. 10. La Madeleine, Dordogne, France. Engraving on bone, Magdalenian period. An anthropomorphic figure is in a walking position holding a bâtonnet on his shoulder. The bâtonnet, often bifurcate, is common in hunter's art and is considered the indication of a person travelling ("the traveller"). A horse's head above him defines the personage, probably indicating his name. He heads towards another similar horse's head. The document appears to be the recording of a story or of a myth of migration or travel: Mr. Horsehead is travelling to 'Horsehead land', returning home.

(Tracing after Breuil, 1952). The space behind his back, where he is coming from, is marked by a snake with a tail in the shape of an arbolet'. The image indicates the name which may be something like 'Male Snake': it can be the name of a human clan, a territory or both. There is a composition of lines in three rows on both sides of the snake. This composition of horizontal lines defined by vertical lines is another ideogram, considered to mean "territory". In the present case it is plural: territories. The reading would be 'the three territories of Male Snake'.

La Madeleine Bone

A popular theme of Paleolithic iconography is travel or migration. Such documents may illustrate myths or events and are likely to have a didactic purpose connected with initiation. They are recordings of oral traditions that had to be memorized and transmitted to the next generation. Stories of migrations, myths of origins and sacred narratives of exodus towards a promised land were probably part of traditional accounts millennia before the compilation of the Old Testament.

The engraving from a bone of La Madeleine, Dordogne, France, shows a marching person holding a *bâtonnet* on his shoulder. (Fig.10). This ideogram of the stick (*bâtonnet*), sometimes bifurcated, often held on the shoulder, is common in groups of moving figures and is considered to indicate walking or travelling. This figure is a traveller, and the engraving provides his name and where is he going. He is bound to the image of a horse's head, which is defining him, and moves towards another horse's head: 'Mr Horsehead is going to the land of Horsehead.' He is probably going back to his homeland.

This engraving on bone is probably a means of commemorating the story of a journey, maybe the evocation of a myth or an event. The reading seems to be implicit: 'The man (or the group) whose name, symbol or totem is Horsehead, goes (or returns) to his territory, to the Land of Horsehead, leaving behind the three territories of the Male Snake.' It sounds like the synthesis of a story or myth of migration: going back to the land of origin after a stay in foreign lands, or going back to the land of the fathers. Probably these stories were narrated orally, as still happens in the tribal world. Such a story in our contemporary society could have produced a bestseller.

The Les Eyzies Bone

Another story of migration is engraved on a piece of bone from Les Eyzies, Dordogne. Like the previous example, it is attributed to the Upper Paleolithic Magdalenian culture, and appears to be a complex and well-conceived intentional composition. (Fig.11). A group of eight schematic anthropomorphic profiles appear to be moving. Each one of them holds a forked *bâtonnet* on his shoulder. As mentioned before, the forked *bâtonnet* ideogram signifies "traveller". On the right side there is the profile of a bison, and the team is marching in its direction. On the upper and left side of the composition, a couple of ideograms are repeated, once on top of the heads of the team and once behind the team. The presence of two identical ideograms, one near the other, means plural. Various authors have interpreted this ideogram as branches or trees. Comparing it with other similar depictions in the rock art of three continents, it seems that we may define it as fire; being two, their sense is plural, fires (cf. *EXPRESSION* 13, 2016, pp. 7-14). The ideograms above the heads of the group, as in other similar cases, indicate the name of the group. The ideograms behind the group are likely to indicate the locality from which they come.

The reading we propose is: 'The team of the eight people (or eight clans) of the Land of Fires, leaves the Land of Fires, directed to the Land of the Bison'. It sounds very much like the account of a myth, but perhaps it may also be the memory of a historical fact. This may tell a story of great interest about the peopling of Europe by a group of Paleolithic *Homo sapiens*.

From the beginnings of written history and from ancient myths, the Land of Fires is today's Azerbaijan, the eastern gate of Europe, where mineral gas, petrol and bitumen emerge at ground level, producing the famous



Fig. 11. Les Eyzies, Dordogne, France. Fragment of decorated bone from the Magdalenian period, Upper Paleolithic. A group of eight anthropomorphic beings in profile are holding on their shoulders the forked bâtonnet: they are travellers. On the right side there is a bison in profile and on the top and the left side are two double signs. People identified with 'fires marks'. 'Eight people or clans of the Land of Fires leave the Land of Fires going towards the bison, likely to indicate the Land of Bison., Since the beginning of written history, Azerbaijan has been known as the Land of Fires, where petroleum and gas deposits create fire choreographies. The Land of Bison could be the Franco-Cantabrian area, where this fragment was found (after Anati, 2001).

mysterious perennial fires. The Land of the Bison, towards which these people are moving, is likely to be the place where this document was found during archaeological excavations in the Franco-Cantabrian region of western Europe, the Land of the Bison, which Paleolithic men depicted on many objects and on the walls of caves.

This piece of bone is likely to preserve an exceptional historical document, the testimony of a migration of people coming from the east, reaching Western Europe. Migrants from the east settled down in Les Eyzies over 20,000 years ago.

The Flute of La Vache Cave

An engraving on an eagle bone, likely to have been a musical instrument, a sort of flute or tube, may represent the story that the prehistoric troubadour sang or played on it. It comes from the La Vache Cave, Ariège, France. Like the previous examples, it belongs to the Magdalenian period. (Fig. 12).

The engraving shows six human figures, at least two of which are naked males. On top of their heads there is a disc, which may indicate the name or totemic identity of the group (circle, disk, star, land of the circle or something like that). The main subject at the centre of the composition is a horse, which is larger than the other figures. A rectangle with parallel lines is engraved on its body. This is an ideogram meaning "land", thus Land of the Horse. There is a bear seen frontally between the group of people and the horse. It may indicate a problem, a danger or handicap to overcome in the journey. On the right side of the Horse-land there are two pictograms: a fish on which there is a 'arbolet' ideogram (male value), and a ruminant seen from the back, near which there are two parallel lines, a 'lips' ideogram (female value). At the right end of the composition, there are three V-signs (vulva ideograms), one of which is penetrated by a line. The bear (danger) and the 'Land of the Horse' separate the group of people from male-fish, female-



Fig. 12. La Vache Cave, Ariège, France. Upper Paleolithic, Magdalenian period. Engraving on bone of eagle. It was probably a musical instrument, a kind of tube or flute. The engraving describes six human figures, at least two of which are nude males. Above them there is a disk that could indicate the name of the human group or of the territory. The main subject, at the centre of the engraving and of large dimensions, is a horse. On its body is engraved a rectangle with parallel lines. This ideogram often means "territory". Between the human figures and the horse there is a figure of a bear facing front. On the right there are two pictograms, a fish on which there is an arbolet ideogram of a bâtonnet (male ideogram) and a ruminant seen from behind, next to which there are two parallel lines, the lips female ideogram. At the right end of the engraving there are three V-signs, one of which is penetrated by a line. This engraving is likely to refer to a narration, probably a myth that was repeated or perhaps even sung. It concerns a group of people, facing the Land of the Horse, to reach beings or localities indicated as Mr Fish and a Mrs Ruminant. This working hypothesis has parallels of similar ways of representing narrations, among recent populations of hunters from different areas, like the Inuit of Arctic Canada or Australian Aborigines of Arnhem Land (tracing after Marshack, 1972a).

ruminant and the plural vulva ideograms. What is the story behind this puzzling composition?

This engraving is likely to refer a narration, probably a myth, which was memorized or perhaps even sung. It concerns a group of travellers, facing some difficulty, planning to cross the 'Land of the Horse', to reach beings, clans or localities indicated as Mr Fish and a Mrs Ruminant, where three women are waiting.

We shall describe, to conclude, the decoding of a small rock engraving from Altamira cave, which is a clear example of the memorizing and communicating logic of Paleolithic

semiographic 'writing', the same logic emerging from the decoded bone objects described in the present paper.

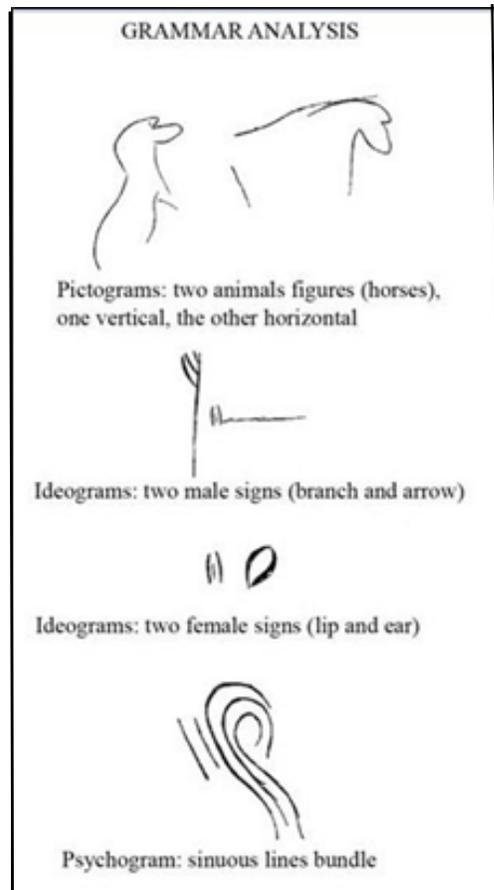
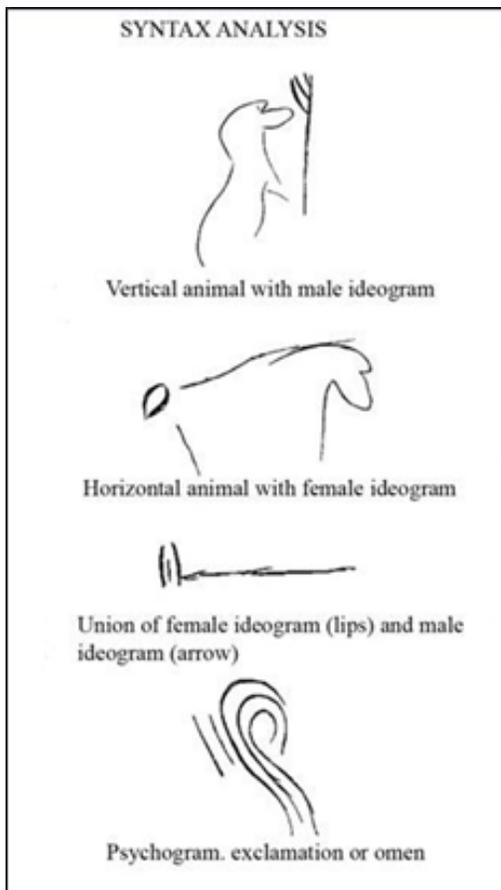
The Altamira Engraving of the Two Horses

Different authors, starting with the Abbé Breuil in 1912, have published and reproduced a small, engraved composition from the cave of Altamira in Spain. No reading of the message had been proposed in over 100 years. There are two horses, some ideograms and a psychogram. The ideograms have male and female values. A vertical horse is associated with a male ideogram (*arbolet*) and a horizontal horse with



Fig. 13. Altamira cave, Spain. The rock engraving shows two horses, some ideograms and one psychogram. The dart or spear usually has a male value, like the 'arbolet' ideogram. Vulva and 'lips' ideograms have a female value. A vertical horse is accompanied by a male ideogram, a horizontal horse by a female ideogram. On top of them appears the

depiction of the dart ideogram (male) penetrating the 'lips' (female) ideogram. Below the composition a psychogram appears, a sort of exclamation. The document may read: 'Mr. Vertical Horse met Ms. Horizontal Horse: sexual union, Ohh!!' This Altamira engraving may simply tell a love story of 20,000 years ago. (Tracing after Breuil, 1912).



a female ideogram (vulvar or *eye* sign). On top of the composition an arrow ideogram (male) joins the *lips* ideogram (female); the psychogram appears as an exclamation of pleasure or satisfaction. The story can be read as 'Mr Vertical Horse meets Mrs Horizontal Horse, sexual intercourse, ohh!' The decoding seems to reveal the story of Mr Vertical Horse and Mrs Horizontal Horse, who realize their dream of love! Paleolithic storytellers existed already 30,000 years ago.

Conclusions

We have presented some examples of decoding of Paleolithic markings on bone (using comparative examples also from other materials). They reveal a world of anecdotes of shared lives, events, deals, legends, myths and beliefs, of periods defined as prehistory, which are now enlightened by flashes of history. So we learn that Mr Vertical Horse and Mrs Horizontal Horse had an agreeable meeting, that a successful deal on food exchange was carried on between two clans or totemic groups, that storytellers used to sing about a myth of exodus, that educational records tell us about travel and migrations, and other such historical details reaching us from deep prehistoric times. Is this history or prehistory? In any case, these messages provide new ideas about the roots of culture (whatever this term may mean). To what extent can we consider them as writing? They reveal vivid images of daily life.

A new age in the study of prehistoric art has started with decoding. The first steps are opening up a new landscape. If we can read messages from 30,000 years ago, prehistory is becoming history. The history of humankind may suddenly become much longer. From other documents (Anati, 2015) we are learning that human clans were memorizing agreements on the acquisition or exchange of women, that they

recorded agreements on the trade of food and other utilities, and that they were memorizing stories and myths. All this seems to contribute a new look to archaeology.

The decoding of prehistoric art is revealing the ability of peoples from the Paleolithic to communicate information, events, and also feelings and evaluations, through pictographic and ideographic systems. The grammatical and syntactic structure of those messages has the same conceptual bases adopted by conventional writing many millennia later, in the last 6,000 years.

Research on the decoding of prehistoric art is at its beginning, but already it offers new perspectives for semiotics, psychology, linguistics, conceptual anthropology and, above all, the understanding of the primary roots of the cognitive system. It can be stated that the ability to produce writing is far more ancient than what was supposed. Is it a central element of the primary conceptual features of *Homo sapiens*?

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READING MESSAGES INTO PALAEOART

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Introduction

In his rationale for this collection, Emmanuel Anati is quite right that some of the images in rock art can be, in a sense, decoded; but he is mistaken in believing that 'other images are yet to be understood and awaken scientific inquisitiveness'. The underlying principle of scientific inquisitiveness is the falsifiability or testability of propositions. Without such an epistemological framework, proper science does not exist. Invented interpretations of rock art or other palaeoart are untestable propositions, and while it is no doubt entertaining to invent such explanations, it is irresponsible to present them to the public as actualities, or to mislead colleagues into believing that such interpretations are credible.

Some care is required even in those cases where the explanation of a knowledgeable person, that is, an elder or custodian of the indigenous society that produced the rock art, is available. We know that some rock art is related to information that may be sacred or secret, that is, not available to cultural outsiders. We also know that to guard such restricted knowledge it has to be protected from the uninitiated, including prying researchers. For this reason the custodian of the rock art usually employs one of two strategies: he either pretends that he knows nothing about the rock art's meaning; or he offers a substitute explanation, usually a version intended for children or other uninitiated people. This is similar to a modern parent giving a simple explanation to a questioning child to satisfy its curiosity. The inquisitive anthropologist, however, may not know this, and is likely

to believe he is the recipient of profound knowledge. Having published it appropriately he is then unlikely to concede that he has received and reported a children's explanation. And yet his interpretation is like a paper in a medical journal that states that babies are delivered by the stork.

It is generally accepted that the number of instances where any level of emic understanding of rock art, at whatever level, is available is miniscule worldwide. Most of such ethnographically secured information comes from Australia, and it is the Australian rock art researchers who are the least inclined to read messages into rock art. Indeed, they have for many years practiced placing all 'interpretations' in quotation marks, to indicate that these are merely etic labels where emic evidence is lacking. If researchers elsewhere are more confident in their vibes of what the rock art means, it may be of benefit to review the relevant science.

Science of rock art interpretation

The interpretation of rock art by its present-day, culturally unconnected beholders occurs in an epistemological vacuum: it reflects the mental activities of the observer rather than those of the producer of rock art. Moreover, it offers no form of testability. Nevertheless, the topic of rock art interpretation has not been entirely immune from scientific attention, even if there has only been one formal blind test of this issue. Blind tests, some archaeologists insist, are disrespectful and 'unethical' (Zilhão 1995), illustrating the incommensurability gap between their hobby and science (Whorf 1956; Feyrabend 1962; Kuhn 1970), but in the sciences they are eagerly applied. It was a scientist who, through unusual circumstances, found himself in the position of being able to test his own interpretations of numerous painted biomorphs

in two rock art sites in the Northern Territory, Australia. He had earlier published his own expert readings of them, based on his qualification of being an eminent professor of anatomy (Macintosh 1952). Decades later he discovered, to his amazement, that the producers or traditional owners of the paintings were still alive. Being a good scientist he decided that he could test his own findings by comparing them with the identifications of the biomorphs by the people who possessed the required cultural understanding, or indeed still knew what they had intended to paint. Macintosh (1977) reported that his interpretations had been false in 90 percent of the cases. This has prompted Australian rock art researchers to adopt the convention of placing their 'identifications' of rock art motifs in quotation marks to express that these words are merely labels and not to be taken as literal interpretations. That convention still has not been emulated in the rest of the world.

Macintosh's finding should teach us the humility required to admit that most of us lack the skills of an anatomist, and should expect to be wrong more often than Macintosh in 'interpreting' biomorphs in rock art. This, however, is not the humility I detect in rock art interpreters: not only do they think that they know what most motifs mean; if they find themselves contradicted they tend to defend their unexplained ability.

Rock art interpreters sometimes explore well beyond the 'identifications' of species, divining even more detailed aspects of the imagery's meaning. These constructs have their origins not in the rock art concerned, but in the mental processes of the respective interpreters. No translator of rock art has been trained or tested in his or her ability to determine the intention of the producer correctly. Their vibes result in pareidolic convictions about meanings and messages that simply cannot be falsified or

tested; they are outside of proper science. Moreover, such interpretation is an academic appropriation of indigenous culture, beliefs and metaphysical constructs, and is thus a form of neo-colonialism.

Rock art interpretation and human vision Every professional uses tools in his or her work, and if one gained the impression that one's dentist had a poor understanding of his tools - of what they could do and what their purpose is - one might be inclined to decline that particular dentist's services. In the case of the interpretation of rock art motifs or their intended relationships we are using only one tool: the human visual system. Therefore the precondition to considering the significance of such perceptions is that we can be reassured that the researcher posing and defending such propositions can demonstrate neuroscientific understanding of the processes that lead to these 'interpretations'. This is not just a reasonable expectation; it would also be of the greatest help to the beholder of rock art to fully understand the underlying neural activity. The visual system is an incredibly complex structure and one can only marvel at our ability to make any sense at all of sensory information beyond the reach of proprioceptors or the retina. For instance, it is obvious that we cannot see events as they happen, because it takes several hundred milliseconds to process the incoming information and present us with a visual reality. And yet our brain manages to smooth over this rather tricky problem of always seeing in the past, presenting us with a video of the outside world that seems to be completely seamless. Indeed, it is just as incredible that we experience such a smooth film when in fact we should be seeing a terribly jerky video, considering the relentless movements of our gaze over the surfaces of its subject (Eagleman 2015). The astonishing process that stitches together this

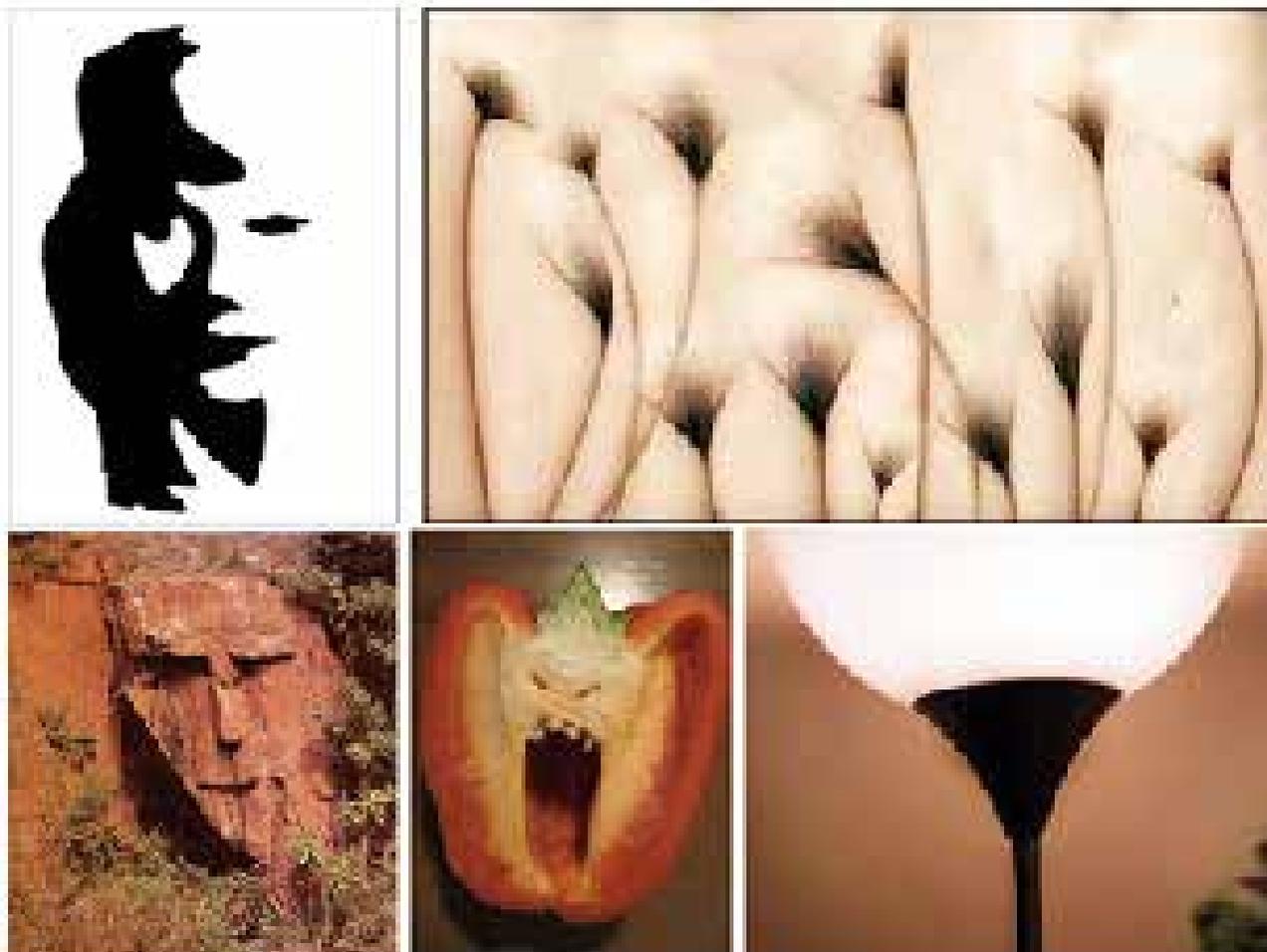


Figure 1. Some pareidolic effects

video in our brain is also deeply involved in pareidolia, the detection of patternicity in random information (Brugger 2001; Shermer 2008). Indeed, without pareidolia (both its visual and auditory forms) we would probably have become extinct long ago (Figure 1). Apophenia, of which pareidolia is a specific form, is essential to our ability to find our way in the material world, and to interact and compete evolutionarily with other members of the biosphere. But that does not mean that a facility of our sensory equipment that lacks in effect an error-detection governor to modulate the pattern-recognition engine

(Shermer 2008) is necessarily an ideal tool for determining the meaning of rock art. Here is the problem: what we perceive as pictures on the rocks are in reality just deliberately arranged colour patches (pictograms) or anthropogenic depressions (petroglyphs). The human brain, sensing their intentionality, disambiguates them by seeking patterns matching previous visual experiences. The production 'of iconographic forms is simply the cultural and intentional creation of features prompting visual responses to a signifier; it induces visual ambiguity intentionally' (Bednarik 2003: 408). Until we appreciate that what we regard as graphic art is 'a

manifestation of managed use of visual ambiguity' (Bednarik 2003: 412) we will make no progress in a scientific understanding of what we so casually call art (see *Expression* 12, June 2016).

To appreciate this it is necessary to understand the operation and purpose of the tool we are using in pareidolic interpretation: human vision. External visual information from the retina via the optic nerve accounts for only about 5 percent of the data received by the LGN (lateral geniculate nucleus) of the thalamus, where our visual model of reality is created. Nearly all the information forming what our brain tells us we see derives from the visual cortex in the most posterior section of the occipital lobe, with the superior colliculus, pretectum, thalamic reticular nuclei, local LGN interneurons and other projections making minor contributions (Bednarik 2011). What this means in practical terms is that we 'see' not so much 'what is out there', but what our brain expects to 'see'. In other words, 95 percent of what we 'see' is a reflection of our ontogenic history; therefore every human 'sees' differently. These differences exist among conspecifics, but should be assumed to be very much greater between us and the producers of rock art. The latter are thought to have been illiterate, and Helvenston (2013) has in her magisterial paper explained the huge differences in the brain's structure, arrangement and chemistry which literacy has introduced. Another example is the seminal report on the brains of London taxi drivers (Maguire et al. 2000; cf. also Draganski et al. 2004; Smail 2007; Malafouris 2008), and researchers relying on the reliability of their own perception as a research tool need to have some understanding of neuroscience. Otherwise one is simply a professional lacking the comprehension necessary to appreciate the operation of

the tool being used, for instance in interpreting the meaning of rock art.

Discussion

One of the many fascinating aspects of pareidolic rock art interpretation (Bednarik 2016a, 2016b; Lewis 2017) is that there are always motifs the 'interpreters' admit they find impossible to identify: motif taxonomy tables tend to include a column named 'unknown'. This is a psychologically interesting phenomenon that can probably help establish why rock art interpreters believe in their unexplained ability. It is not just a matter of defining some motifs as incomplete; there are also many apparently complete motifs that are labelled unidentifiable, for example, zoomorphs that are regarded as sufficiently ambiguous to resist interpretation, or that are interpreted as different species, sometimes even by one author at different times (Drouot 1953: 26 vs. 1968: 147; Bahn et al. 2003 vs. Ripoll et al. 2004) (Figure 2). Then there are the figures that are defined as non-realistic entities, such as images of therianthropes. So, the rock art interpreter not only 'knows' what the diagnostic aspects of some patches of pigment or some pounded areas of rock surface are intended to tell the viewer. He or she also 'knows' when there was no such intended communication, or when the viewer was misled deliberately, or when a visual pun was intended. He even 'knows' when the image is misshapen and cannot be identified, when the viewer is deliberately misled and so forth. He or she really must be a clairvoyant.

There seem to be two possible explanations: either pareidolic rock art interpreters are outstanding individuals, possessing miraculous abilities resembling those of a diviner, and without ever having received any training in



Figure 2. This zoomorph has been variously described as a horse, saiga antelope and mammoth by 'interpreters'. If they cannot identify this image credibly, on what basis should we accept any other of their 'identifications'? (Baume Latrone, France, 1981)

these faculties; presumably they were born with this gift. Alternatively, these abilities are simply imagined and their results can be proposed and defended precisely because they were never intended to be testable. To an unbeliever, the second explanation represents a fair application of Occam's razor.

Ultimately, the issue of divining the meaning of rock art motifs is simple. Every human being, of any intellectual, sensory, religious, political or academic conditioning, when seeing a rock art motif automatically reacts by trying to ascertain its meaning. Children are very good at this, as are tourists, butchers, bakers, candlestick

makers and archaeologists. None of them have received any instruction in how to express this innate ability, but the scientifically most useful 'determinations' are those of small infants, followed perhaps by illiterates. Those of cognitive sophisticates, such as academics, are the least interesting. Nevertheless, people trained as archaeologists are the ones telling us most frequently and with authority what the rock art means, when in fact their brain can be assumed to lack the experiences of the rock art producer; hence they cannot recall relevant experiences; they see with different eyes. Remember, it is previous encounters that determine what we

expect to see and what we usually 'see'. Therefore reading the messages 'encoded' in rock art using one's own visual system is unlikely to result in legitimate interpretations (see Macintosh 1977). It is enjoyable, admittedly, but we should leave it to children and rock art tourists. They are so much better at it.

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THE FORGOTTEN PERCEPTION

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Seminar of Thinking

1. Their animals are not our train

Did the audience of *L'arrivée d'un train en gare de La Ciotat* by the Lumière Brothers really panic when watching the train approaching on the screen? According to Martin Loiperdinger (2004), we do not have any proof whatsoever that this is what happened inside the cinema when the 50-second film was first screened in 1896. The lack of evidence for this rather suggests to us that such a reaction never took place, and that contrary to what cinema critics have subsequently been asserting about the manipulative power of cinema, an 1896 audience could distinguish between the moving image on the screen and real life. The question left by such a myth debunking is thus the reverse of the one that the myth allowed. It is not why those people could not differentiate between the screen and reality; it is rather why is it that they could operate such a distinction? Why is it that they did not panic?

In the documentary film *Cave of Forgotten Dreams*, director Werner Herzog argues that rock art found in the Chauvet Pont-d'Arc cave, is 'almost a form of proto-cinema'. While filming the images of a bison with eight legs and a rhino with several horns, Herzog notes that the Upper Palaeolithic painters around 32,000 years ago wanted to convey the 'illusion of movement, like frames in an animated film'. In doing this, Herzog says, they were aided by the surface on which they worked, the walls of the caves, that, unlike a cinema screen, 'are not flat, but have their three dimensional dynamic, their own movement'. Herzog discusses the painted walls of the Chauvet cave, claiming that 'for these Palaeolithic painters, the play of light and shadows from their torches could

possibly have looked something like this', as he demonstrates to the camera what they would have experienced first-hand, adding that 'for them, the animals perhaps appeared moving, living'.

It is in making the comparison between two types of French people, the 1896 cinema audience and their (and our) ancestors 32,000 years ago, when obviously France did not yet exist, that my contribution wants to deal with the first question posed by the current issue of *Expression* magazine: What are the images of prehistoric people telling us?

They tell us that the rendering of sensory experience while consuming such images cannot be communicated through a camera and therefore via a screen. It is a matter of being there, rather than watching from a distance. If the objective of a movie is to keep the viewers glued to their seats, the images painted in those caves in those times were motivated by a different type of goal. Herzog is right when affirming that the painted animals appeared moving, living. Yet rather than an illusion, I would suggest that those animals were real for the Upper Palaeolithic people. And because of that reality people could not remain still when consuming such images, unlike the viewers in a cinema theatre. So what prehistoric people images tell us about, first of all, is movement, movement not only in the sense of moving when seeing such images, but also in the sense of searching for the spot where they are to be painted. Accompanying Herzog and his crew inside the cave, one of the researchers studying the cave says: 'In this big chamber, which is very huge, the biggest in the cave, there are no paintings, except right at the end. This is probably relevant because when the entrance was still open, there must have been some light here so they put the paintings really in the complete dark.' It would have been easier for them to paint in the light, but the paintings needed darkness; they needed

the evocation of another space-time, a passage to another space-time.

A good acoustic environment was also required for the evoking of another space-time. Thanks to the research of Iegor Reznikoff (2014), we have discovered that painted caves have excellent acoustic properties compared with caves where paintings have not been found. Reznikoff talks of the bison effect as the effect whereby if a human hums in a part of the cave, it is as if the cries of the painted animals are imitated. In a subsequent section of *Cave of Forgotten Dreams*, it is shown that ancient flutes have been discovered in painted European caves of the Palaeolithic, providing additional room for the suggestion that sound was indeed very important to our Palaeolithic ancestors.

Herzog does note something appropriate when pointing out that the walls of the cave give dynamism to the paintings. Prehistoric images in fact tell us that the spot chosen has its own spirituality, as if it was the *genius loci* that creates the painting. Prehistoric painters probably never called themselves painters, as a young researcher, interviewed by Herzog, reminds us. He reports the case of an ethnographer approaching a painted rock shelter with his aboriginal informant in north Australia. The aboriginal man became sad when he noticed that the paintings were decaying. The ethnographer, says the researcher, asked the question 'that any Westerner would have asked: why are you painting? His answer was: I am not painting, that is the holy hand, the hand of the spirit, that is actually painting.'

The spot chosen has chosen you. The same researcher that is accompanying Herzog and his crew inside the cave, when approaching the beautiful panel of the horses, says that the animals are painted around a hole in the walls from which water can spring out after one week of rain. Prehistoric images, in sum, do not tell us about cinema. They rather tell us of a 'natural theatre',

a 'sacred geography' (Feo [2005] 2015), where rituals may have taken place, possibly with chanting, instruments, dancing and painting. If there is something that prehistoric images need to tell us, it is that they are the scene of a ritual. In the ritual, a communication with another space-time, with the realm of spirits, of the ancestors, takes place. And a reaction of panic is a possible eventuality within such a space-time. It is not when a perception fails to fire, to use inappropriately a verb that neuroscientists largely deploy. When it is forgotten that the images, the sound and the natural theatre of the images can get you physically involved, re-sound within you and prevent you sitting still in your own seat, an audience ends up not panicking when watching the approaching train. Besides, we cannot compare their painted animals with our filmed moving train. Their animals do not mean what we mean by a train. I would say that the perception that seems forgotten in the transition from Chauvet Pont-d'Arc people to the 1896 Lumière audience is one that has to do with journeying. If journeying means movement, if it means being exposed to the unpredictability of journeying; this is precisely what the train passenger lacks. The train passenger is not moving. The train is taking them to pre-established destinations, to which they already know they will be taken. The people doing a ritual, by contrast, do not know where the ritual takes them.

The possibility of panic stems from here. The imperturbability of the train passenger derives from the fact that they are sound-proofed and protected from the external environment, which they watch from afar.

2. The replacement effect

While we have been unable to understand the cave people with the categories we have built outside the cave, and therefore we may mistake the painted wall of the cave for a screen, we have probably never been closer to approaching

their world in a different light. This is because the distance with which the train passenger watches the world is in deep crisis. Reality is erupting, it is breaking through, it is bridging the gap built by distance: the distance of the paper, first, the distance of the screen, second, the distance upon which the supposed superiority of Western modernity has been erected.

This distance is the distance that the introduction of alphabetic writing introduced: choosing the sense of sight as the privileged channel for expression: vision as the sense of the institution, by which Western modernity is an oculo-centric tradition. It is often remembered that for the philosophers of the Enlightenment reason expressed itself through vision, the only sense able to impose itself over the dominion of passions, in which the other senses would be invested.

This distance, however, is at risk from the digital culture of the screen. Virtual glasses, considered to be the technology of the future, respond to the need to get viewers physically involved in their vision and overcome the distance of the screen.

This distance is also at risk from the return of the other senses; those that were taken away from Western modernity when it was decided how to make sense of a meaning. The eruption is the return of hearing, for instance. The fact that the Nobel Prize for Literature was assigned in 2016 to Bob Dylan, with Sara Danius, the permanent secretary, mentioning the oral-roots of poetry in Homer's and Sappho's work and adding that poetry has always been sung, suggests that the time is right for the return of hearing among the senses chosen to give meaning. Hearing – consider here the commercialization of audiobooks – returns to join vision: and in fact, ours is an audiovisual time, a movie with a soundtrack, a music-video (short and fast) that anyone can upload to YouTube. Yet there is also another sense that is returning, alongside hearing. This is the sense of touch.

I-touch technologies respond precisely to the need to use our hands to communicate. According to the hypothesis of the gestural origin of language which emerged from neuroscientific and psychological research (Corballis 1991, 2002; Arbib and Rizzolatti 1997, 1998), communication occurred first via the hands, and vocalization was then attached.

The digital revolution brings about a return of the senses of hearing and touch that writing, throughout modernity, has neglected. The combined functions of hearing, touch and vision are in fact key to the human performance of communication. The return of hearing and touch stands for the return of what humans cannot sweep under the carpet in the performance of human communication. However, this return is mediated by audio-mobile technologies which replace the presence of a human interlocutor with a screen, keyboard or headphones. In this replacement effect, what is left out is the possibility for the interlocutor to engage in a communication in which the sense of smell and taste are also involved. If not key to the actual human performance of communication, smell and taste constitute the sensorial basis from which our ancestors began to communicate. If the hypothesis of the gestural origin of language is correct, we can speculate that communication began via the movement of the hands precisely because hands were bringing food to the mouth, to be tasted and smelt. We can imagine that our Palaeolithic ancestors also ate together inside those caves. Eating together is the first socialization from which language arose. Mobile technologies, by contrast, so focussed on the individual, on their eyes (screen), ears (headphones) and hands (keyboard), strengthen the level of isolation from the environment, making it almost impossible to inhabit open space collectively. If, in 1896, it became possible to watch films and movies collectively in large halls, today we are confronted with walking, standing or sitting people,

watching a screen, wearing headphones and typing on the screens of their mobile technologies, while sharing a collective space. The 1896 cinema audience has turned into an individualized mass of new communication-technology users, a large slice of which seems unable to leave the cinema hall and disconnect from the internet. Perhaps the other-space time that was called for in the Palaeolithic caves has become the internet, but in this transition what has been forgotten is the special temporality and sacredness of the ritual, its grammar and performance, its beginning and end. Today new pathologies, especially among the younger generations, make us register an increased incapacity to disconnect from the internet and jump offline. This is why we seem unable to give importance to the experience of the ritual like the Upper Palaeolithic people probably did.

This tells us that even if we have a new technology of communication that is reducing the distance created by the technology of alphabetic writing, and therefore we are better able to understand what happened inside those caves, we still depend on a technology of distance. We are still tempted to understand their images with a screen, so that instead of imagining a ritual, the most we can do when seeing such walls is see a music-video.

Conclusion

This short paper began with a reverse question: Why did the 1896 audience not panic? We tried to show why our ancestors may have panicked and we do not. This was meant to answer the question of the current issue of *Expression* magazine: what do prehistoric images tell us? Let us end now with another reverse question: what would prehistoric people tell us about our images? According to Alex Gearin (2014), Upper Amazonian indigenous people have incorporated modern technologies of the screen into their

way of thinking without drastic changes. He recalls, for instance, that when the Yaminahua shaman Jose Chorro was confronted with cinema by the anthropologist Graham Townsley in the late 1980s for his film *The Shaman and his Apprentice*, Chorro's reaction, after a consultation with the spirits, was to declare cinema not as strong as ayahuasca, giving reason for Gearin to suggest that perhaps the screen of the cinema is a kitsch technology compared with the shamans' visions when journeying to the otherworld.

Perhaps the images of prehistoric people tell us precisely this: that no matter how advanced we think we are, we are still outdated in respect to them, we are still not able to fully (read sensorially) communicate, like they did.

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THE SKULL MOTIF IN ROCK ART OF THE FAR EAST: SYMBOL OF DEATH, REBIRTH AND THE LINK BETWEEN THE GENERATIONS

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Sikachi-Alyan is one of the most famous rock art sites of the Russian Far East, located about 60 km north-east of Khabarovsk, on the right bank of the Amur River. The site is named after the local village which is still inhabited by Nanai people; in their native language Sikachi-Alyan means Boar's Hill (Fig. 1).

Since the end of the 19th century Sikachi-Alyan rock art has been recognized as an important cultural manifestation. In 1935, and then from the 1950s and 1960s the petroglyphs were recorded by an archaeological expedition led by

the well-known Russian archaeologist Aleksei Okladnikov (1971, 1981). Nowadays studies and new recordings of the site are run by joint expeditions from the Institute of Archaeology Russian Academy of Sciences and Khabarovsk Centre for the preservation of the historical heritage (Fig. 1) (Devlet, 2012; Devlet and Laskin, 2014, 2015). The new surveys of the Sikachi-Alyan and Sheremetyevo rock art site on the Ussuri River revealed several petroglyphs. New unique anthropomorphic and zoomorphic figures were revealed, and with the employment of the RTI (Reflectance Transformation Imaging) and photogrammetry, modern recording methods made it possible to expand our knowledge of the art tradition and its context (Devlet and Pakhunov, 2016).

A special approach was developed for drawing petroglyphs not only with contact copies (tracing paper, estampages, transparent films) or photographs, but in three-dimensional space. Fragments of polygonal models of the boulder surfaces with images were transformed into



Figure 1. Sikachi-Alyan under current studies and documentation (Photo by I. Georgievski)



Figure 2. Sikachi-Alyan. 3D model of the boulder with rock art (by A.Pakhunov).

topographic models (elevation maps), while drawing was performed both over polygonal and topographic models.

The boundaries between carved and unaffected surfaces were determined by detection of the surface bends by means of mathematical visualization of the model's shape, and not along the boundary of light and shadow, as when working with traditional photography. Three-dimensional modelling made it possible to document the petroglyphs of Sikachi-Alyan in better detail (Figs. 2-3). Now the new concept of rock art management and public access is under consideration and it is focused on rock art protection and new cultural patterns in the

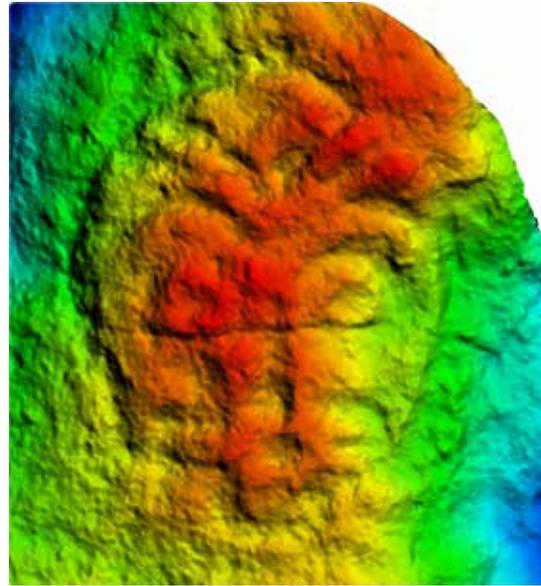
public awareness of rock art and recognition of its inherent value. This is a tourist location and about 5,000 visitors come to Sikachi-Alyan annually, although periods when the rock art is accessible are very limited and depend heavily on the water level during the tide season (Fig. 4).

Sikachi-Alyan is the only rock art site in Russia whose elements continuously change their position due to the fast-flowing powerful Amur water, especially during the spring rush of ice that tosses and overturns boulders on the river banks. As a result, some petroglyphs are hidden from view, while others reappear again. When the boulders with carvings are deposited



Табл. 20. Савачи-Алян (1 1/2 нат. вел.).

Figure 3 + 3a. + 3b Visualization of mask skull-like image from the 3d modeling and tracing of recording by team of A. Okladnikov (compare with fragments of polygonal models of the carved surface transformed into topographic models ("elevation maps"))



on the sand rather than on the bedrock, they sag and may be partially and even completely covered by sand and sediments (Fig. 5). Petroglyphs are concentrated on the riverside basalt boulders which are submerged in the water during floods; some are located on a

rocky ledge of the bank's terrace. In 2013 the Sikachi-Alyan site experienced a disastrous flooding. The Amur River's height reached a historical maximum of +800 cm, and all river-bank basalt boulders with petroglyphs were submerged under the water (Figs. 6-7).



Figure 4. Sikachi-Alyan boulders are often covered with water (photo by A.Pakhunov)

Apart from this most severe natural disaster, a similar situation occurs annually to a greater or lesser extent and these affect the preservation of petroglyphs and the landscape in general, because many boulders are dislodged or turned over and the petroglyphs are nowhere to be seen.

These features of the location set specific requirements for the methods of monitoring preservation conditions and assessing the damage caused. The use of photogrammetry has proved to work well in the documentation of each element of the dynamically changing site, its

visualization and its presentation to the public. Although archaeologists and the authorities responsible for cultural heritage in the federal centre city of Khabarovsk recognize the importance of improving the situation and the need for raising public awareness, local inhabitants have opposing ideas on how it should be managed. In the late 1990s six stones were intentionally relocated as part of the program of rock art protection, and afterwards local people claimed that several people died (it was an argument to oppose the suggested new steps for arranging the access to the cultural heritage).



Figure 5. Sikachi-Alyan site. Rock art mask partly covered with sand (Photo by I. Georgievski)

In the opinion of the local Nanai people, further replacement may cause more trouble and they claim that boulders are repositories for their ancestors. Nevertheless, local people use the site as a fishing place, put their boats and other equipment among the carved stones, start campfires and do not care about the preservation of the landscape.

This contradiction in the perception of the message from the ancient past introduces a lot of issues for rock art protection.

Basing his research on related materials from

local excavations, Alexei Okladnikov has dated Sikachi-Alyan rock art, with its particular set of motifs and distinctive style, to a number of chronological periods from the Stone Age to the medieval epoch.

Besides zoomorphs of the archaic tradition (probably 13,000–10,000 BP) there are numerous images of the Neolithic period that consist of masks with elaborate details in geometric style; this dating is based on the similarity of images with decoration of the ceramics from the area (5,000–4,000 BP) (Fig. 8).



Figure 6. Sikachi-Alyan. Panoramic view (Photo by A.Peshkov)
Figure 7. Sikachi-Alyan. One may see water level in 2013 on the informational post at the rock art site (Photo by I. Georgievski)



Figure 8. Ceramics of Voznesenovskaya culture (courtesy of IAET SO RAN) (by A.Pakhunov)

In the final Neolithic and in the Early Iron Age rock art masks get more variations in their decoration with spirals, strokes, etc, that they probably could be imitations of facial paintings or tattoos. Stylized imagery predominates in the area. Decorative X-ray elaborate zoomorphic figures are also attributed to the period. Terminal medieval rock art carvings are very different in style and quite simple. Practically all Sikachi-Alyan petroglyphs are

carved on riverbank boulders of various sizes and shapes. Preference for boulders used as natural rock panels is a feature of the local rock art tradition. The natural relief of the boulders helped the artists to depict the human-like masks. Anthropomorphous masks were carved on the adjoining faces of the boulder to make them look like a relief, and Sikachi-Alyan petroglyphs tend to be perceived as a relief rather than a two-dimensional image (Fig. 9).

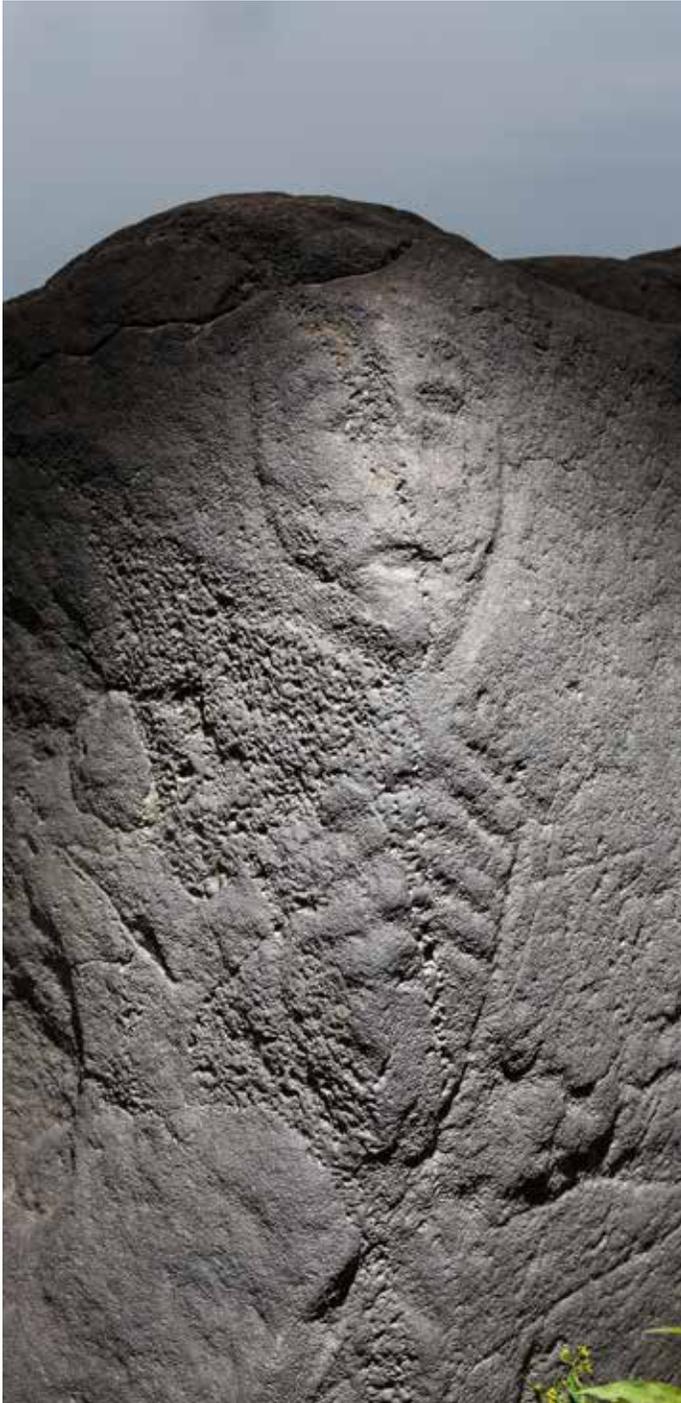


Figure 9. Sikachi-Alyan. Anthropomorphic figure in X-ray style at the conjection of two surfaces (Photo by I. Georgievski)

Many petroglyphs are outlined with a groove; this technique is rarely used in the rock art tradition and gives salience to the petroglyph silhouette, separating it from the rock background. The anthropomorphic mask images have a central place in rock art repertoire, and these key images of the Sikachi-Alyan rock art gallery bear an astonishing expressiveness. Mask images are abstract, conventionalized images of human faces, yet each possesses an individual shape and decorative elements. Outlines of the mask images are diverse: they may have oval, round, heart-shaped, even trapezoidal or square shapes. A particular group comprises partial or incomplete masks having no external outline or internal filling. The eyes designated on the mask images are sometimes elongated, almond-shaped or round.

A distinctive feature of the Amur-Ussuri region dominating rock art style is a tendency toward abstraction and ornamentation. A lot of decorative elaborate elements such as spirals, concentric circles and ornaments have been used by artists and it is nowadays argued that these elements might be evaluated as an indicator for some chronological periods, or it may just be individual artistic skill.

Among the imagery variety several skull-shaped masks can be seen, and one can argue that they were done to portray the world of spirits or ancestors (Figs. 10-12).

These tend to bring out analogies with Central Asia and northern China. Probably the motif of death that is embodied in these skull-shaped masks is one of those universal intrinsic themes in the art of ancient man, also typical of the visual traditions of early chiefdoms and civilizations regardless of the geographical location of culture.

Attention can be drawn to the similarity of the images of skull shapes in Central America, for example.



Figure 10. Sikachi-Alyan. Mask rock art motifs. (Photo by I. Georgievski)

Figure 11 a-b. Sikachi-Alyan. Scull-like art motif. (Photo by I. Georgievski)



Figure 12. Sikachi-Alyan. Scull-like art motif. (Photo by A.Pakhunov)
Figure 13. Sikachi-Alyan. Horse with a scull-like motif. (Photo by A.Laskin)



A project aiming to bring together rock art motifs with materials on their mythological background was supported by the Academic Scientific Program 'Historical Heritage of Eurasia: New Values'. Studying rock art motifs from the Sikachi-Alyan petroglyphs the theme of dead faces or skull appears varied. There are a number of images resembling skulls, but they are diverse in detail and are located as a separate motif as well as in combination with other motifs. One unique piece of rock art is that of a horse having a human face (skull?) attached to its body (Fig. 13) (Okladnikov, 1971, pl. 28). According to a Nanaian myth there lived a human head without a body which always lay on a bed of planks.

Once a steed came running up to it and neighed. The head began to rock and slid on to the horse's back, whereupon the steed neighed and rushed away, bearing the head downstream on the Amur River.

Having undergone various misadventures, the head finally turned into a hero (Devlet and Devlet, 2005). The myth of a skull leading a life independent of its body exists among other peoples of the north. In the lower Lena region there is a story about the skull of a well-known shaman which continued to lead an active life after his death and burial (Okladnikov, 1971, pl. 28). A Chukchi story tells of a girl who found a skull in the tundra and brought it home. Afterwards she used to take it from the bag and they would smile at one another. This caused her relatives to flee from the settlement in horror. The girl began to cry then and the skull left her to search for its body, returning soon afterwards as a handsome young man (Bogoraz, 1939, vol.2, p. 182).

Turning to the book about traditional culture written by aboriginal woman one can find an abstract where she considers similarity between masks images, decoration on local Neolithic ceramics and survived beliefs of Nanai people (Samar, 2003, pp. 120-3).

Sikachi-Alyan rock art is still important not only for visitors as a cultural attraction but also for local traditional culture. Sikachi-Alyan and Oglakhty in Khakassia are the only two open-air rock art areas in Russia included in the UNESCO World Heritage Centre - Tentative Lists. (Devlet, 2015). The rock art is outstanding for its intrinsic character, cultural context and natural surroundings.

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READING THE MESSAGE? THE PROBLEMS WITHIN THE INTERPRETATION OF ROCK "ART" IN THE CANARY ISLANDS

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Introduction: the Imazighen of the Canary Islands

The Imazighen, the indigenous populations of North Africa, have maintained a constant presence since ancient times in modern Tamazgha, a region which encompasses the geographical area between the Mediterranean Sea and the Niger River, a large swathe of territory spanning Morocco, Algeria, Tunisia, Libya, Mali, Niger, Egypt and the Canary Islands (Hachid, 2000; Chafik, 2005). This African region has experienced various forms of colonization which, through contacts established with the indigenous people, have given the area a special character. North Africa has been the focus of interactions with late-comers, from the founding of Carthage in around 814 BC to the arrival of the French and Spanish colonizers in the 20th century. The Amazigh-speaking peoples of ancient times, having already encountered the Phoenicians in Carthage, then came into contact with the original globalizer (Rome), later Byzantium. This was followed, more profoundly, by Islam, with the Muslim presence, starting in around 647 AD, proving the most significant.

By the 17th and 18th centuries, Arabic had come to predominate in Tunisia and Algeria, although in Morocco the majority of the population continued to live within Amazigh-speaking tribal frameworks.

It was only in the 19th century that Europe returned to the Maghreb in full triumph, inaugurating another wave of integration within the world economic system through imperialism (Maddy-Weitzman, 2012).

In the case of the Canary Islands, the Imazighen from North Africa settled in the Canarian Archipelago at the beginnings of the first millennium BC and developed a culture on the islands that can be linked to native North African societies and magical-religious practices associated with the religions of the ancient Amazigh (Farrujia, 2014). This culture began to disappear, from the 15th century onwards, as a consequence of the European conquest and colonization of the Canarian Archipelago. But we are still far from being able to form a final opinion regarding the situation for the Archipelago as a whole, since the extent of research varies widely from island to island. Also, the present-day situation is unpromising since, although research in recent decades has consolidated the Canarian-African relationship, it is clear that there is still no consensus in terms of origins (how did the islands become populated and colonized, how did the first settlers arrive?).

In addition, isolated radiocarbon dates obtained recently are not representative of the entire archipelago. For example, those from the Buenavista site in Lanzarote, which produce a date of C-14 for the 10th century BC, suggest an earlier occupation of Lanzarote (Atoche, 2011), the island which is closest to the African coast. In Tenerife, the most ancient ones produce a date of C-14 for the fifth century BC, and in La Palma, for the third century BC (Farrujia, 2014).

The Canary Islands and the interpretation of the rock art sites

The interpretation of prehistoric artistic data and, therefore, of rock art has been analyzed from different perspectives. The proposal of art for art's sake (Halverson, 1987), art as

magic expression (Breuil, 1952) or the structuralist proposal (Leroi-Gourhan, 1965) were part of an innocent stage in which it was supposed that the systematization of rock art data would enable its meaning within the societies that had produced it to be revealed.¹

Later in time, other proposals were developed, such as environmentalist processual functionalism (Mithen, 1990), Marxist functionalism (Gilman, 1984), shamanic functionalism (Lewis-Williams, 1981) and ideological post-functionalism (Tilley, 1991). All these proposed interpretations have considered themselves more or less holistic (the magic hunter, structuralism or shamanic model), and all have claimed, in an aprioristic way, that their given interpretation was the correct one.

In opposition to this, it is very important to bear in mind that scientific knowledge is constructed in the light of existing knowledge, which is sanctioned by the educated community in accordance with its own means of understanding the world. In this sense, we consider that the most appropriate way of approaching an interpretation of rock art is to adopt a contextual rather than a generalist focus. General explanation, as Fraguas (2006: 33) has pointed out, seems to be more and more impossible and undesirable, because it is within the multiplicity of focuses and cultural solutions that the essence of human groups as sociocultural conglomerates can be found. This means that we should stop looking for global paradigms when interpreting rock art.

In most cases, however, rupestrian manifestations cannot be read directly because the motifs are the result of cultural distillation, which is

the result of the habitus of the group. Surprisingly, in contexts where direct ethnographic data do exist and where it is easier to figure out the motifs, the art never means what is directly shown (Fraguas, 2006: 37). Therefore, if we consider the situation in the Canaries, where ethnographic data progressively disappear as a consequence of the conquest and colonization of the archipelago in the 15th century, it is possible to understand how complex the interpretative study of Canarian rupestrian manifestations becomes.²

In other words, the study of the meaning or function that the engraved panels contained for the society that generated them is certainly a daunting task.

In Saharan Africa, for example, the transition from the Bovidian period to the horse and camel periods can be interpreted functionally (the progressive aridity would have hindered the breeding of bovines), and also from an ideological point of view, in the sense of a symbolic expression of populations which were becoming increasingly excluded and whose aesthetic resources were in decline (Fraguas, 2006: 38-39). In contrast, the prehistory of the Canaries lasted a relatively short time (roughly 20 centuries, from the beginnings of the first millennium BC to the 15th century), which is why applying the stylistic criteria defined for Saharan Africa by authors like Monod (1932), Lhote (1961) or Muzzolini (1995) to the Canaries is obviously complicated.³

The Canary Islands can only be related to the African frame of reference from the horse period onwards, and even so, it should be remembered that the animal that actually defines this

¹ As Teresa Chapa (2000) has pointed out, the term "art" originates from a perspective emanating from the researcher's own substratum and does not reflect a similar concept in the types of society being studied. A theoretical discussion on the use of the concept "art" can be found in the works of Searight (2004) and Fraguas (2006).

² The Canarian ethno-historical sources provide almost no information at all on indigenous rupestrian manifestations. Only Marín de Cubas, a 17th century author, notes that the indigenous Canarian people engraved lines in wood, walls and stones and called these engravings *tara* and *tarja* (Marín, 1986 [1694]: 254).



Fig. 1. Archaeological site of Balos (Gran Canaria). Photo: Tarek Ode.

period (the horse), like the one which defines the following period (the camel), were introduced to the islands after their conquest in the 15th century.

This explains, to a great extent, the virtual non-existence of representations of horses in the Canarian rock engravings, and the total absence of camels, in contrast to the situation in Africa, and it should therefore be borne in mind when comparing Canarian rupestrian manifestations with the horse and camel periods.⁴

The human groups that arrived in the Canaries

³Le Quellec (1998: 142-143) has wisely criticized the use of the concept of "style" since, from the observable reality in Africa, an apparently wide diversity of styles may correspond to a cultural homogeneity that is not evident from a consideration of artistic production alone. Also, the concept of "style" implicitly involves an evolutionist position (ancient style, schematic style...).

⁴The only horses so far documented in Canarian rock art are those at the Aripe I site (Guía de Isora, Tenerife) where two of these animals are represented; or those of the Ravine of Balos (Tirajana, Gran Canaria), where three of them are represented together with their horsemen (Farujia & García, 2007). This archaeological sites are related to the Saharan horsemen cycle. Nevertheless, it should be noted that within the Canarian rock art corpus, other animals have been documented, although their presence on the islands has not been archaeologically verified. Therefore, their representation must be associated with the cultural baggage of the human groups responsible for such engravings. We refer here to the possible zoomorphic engraving of a bovine in La Cañada de los Ovejeros (El Tanque, Tenerife) and the zoomorphic sculpture of a ram in Zonzamas (Teguise, Lanzarote) (Mederos et al., 2003: 170 and 291).



Fig. 2. Podomorphs. Archaeological site of Montaña de Tindaya (Fuerteventura). Photo: Tarek Ode.

from the north of Africa brought their own cultural baggage with them, but had to face environmental and cultural change as a consequence of the colonization of the islands. Such changes definitely had important repercussions for them and therefore for the rock art, given that a colonizing group cannot entirely reproduce the preceding culture, as it only brings with it a small proportion of the cultural, social and technological features of its own culture. Obviously, cultural change is gradual and usually extends over several generations, and also has multiple, rather than exclusively environmental, origins. Once the human groups were settled in the Canary Islands, there are several factors that not only explain the differences between Canarian and African culture,

but also those within the Canarian scenario which is, in fact, defined by the variety of its rupestrian manifestations, with clearly documented differences existing between some islands. The factors that contribute towards explaining this situation are the geographical features (insularity), the apparent isolation which existed between the islands, and for some authors, the theoretical colonization of the islands by different ethnic groups (González, 2004:140-142; Tejera, 2006). It becomes even more complicated due to the lack of any diachronic sequence required to explain the development of the prehistory of each island. The exception to this is the island of La Palma, where the rock art has been classified into several periods with the help of decorated pottery, whose



Fig. 3. Painted cave of Galdar (Gran Canaria). Photo: Tarek Ode.

evolution has been stratigraphically documented.

We could argue that rock art in the Canary Islands had several levels of meanings, depending on the sort of motifs, sites and locations. In the case of Gran Canaria, there are several rock art sites that can be related to the Saharan horsemen cycle of Western Sahara, as in the archaeological site of Balos (Farrujia, 2014), where horses and their riders can be interpreted as a representation of territoriality, the delimitation of the territory occupied by an ethnic group. The footprints documented in several rupestrian sites of the Canarian Archipelago, the so called podomorphs, present clear parallels

with those documented in the north of Africa (Western Sahara, Moroccan Atlas or Tassili N'Ajjer in Algeria). The ones present on the Tindaya Mountain (Fuerteventura), can be compared with similar podomorphs documented in North Africa, for example in the Atlas, where footprints serve to sacralize the spaces. Podomorphs have been related to the sense of taking possession, purification in places of passage, or with places where justice was imparted. Likewise, they have also been related to veneration towards divinities, spirits, or genii, who choose as a place of attachment the top of certain mountains, natural water sources or certain trees, which are consecrated as



Fig. 4. Archaeological site of Roque de María Pía (La Gomera). Photo: Tarek Ode.

sanctuaries where they are worshiped, in asking for rain, fertile land and abundant livestock. Some other rupestrian sites in the Canary Islands were related in the 19th century to the concept of art, due to the aesthetics of their motifs. Among others this is the case in the painted cave of Galdar, Gran Canaria, an archaeological site that has recently been considered as a ceremonial space, because the painted ideograms may relate to a system of measurement and calculation of time, an elaborate lunar and solar calendar that would be based on the combination of series organized from the number 12 and in the alternation of red, white and unpainted spaces. The interpretation of this space as a sacred one is reinforced by the archaeological findings made inside the painted cave at the end of the 19th century: mummies, pottery and other indigenous artefacts.

And of course, there are several rupestrian sites in the Canary Islands whose meaning is still far from being interpreted in the current state of knowledge. This is the case for the rock sites with geometric engraved motifs, of which there are many examples in the isles of Tenerife, Fuerteventura and La Gomera.

The alphabetic inscriptions

Further evidence of the North African origins of the indigenous Canary Island populations can be seen in the rock engravings featuring a script classified as Libyan-Berber that shows clear affinities with scripts recorded in Libya and Algeria. Moreover, from a genetic point of view, the closest counterparts to 55 percent of the descendants of the indigenous populations are found in the Maghreb.⁵

The most frequently asked question is whether



Fig. 5. Archaeological site of Montaña Tenésera (Lanzarote). Photo: Tarek Ode.

we can read these ancient inscriptions of the Canary Islands. For a considerable part of them the answer is yes. The transliteration of the Canary inscriptions has been nearly 100 percent solved by new discoveries in the last decades. In the third century BC two Numidian kingdoms developed in the north of Africa, the Masaesyli and the Massyli. The Libyco-Berber script of this time, which can be called the classic one, was adopted as an official script by these kingdoms, especially used for monuments and gravestones. The considerable influence of the Roman and Punic cultures upon these inscriptions is documented by a series of bilinguals.

There was a second wave of immigration to the

Canary Islands at exactly this period. Amazigh people which were accustomed to the Roman culture and script brought a second type of inscription.

This special type of cursive script, which is typical of the border territories of the Roman empire, can be dated to the time of about Jesus Christ's birth (Pichler, 2007). This is exactly the time of the colonies of Augustus in Morocco (Tingis, Lixus, Zilis, etc: 27-14 BC) and the

⁵Autochthonous (E-M81) and prominent (E-M78 and J-M267) Amazigh Y-chromosome lineages were detected in Canarian indigenous remains, confirming the north-west African origins of their ancestors, thus validating previous mitochondrial DNA results (Fregel et al., 2009)



Fig. 6. Detail of the inscription of Montaña Tenésera (Lanzarote). Photo: José Farruja.

Mauretanian king Juba II (25 BC–AD 23) with his crimson factories at Mogador and probably also in the Canary Islands.

Among the Latino-Canary lines we can find personal names which are well-known from North African inscriptions: ANIBAL = HANIBAL, NUFEL = NUBEL/NUVEL, etc. The preferred destination of this wave of immigration was the eastern islands of Lanzarote and Fuerteventura, where the classic type of script is the only one. In the case of the inscription of Montaña Tenesera (Lanzarote), the toponym or anthroponym Masidya has been documented. It is possible that in the lower-right panel that can be seen in figure 5, both scripts (Lybico-Berber and Latino-Canary) express the same term, related to Venus, but not the same transliteration.

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RECURRENT CHARACTERS IN ROCK ART REVEAL OBJECTIVE MEANING

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Plato's cave remains a good metaphor for perception and meaning. We build 'reality' from projected shadows, including our self-image. To extend the metaphor, human actors cast additional shadows by way of stories, rituals, art and buildings. These cultural sideshows offer keys to Plato's pre-existent archetype, and thus to the objective meaning of the passing parade. Unresolved controversies in anthropology all involve semantic relativity, or lack of a lexicon of cultural behaviour (Endicott and Welsch 2005). Gumperz and Levinson (1996) remain relevant: there has been 'little scientific progress ... in the study of lexical or morpho-syntactic meaning'. Language, thought, culture and art remain 'global cover terms ... differently construed'. Our Babelian paradigm is sustained by 'two perennial strands of thought, universalism vs. relativism'. Relativists apply 'strong' versions of 'three background assumptions' of the supposed sources of meaning: experience; dualism; and cultural differences in media. Only a universal lexicon could resolve the relativity divide. Archetype is the best candidate, but the Platonists did not list them. Jung (1934 onward) described a few broad types from an apparently open-ended list. Do our shadows and pictures follow testable laws? Did our collective 'cave' remain the same, or become larger? This paper expands the method and the evidence for revealing universal objective meaning, and for static perception and expressive capacity, by

expanding the list of recurrent attributes in artworks, and their average frequencies. The implications for semiotics involve several sciences

Science makes art 'relative'

Frazer (1890) revealed universal features in myth and ritual, but did not theorize an alternative to relativism (Ackerman 1987). Freud saw cultural works as 'immortality projects', thus relative to ego. Linguists note that meaning requires abstraction, relative to self-awareness, thus objective meaning may not exist. Jung (1934) followed Plato's archetypes by describing universal meanings in our layered consciousness. However, he concentrated on identity and maturity processes in a kinship context (what esoterica knows as planetary), too limited to apply to detailed art or myth analysis. Some of his detailed work is relevant to cosmic ages (Jung 1951), now revealed as the fifth layer in art, requiring an entire structural context (see Table 1 notes). Levi-Strauss demonstrated universal mechanisms in meaning, but classical structural opposites with transitional values between, or 'traffic lights' (Leach 1970), were too abstract for detailed art analysis.

Behaviourism tried to escape the double relativism of artist's and viewer's meanings (and cultural records such as mythology), by measuring stimuli and results, and assuming causal associations (Wallman 1992). Yet an artwork is a web of responses and stimuli, and associations remain doubly relative. Behaviourism is now a managerial craft, as in behaviour-based safety (BBS) and neuro-linguistic programming (NLP), yet it agrees with depth psychology that stimuli are external and/or internal. Behaviourism ignores layers of consciousness and kinds of behaviour, but to its credit, also ignores cultures, species and socio-economic level. Behaviourists had to differentiate between repertoires of hard-wired vs. innate but 'conditionable'

behaviour (Wallman 1992). Science remains obsessed with cultural differences. There is a lot going on in our contexts and in our cortexes, but 'attention spans are short and mouths are slow', as Pinker (2000) wrote, thus innate thought, or 'mentalese', must be richer in some ways, and simpler in other ways, than language. Gumperz (1996) remains relevant: 'very little is known about substantive semantic or conceptual universals ... meaning is not fully encapsulated in lexicon and grammar, which provide only schematic constraints.'

Media 'ladder' places art low

McLuhan's (1964) slogan, 'the medium is the message', explored how media enable and disable certain meanings. He found relativity also in an assumed media hierarchy: 'the content of a medium is always another medium'. Thus art illustrates events, myth or ritual. Linguists note media context, such as format and program (for example historic vs. decorative art). However format is inherently meaningless. McLuhan noted that media operate by assumptions, yet we also recognize 'structural changes in predisposed content' (such as a light bulb going on or off). Some artists rebelled against predisposed content. Salvador Dali paraded a large shirt, and painted a pig green, apparently to demonstrate objectivity. Like all artists, Dali subconsciously expressed visual structure in his paintings (see www.mindprintart.wordpress.com). McLuhan noted cubism as enforcing 'instant sensory awareness of the whole', rather than separate characters. Viewers could not ask what cubist works mean, demonstrating only that visual media could be artificially stripped of characters and meaning, like a newspaper with a jumble of unrelated words and textures.

Due to sparse agreement on universal meanings (resources, colours, plants, kinship), notably

of physical categories, the search for laws of meaning continued. Yet the apparent triviality of cultural categories should not discourage study. Some oracle priests have confessed that the results of elaborate divinations are sometimes 'small matters' (Temple 2003), yet liver inspection, Delphic rituals and oracular books loomed large in Greek and Roman culture. Cultural relativity requires lexical categories to be incidental, apparently to explain assumed cultural differences. Indexicality sought to anchor meaning in social relationships: between artists, viewers, media, and interpretation motives. The trance school recently explained rock art as 'culturally framed idiosyncrasy' (Lewis-Williams and Pierce 2012), thus doubly relative in the making, and doubly relative in interpretation. Yet they see art as a different medium from rock art. Relativity includes variant scientific meanings of the same terms, sustained in part by academic appropriation. Abstract could mean lifelike figuration (Gombrich 1984), stick figure, schematic, part for whole, approximate shape, regular geometry, mental concept, and so on.

Core vs. context in art

Gumperz had demonstrated by a syllogism that a semiotic resolution hinged on recognizing 'atomic and molecular' levels in innate thought and behaviour. Universal concepts, actions and images are atoms, innate, compulsive, meaningful; while larger molecules allow 'combinations' (a word that also meant power politics in European settler era America), that scramble subconscious logic. In art, recurrent features are universal and thus atomic. The lumpy molecular level equates to styling (that could be faked), enabling groups to appropriate culture. Cognition computing models proposed central processors and modular subsystems, for visual meaning, for pro

positions, and so on, in post-modern logic. Geertz (1973) dismissed scientific approaches to culture as mathematics, seeking instead 'discourse, instruction, amusement, counsel, morality and natural order in behaviour', in an inductive approach. His 'deep description' seeks to magnify, but rise above hermetic (internal) interpretations (and above the study of anthropology). Social order is another term for behavioural law. Linguistics is a good model for both, since it reveals various levels of recurrent features, as structuralists demonstrated by following Jacobsen and Chomsky. Yet interrogating art for conscious, logical, practical, cumulative, contextual, developmental and linguistic meanings, had limited results. Intermedia and intercultural parallels are still almost exclusively studied in the context of diffusion (see the set theme in Expression 14), despite several sustained efforts to indicate their universal philosophical (Plato), conceptual (Frazer 1890), psychological (Jung 1934), structural (Levi-Strauss 1973 and earlier), cosmic (Gombrich 1984), semiotic (Chomsky 1986 and earlier) and layered spatial (Furter 2014) contexts. New evidence offers a subconscious, coherent, inherent, universal, archetypal set of recurrent features, and thus meaning in art, extendable to other media.

More recurrent features in art

Recurrent features such as postures have rarely been studied, and only in limited local contexts (George 2013). Globally recurrent features in art and building sites, including preliterate rock art (Furter, in Expression 9, 10, 13, 14, 15), and preliterate sites such as Gobekli Tepe and Queens Valley tombs (Expression 14 and 15), have been expanded by additional data to about 70 attributes, each expressed by one of the 16 archetypal characters. Each recurrent feature is optional, which may result from chance, but

is predictably frequent, thus subconsciously compulsive. The spatial context of the attributes is complex and layered (Table 1), indicating that an artwork or building site is a subconsciously holistic organism or microcosm; and that the core content of culture is a function of autonomic behaviour, thus largely of nature.

Table 1: **THE TWELVE CORE TYPES** with their eyes (or focal features) on the axial grid in artworks and building sites. In works with about 16 to 20 characters, two each express types 1 /2; 5-20/5-21; 8/9; and 12/13. Types are interspaced by two of the five polar markers (often on limb joints); and by four transitional items (3c, 6c, 10c, 14c). Each optional attribute occurs at a certain average frequency: 1 /2 Taurus; (twisted 48%, tower 22%, bovid 19%, cluster 14%, pit 13%, bird 10%, book 6%). 3c Cista Mystica; (secret 17%, container 13%, woven texture 13%). 3 Aries; (long /bent neck 37%, dragon 14%, sacrifice 13%, school 11%, empress 9%, pool 9%). 4 Pisces; (squatting 25%, rectangular 20%, twins 11%, king 9%, bird 6%, field 6%, furnace). 4p Galactic South Pole; (limb joint /junction 50%, spout 13%). 5 Aquarius 20/21; (assembly 30%, varicoloured 30%, hyperactive 30%, horizontal 30%, priest 15%, water 15%, %, tailcoat head, heart of 12/13, inversion of 12/13). 6c Cista Tail; (attributes not yet isolated). 6 Capricornus; (egress /ingress 48%, sacrifice 13%, small 13%, U-shaped 11%, tree, volute, reptile, amphibian, horned, double-headed). 7 Sagittarius; (unfolding 17%, bag 13%, rope 12%, juvenile 10%, chariot 8%). 7g Galactic Centre: (passage, water 15%). 8/9 Scorpius; (pillar 50%, bent forward 30%, healer 11%, strength 9%, ritual). 10c Cista Lid; (revelation 15%, law enforcement 9%, snake).

10 Libra; (arms V/W-posture 50%, staff 17%, council 17%, guard 15%, market 8%, metallurgy 8%, crown / disc / wheel 10%, school 8%, canine).

11 Virgo; (womb / interior 87%, mother 60%, tomb 13%, library 11%, wheat 6%, law 6%).

11p Galactic Pole: (*limb joint / juncture* 68%).

12/13 Leo; (heart / interior 85%, feline 20%, death 33%, water-work 30%, rounded 26%, bastion 22%, war 17%, weapon 13%, inversion).

14c Cista Head; (prediction 11%, texture 6%).

14 Cancer; (ingress / egress 50%, bird 10%, tree 6%, small canine).

15 Gemini; (rope 30%, order 25%, bag 10%, face 10%, doubled 10%, pool 8%, canine 8%, creation, churn, sceptre, mace, rampant).

15g Galactic Gate; (*passage* 20%, *river* 6%).

pE; Ecliptic pole (*axial centre* 100%, *limb joint* 26%).

pC; Celestial pole (*limb joint* 50%).

pCs; Celestial south pole (*limb joint* 37%).

Astronomical and mythical labels are used for convenience. Typology does not derive from astronomy or myth.

The vertical or horizontal plane of an artwork (or cardinal direction on a site) often confirms the 4p-11p axle, or the pC-pCs axle. The pC or solstice marker is usually on or near type 15, 14, or 12/13, implying spring and the cultural time-frame in Age Pisces, Age Aries, or Age Taurus 1/2. Type 12/13 has its heart (or upper interior) on the grid, and type 11 has her womb (or lower interior) on the grid, thus types 11 and 12/13, or 12/13 and 14 could be combined. Artworks express about 60% of the currently known features of expression, with a sigma variation (bell curve) from 40% to 80%. The analysis score formula (updated in May 2017) is ___/70 attributes, ___/20 axial points, ___/5 polar markers, ___/2 planar or cardinal orientations, ___/3 thematic features; total ___/100, minus ___ extra characters off the axial grid; total ___%. Scores

indicate accuracy of the image and analysis, not artistic value. Some abstract attributes (such as '8/9 healer') require better definition to include variant conventions (such as laying on of hands). Scoring may indicate maturity in cumulative works such as building sites. Works including more than 28 characters usually express two adjacent imprints, which are scored separately.

Table 2. **VISIBLE TYPOLOGICAL ATTRIBUTES** of the sixteen archetypal characters (1 to 15, with two types of 5) on ocular axial grids, in 25 artworks published in Expression:

A. Spain, Armintxe cave, Berriatua, Lekeitio, Ice Age (Expression 14 40): 2 bovid, twisted. 3 equid, long-necked. 5,20 equid, inverted. 5,21 varicoloured (moulting), inverted. 6 horned, ingress, tailcoat head (of 5). 7 unfolding. 9 bent. 10 staff? 11 womb. 12 equid. 13 heart, feline.

B. France, Peche Merle cave, Ice Age (Expression 14 45): 2 bovid. 4 equid. 6 ingress. 7 juvenile. 11 womb. 13 heart. 15 ropes.

C. Turkey, Gobekli Tepe House C pillars (Expression 14 42): 1 cluster (five birds), net, boar, fox. 5 boar, boar, heart (of 13). 7 bag (loincloth), rope (belt). 9 fox. 10 V-marks. 11 niche / womb, niche / womb. 12 bench / heart. 13 bench / heart. 15 canine.

D. Turkey, Gobekli Tepe pillar D43 (Expression 9 22): 3 neck-long. 4 bird. 5,20 heart (of 12), tailcoat head. 5,21 tailcoat-body / heart (of 13). 6 tailcoat-head. 7 bag, genitals. 9 scorpion. 10 snake. 11 womb. 12 heart. 14 bird. 15 rampant up or down?

E. Turkey, Gobekli Tepe village map (Expression 14, 44). 3 ovid, snakes. 12 feline. 13 feline. 14 egress. 15 doubled, doubled (again).

F. Babylonia, seal of Etana (Expression 14 45): 2 twisted. 3 cluster (of 2). 4 squatting. 5 horizontal, active. 7 rope. 10 arm-V, staff. 11 womb. 13 heart, feline. 14 tree, canine. 15 rope, bird.

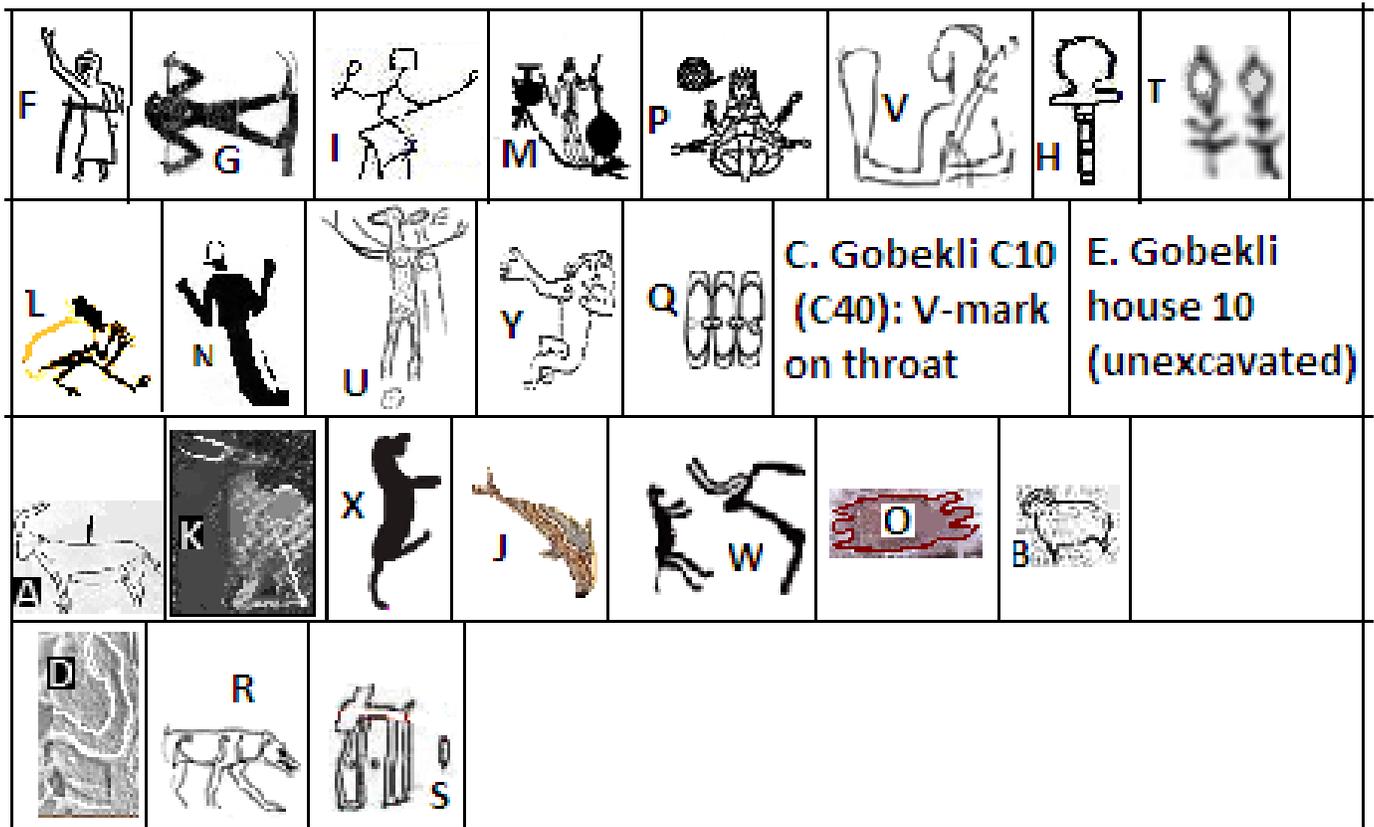


Fig. 1. Type 10 Libra characters from 25 works: F. V-arm, staff. G. Bull foreleg polar staff (under W-arms, staff). I. W-arms, staff. M. Disc bovid (at V-arm, staffs, shield). P. W-arms, staffs. V. V-arms, staffs. H. Ankh 'arms', staff. T. 'Staff people', W-arms. L. 'Bee person' W-arms. N. W-arms, staff in belt.

G. Egypt, Seti I polar decans (Expression 13 46): 2 bird. 4 bird. 5,20 feline (of 12). 6 croc. 8 arms-W, staff, balancing. 11 womb. 12 heart. 13 hippo. 14 croc, egress. 15 rope handler.

H. Hittite 'hieroglyphic' characters (Expression 13 48): 2 swift-person? 3 crayfish. 4 king?, twinned. 5 rectangles. 6 U-shape. 9 healer, pillar, and healer, pillar (ankh person). 10 balance (arms-out). 11 woman. 13 heart?. 14 bird. 15 face, creator, rope (eel), doubled.

I. Brazil, Pedra Pintada oval (Expression 13 51): 1 twisted. 2 bird, twisted. 3 dragon, neck-long.

U. Disc (under W-arms). Y. Smith's W-arms. Q. Discs or shields. C. V-marks. E. (unexcavated). A. Antelope under staff. K. Antelope's V-arm, staff. X. Stallion V-legs. J. V-fins. W. V-horns (over V-arms). O. Turtle's V-fins. B. Ovicaprine (more typical at type 3). D. Snake and canine. R. Canine. S. Disc (with canine?).

5,20 tailcoat-head, horizontal. 5,21 heart (of 13), bauble, varicoloured, horizontal. 6 horned, snake. 7 rope. 10 arms-W, staff. 11 womb. 12 feline. 13 heart, feline. 14 egress. 15 rope, bag.

J. Greece, Phoenician mural, Thera, Santorini (Expression 15 23). 4 squatting, king. 5 hyperactive. 6 ingress. 11 womb (interior). 12 heart. 13 heart, feline. 15 rampant.

K. South Africa, Ndedema Gorge 'magi' (Expression 9 23). 4 squatting. 7 juvenile. 10 arm-V, neck-bent (of 3). 11 womb. 13 heart. 15 staff, rope.

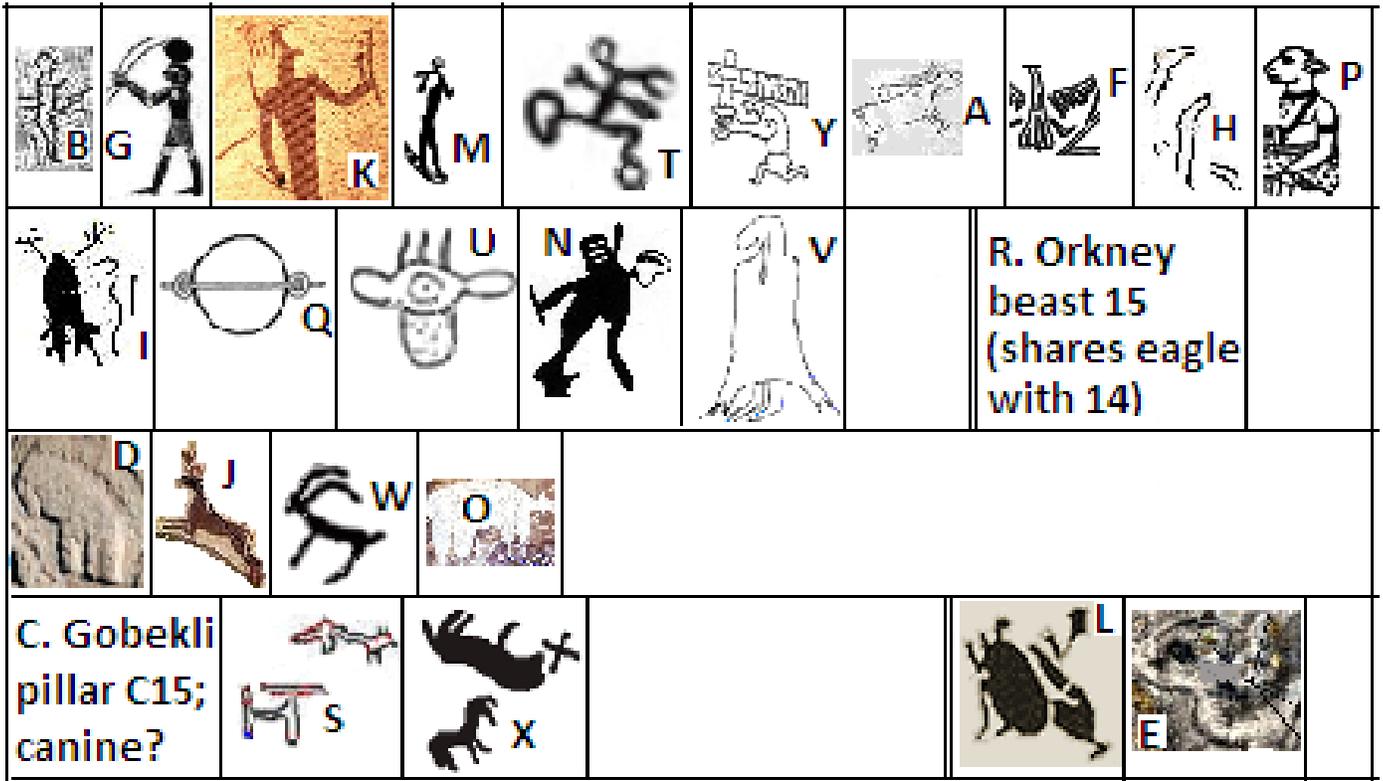


Fig. 2. Type 15 Gemini characters from 25 works: B. Rope man. G. Rope handler. K. Ropes user. M. Rope walker. T. Rope-head. Y. Rope smiter. A. Ropy manes. F. Eagle on rope. H. Birds or snakes at rope. P. Canine pulling churn snake rope. I. Bag and rope churn pair. Q. Bag and rope symbol.

L. South Africa, Maclear bee people (Expression 15 20): 2 twisted. 5 varicoloured, hyperactive. 11 womb. 12 heart. 13 heart. 14 ingress. M. South Africa, Maclear, Linton extract (Expression 14 45): 1 bovid. 2 twisted. 3 neck-long. 5 horizontal, varicoloured. 6 ingress. 7 ropes. 9 bent. 10 disc. 11 womb. 13 heart, feline. 14 egress. 15 rope.

N. South Africa, San or Khoe dancers (Expression 10 16): 2 twisted. 4 squatting. 6 egress. 8 dance, sticks. 9 dance, sticks. 10 arms-V/W. 11 womb. 13 heart. 14 egress. 15 bag, doubled.

O. Australia, 'ecological' group (Expression 15

U. Baggy ropey face. N. Bag itself. V. Bag 'coat person'. R. Eagle? D. Boar /bear rampant downward? J. Antelope rampant. W. Antelope rampant. O. Kangaroo rampant. C. Canine? S. Griffin animal (with canine). X. Stallion rampant, and canine on same ocular axis. L. 'Bee people' pair (damaged). E. Houses pair.

22): 1 twisted. 4 twins. 7 juvenile. 10 arms-W, disc (wheel). 11 womb. 12 heart. 15 rampant?

P. India, Vishnu's churn, Mahabharata (Expression 14 45): 2 twisted. 3 neck-bent. 4 king. 5 active. 6 reptile. 7 bag, unfolding. 10 arms-W, staffs. 11 womb. 13 heart. 14 canine. 15 rope, canine.

Q. Scotland, Pictish symbols (Expression 13 52): 2 twisted (chariot). 5 horizontal. 6 U-shaped. 7 unfolding. 9 snake. 10 arms-up? 11 woman (comb and mirror).

R. Scotland, Pictish beasts (Expression 13 52): 2 bovid. 3 goose, bent-neck. 4 fish. 5 equid. 6 amphibian. 7 buck-bag. 9 snake. 10 wolf. 13 boar.

14 bird. 15 bird?

Eight artworks initially published by other authors in Expression:

S. America, USA 'pictograms' (Expression 13 52): 1 horned, bovid? 2 bovid (ophiotauros), twisted. 3 dragon (Crab-man), neck-tripled. 4 squatting. 5,20 horizontal, varicoloured (feather-man) 5,21 tailcoat head, triple-head (of 6). 6 bird, triangular. 7 rope handler. 10 canine? 11 womb. 12 heart. 14 canine, egress. 15 canine, rope (snake).

T. Argentina, Los Morteros Block 2 (Expression 13 ,,,,,): 1 twisted. 2 bovid? 3 neck-long. 4 rectangle. 5,20 hyperactive. 5,21 hyperactive, tailcoat-head. 6 ingress, tailcoat head (of 5). 8 ritual? 9 bent? 10 arm-V/W, staff. 11 womb. 12 feline?, inverted. 13 heart. 14 bird. 15 rope-man, bag-head, bag-hip.

U. Chile, Atacama Desert Lluta, Arica (Expression 10 20): 2 twisted. 5 heart (of 13). 6 egress, double-headed? 9 bent, stick? 11 womb. 13 heart, feline? 15 rope? bag?

V. Tunisia, Mt Ousselat Ramada buffalo group (Expression 10 17): 4 squatting? 5,20 hyperactive? 6 horned. 8 strength, stick?, ritual? 9 bent. 10 arm-V, staff. 11 womb. 13 heart. 14 ingress. 15 bag-coat.

W. Kazakhstan, Terekty Aulie horses, main half (Expression 10 18): 1 bovid. 3 neck-bent. 5,20 varicoloured. 5,20 B varicoloured, hyperactive. 5,21 varicoloured. 5,21 B varicoloured, hyperactive. 6 egress, double-headed. 11 womb. 13 inverted. 14 ingress. 15 churn.

X. Kazakhstan, Terekty Aulie stallions, main half (Expression 10 19): 6 ingress. 7 juvenile. 11 womb. 13 heart. 14 egress, canine (lynx?). 15 rampant?

Y. Sweden, Siegfried fighting dragons (Expression 14 45): 2 twisted. 3 neck-long, dragon. 5 varicoloured. 6 U-shape. 7 rope. 9 bent. 10 arms-W. 11 womb. 13 heart, equid. 15 smiting, rope.

Table 3. **VISIBLE TYPOLOGICAL ATTRIBUTE FREQUENCIES** in the 25 examples (compared to larger data in brackets):

1 /2; twisted 48% (48%), bovid 24% (19%), cluster 4% (14%), bird 8% (10%).

3; neck long / bent 32% (37%), dragon or griffin 8% (14%), equid 12%.

4; squatting 20% (25%), rectangular 4% (20%), twins 8% (11%), king 8% (9%), bird 8% (6%).

5; varicoloured 40% (30%), hyperactive 32% (30%), horizontal 24% (30%)(half-inversion), tailcoat head 20%, heart 16% (of opposite), equid 8%, inverted 8% (of opposite), feline 4% (of opposite).

6; ingress / egress 36% (48%), U-shaped 12% (11%), tailcoat head 12% (of 5), reptile 12%, horned 12%, double-headed 8%, amphibian 8%.

7; unfolding 16% (17%), rope 24% (12%), bag 12% (13%), juvenile 16% (10%?).

8/9; pillar 8% (50%), bent 28% (30%), healer 8% (11%), ritual 8%, snake 8%, stick 8%.

10; arm/s-V/W 36% (50%), staff 20% (17%), crown / disc / wheel 4% (10%), canine 8%.

11; womb / interior 88% (87%), female eye 8%.

12/13; heart 88% (85%), feline 31% (20%), inverted 8%.

14; egress / ingress 40% (50%), bird 16% (10%), canine 16%, tree 4% (6%).

15; rope 36% (30%), bag 16% (10%), doubled 16% (10%), canine 12% (8%), rampant 12%, creation / order 8% (25%), wand or mace 8%, bird 8%, churn 4%, 15 face 4% (10%).

Sample note: Eight of the 25 works are among the 170 artworks and 45 building sites in the larger data (in brackets), thus 3.7% duplication. Variations are due to the small sample, and percentages intervals of 4%.

Excalibur: meaning from rock art

It is immediately apparent that the small new sample confirms most of the known high-

frequency attributes, but under-represents the rare attributes, partly due to some oversight and some deliberate subtractions to avoid arguable features. The 25 examples are accessible to Expression subscribers to re-test, compare with other works, or test for recurrent attributes not yet isolated (ideally in a random group of 50 or more works). The complexity of the structure of visual expression, and thus perception, rules out the known conscious mechanisms. Meaning is enabled by structure, and is perhaps largely an artefact of structure. Our re-expression of natural structure in culture is thus meaningful, and probably therapeutic. Conscious uses of art as a vehicle for messages, identity, bonding, appropriation and hierarchy are secondary, although equally innate and compulsive. We use media to claim dualist identity (us against them) and hierarchical position (I am more cultured than you). Ethnic and elitist abuses of culture are well documented. Abuses of science (Endicott 2005, on ethics) indicate that academic meaning could function as a cultural medium, or craft, ironic since science should objectively refine meaning and enable access to meaning.

Every complex artwork and building site carries an imprint (*tupos* in Greek) of the eternal (*arche* in Greek) hologram that informs nature, including culture. Recurrents and structured layers quantify the universal innate content of art, setting a subconscious, perceptive, thus natural and objective framework for visual meaning. The core content is quirky and may seem trivial, but is rigorous. The non-structured remainder corresponds to either conscious motivations, partly rationalized by artists and viewers, thus relative; or meaningless styling. Both conscious layers are socially conditionable, and used to claim or contest resources. The same applies to the use of sound in language, being random, with vague universal

links between certain sound patterns and a few meanings (Blasi et al. 2016), perhaps based in autonomic behavior, onomatopoeia and animal mimic. Looking for meaning or message in the conscious and symbolic layer of single artefacts or behaviours is thus limiting, and unscientific for being 'generally true' (Popper 1963); testable only in a conscious, idiosyncratic and local cultural framework, by circular logic (concepts of symbols of concepts).

Structure is meaning

The standard structure of subconscious expression, and thus of perception and meaning, and its interplay with rationalized meanings, styles and uses, could reveal at least as much about behavior, culture, perception and nature, as the clashing conscious approaches have. Archetypal analysis is particularly relevant in the study of preliterate, post-literate and a-literate cultures, or where ethnography, ritual and other records are sparse or unknown, as of Ice Age sites and the Gobekli Tepe civilization. Literate civilizations such as Sumeria are also illuminated by the way they expressed archetype, as in the Epic of Gilgamesh and the temple building rituals of Ur Nanshe and Gudea (Furter 2016, pp. 177-194); and the way they elevated archetypes within conscious reach as symbols, icons, seals, contract stones, myths and legends. The implications of the eternal structure in art and other media for anthropology, archaeology, art history, sociology, psychology and philosophy are still unfolding. Beyond semiotics lies a question for neurological and physical evolution. If culture, or at least art and building sites and myth, is an archetypal or given quantum, not made or altered by eyes, minds, hands, mutation or socio-economic cycles, then evolution expresses an archetypal biophysical set of periodically distinct 'species', maintained by natural selection, and running to stand still.

Transitional species may be as rare and law-bound as the four transitional types.

World system theory may expand from socio-economics to the other human sciences. Scientists and interpreters could consciously know more (as they already say more) about artworks and cultures than informants do. Science could access subconscious meanings free from relative motivations, contexts and symbols, and develop a universal format (Furter 2016, pp. 382-383) and lexicon of interpretation. Structural analyses could also reveal how academic assumptions influence theories, paradigms, data and interpretations.

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THE FEAST OF ANIMALS: ART AND IMAGES ON PREHISTORIC EASTERN AMAZONIAN STILT HOUSES

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Why art?

Art seems to be a universal human cultural phenomenon. Although the concept of art as we understand it per se (contemplation, aesthetics and emotion) is applied to prehistoric societies, it is probable that these sensations were not felt by their creators in prehistory. It is more accepted among archaeologists that art should be understood within a broader semantic significance: artistic manifestations, therefore, would function as symbolism, cosmological message vehicles that served to communicate the social, political and religious values of a particular society, be it to itself, as a form of social cohesion and/or political control strategy, be it to demonstrate these same values to other peoples, as a form of ethnic identity (Sahlins, 1968; Geertz, 1989; Marconi and Presotto, 2009.)

Precolonial Amazon was filled with artistic manifestations. However, although studies on these themes grew with the interest of archaeologists, we cannot yet define the diverse variations of the art types of these societies, either because there is no standardization of concepts yet, or because the variability is not yet fully known, due to the grandeur, complexity and size of the precolonial Amazon (Schaan, 2004; Neves, 2006; Gomes, 2012). In an alternative proposal to the semantics of Western art, Silver (1979) advocates the use of the term indigenous art or ethnoart.

However, many important paths have already been walked. Among the theoretical assumptions about art that found greater development in Amazon is the structuralist school and its variations, mainly through the works of Lévi-Strauss (1967 [1955], 2004 [1964]), in which art is regarded as an expression of communication and sociability. Agency studies defined by Gell (1998) place the artifacts as social and non-static agents, in the sense that they can highlight the activities in which they are involved, such as rituals, whose magic gives a more pronounced property to the objects, what the author called incantation technologies. The Amerindian perspectivism, also under structuralist influence, has been used successfully in the understanding of indigenous art, especially accentuating the shamanistic relationships between men and animals (Viveiros de Castro, 2002).

The stilt houses (*palafitte*) of the eastern Amazon

This text addresses art in the Brazilian precolonial palafittical societies, located temporally between the 8th and the 10th centuries AD. Thus, they no longer existed during the period of European conquest in the 16th century. Although some studies collaborated for a major breakthrough of the discipline in the prehistoric Amazon, such as Müller (1990), who demonstrated that signs present in the decoration of the ceramics and the body of the Asurini served as a communication instrument among the group, or Reichel-Dolmatoff (1976) who showed that the iconography of the Tukano was associated with the visions they had due to the use of hallucinogenic plants, we know about little about the stilt houses.

The stilt houses were lake dwellings constructed with wooden stilts (stumps or trunks of trees) that served as a support for the superior buildings of the villages, thus giving rise to

the prehistoric *palafittes* (Navarro, 2013, 2016). These traces are located in rivers and lakes and are seen only during the drought period, which corresponds to the months of October to December of each year. In the other months, the stilts are submerged. In some of these archaeological sites, such as Coqueiro, the stilts can reach the number of over 3,000.

This type of archaeological site was described in isolated cases in South America, as in the reports of Amerigo Vespucci in 1499 on communities that lived in stilt houses on the Venezuelan coast. They also appear in the reports of the mouth of the Amazon and the Upper Amazon, near Peru (Porro, 1992). However, in the current stage of research, the prehistoric *palafittes* of Maranhão are the only ones preserved in the entire American continent. Palafittical villages were also common in the prehistory of Europe during the Neolithic age, such as in Lake Constance in Switzerland.

The geographical area where the stilt houses are located is called Baixada Maranhense, in the Brazilian state of Maranhão, located on the Amazonian eastern coast. This is a region which comprises an area of approximately 20,000 km² within the legal Amazon, an area with more than 500,000 inhabitants (IBGE census 2006).

It is a very poor territory, with the lowest HDI indices not only in the state of Maranhão, but in all of Brazil, whose population lives from the subsistence of traditional agriculture, fishing, the raising of small animals and vegetable extraction. The main cities in this area are Pernalva, Pinheiro, Viana and Santa Helena.

We can affirm, at a hypothetical level that in principle the plentifulness of food in these lakes could create a favorable situation for the sedentary housing of the human groups that occupied the region, since there is a rich variety of fish. Moreover, it is probable that these dwellings also had defensive purposes.

It must also be emphasized that the aquatic environment preserved the artifacts, since the oxygen-free environment even allowed the ink on the artifacts to remain visible. The straw of the cottages and utensils made from the wood, like oars and bordunas (hardwood indigenous weapon), also resisted the decomposition process over time.

The most striking characteristics of the stilt houses' artifacts are the small objects that probably had the function of serving foods or liquids in rituals, such as plates and bowls.

These objects were made of good-quality clay at a very high temperature, giving rise to well-burnt and high-quality vessels. Small vessels, with appliqués or very complex painted decoration and with geometric motifs made with precision, indicate too that these ceramics were possibly used in rituals.

The feast of animals in ceramics

These ceramic materials were an information channel of the social/ideological structure among the members of the society when the vessels, as regards to their form and decoration, reflect mythical themes and/or are used in rituals (Arnold, 1985). Archaeologists agree that the ceramics reflect the culture of a society and that the main social changes affect the production and types of vessels (Grieder, 1975). Therefore, the ceramics are vehicles of expression of ideological content, and the most obvious evidence of this is that they were painted, decorated, incised, modeled, with plastic decoration, aiming to reflect mythical or ideological themes (Arnold, 1985). In this sense, the interpretations of art are cultural and therefore adhere to rigid systems of social conviviality. In prehistory, its main material vehicles are mobiliary art, such as decorated figurines and ceramics and feather art; and graphic art, with parietal art and rock graphics



Figure 1. Apparent stilts at the time of the drought. There are thousands of stilts. Coqueiro

and body painting, the latter very important, because in general it demonstrates the status of the individual, like chiefs and other leaders who had high social positions (Ember et al., 2004). Indigenous art is therefore the result of the identity relationship and social conviviality between the indigenous groups (Ribeiro, 1983; Vidal, 1992; Vethem, 1992; Prous, 2005; Lagrou, 2007).

Animal forms recur in the art of the stilt houses, the most persistent being birds, especially the owl; mammals, mainly the monkey and the

archaeological site. Olinda Nova do Maranhão city. Photography by Alexandre Navarro.

jaguar; amphibians, especially frogs and reptiles, mainly snakes. These animals form the appliqués and figurines, and possibly are associated with indigenous myths that were described by the missionary chroniclers of the 16th and 17th centuries and by anthropologists among indigenous Amazonian communities from the 19th century onwards (Gomes, 2001).

The ethnographic analogy shows that myths associating the snake with the creation, such as the canoe-snake, mother of the fish, for example, recur in Amazonian cosmologies



Figure 2. The State of Maranhão in Brazil. The stilts houses are located in the eastern Amazonian near the coast.

(Reichel-Dolmatoff, 1971). However, the king vulture is mentioned in Amazonian ethnography as a bird belonging to the realm of the dead (Gomes, 2012).

The ceramic figurines indicate the presence of ritual. They are characterized by the representation of animals, especially the owl, the monkey, the turtle and the frog. Some of them are anthropozoomorphs, the most common being the zoomorphs. Most of them have a sculptural form: the legs are open in the shape of a half-moon and some of them possess feminine genitalia on display (Roosevelt, 1988; Navarro, 2016). A figurine in particular, in the form of an owl, is a rattle and features a small handle that possibly was used to hang it up. Written documentation of the 17th century associates these rattles with the *maracas*, a rattle that served as communication between the living and the dead (Kok, 1998).

The ceramic appliquéés are another important characteristic of the indigenous art of the stilt houses. Sometimes they represent geometrical figures, mainly hand-shaped, at times animals such as amphibians, fish, mammals and birds, similar to those represented among the Tapajó and Konduri peoples (Gomes, 2001; Guapindaia, 2008). These animals were represented in a naturalistic style, thus preserving identifiable traces of the species. Some examples are the squirrel monkey of the species *Saimiri Collinsi*, in which we can identify in one piece its furry ears, and in another the torn mouth typical of these primates (Silva Júnior, J. de S. et al., 2014; personal communication).

In turn, the frogs are associated with fertility, which is most likely due to the aquatic environment in which these societies lived. Themes associated with frogs are also common in the Caribbean and Mesoamerica (Coggins, 1992;

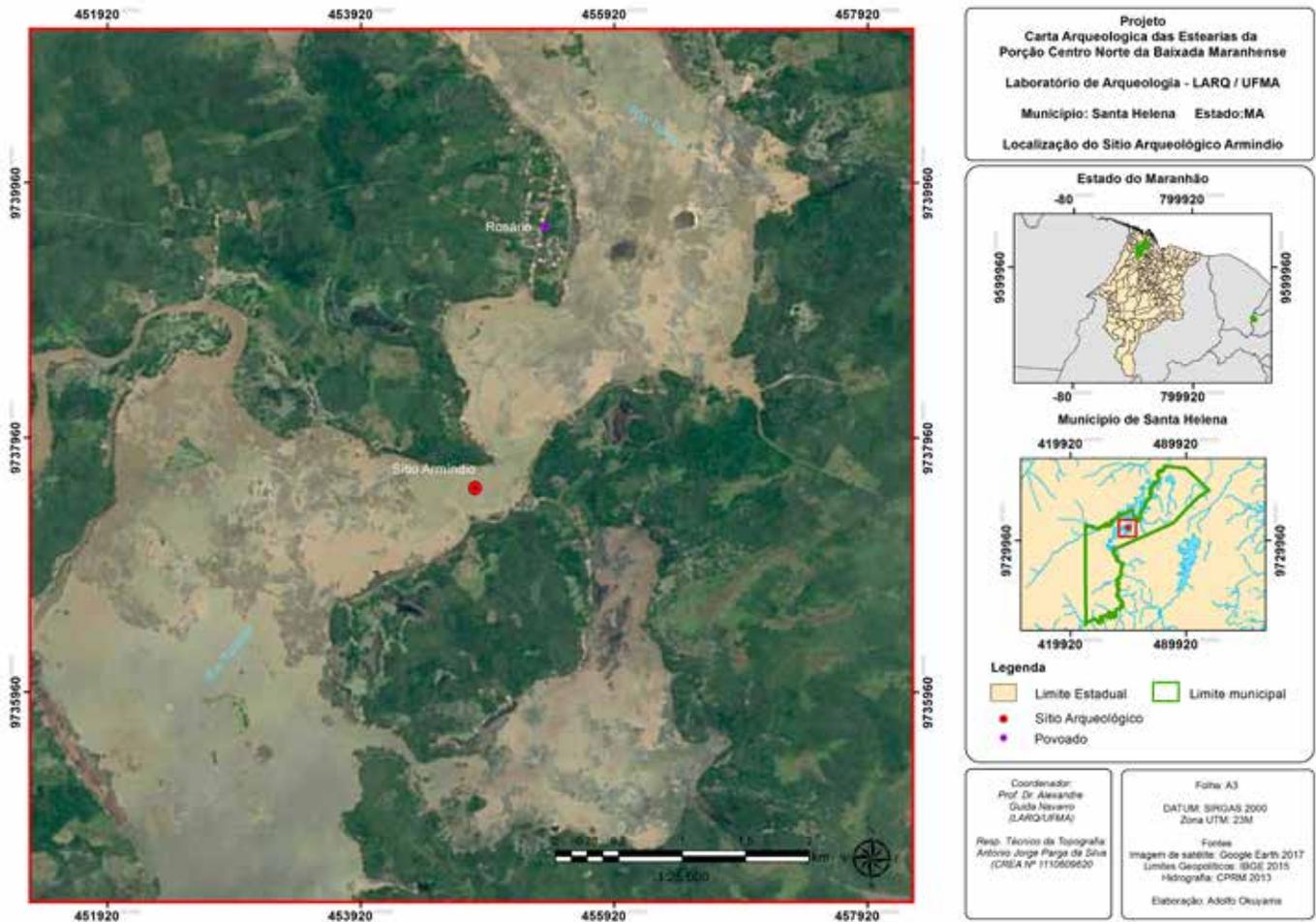


Figure 3. Armindio archaeological site is located inside the Turiacu river at Santa Helena city.

Boomert, 2007).

The iconography is seen through geometric lines or traces that delimit patterns within the stylistic composition of the vases: they are Greek patterns, zigzags or spirals in the interior of the pieces. In general, there are two opposite iconographic fields divided by one or two lines across the piece. Most of the time the motifs of these two fields differ: for example, if there are square motifs in one iconographic field, there may be circular elements in the opposite one. The predominant colors are red and black, being painted on white or cream *engobe*. Some of the motifs resemble the Tupi

iconography, as demonstrated by Prous (2005), associating them with the anthropophagic ritual, such as the representation of the intestine and the brain. However, the ceramic shapes at the stilt houses, as well as their technologies, such as anti-plastics and quality of burning, are very distinct from those of the Tupi, and the material in the stilt houses shows better technological quality and production control. The most fruitful theoretical and methodological discussion that applies to the study of the archaeological ceramics of the stilt houses is the perspective deriving from structuralism. The observation of the iconographic



Figure 4. Rattler-figurine in the form of an owl, a maraca whose sound communicated the living with the dead. Dimensions 13 centimeters in height Armindio site Photography by Áurea Costa.

motifs, with their repetitions and patterns, in addition to the ethnographic bibliographical revision of the Amazon, show that the geometric motifs of the vessels are in general depictions of the skin of animals, especially those at the top of the food chain, such as snakes and owls. Two motifs in particular, one type of greek and two other semicircular pincers that unite, are clearly snake skins. In the first case, they represent the species *Lachesis muta* or *sururucu*, and the ceramics in general are painted red, the characteristic color of this snake; in the second, the *Eunectes murinus*, or *sucuri*, whose support is painted black, which corresponds to the stains of this snake.

Conclusion

As far as anthropology is concerned, it is important to say that the precolonial Amazon peoples were well adapted to the environment and produced a rich art of strong social cohesion. In this sense, two types of artifact of mobiliary art and one of graphic art stand out in the conception of the indigenous art of the stilt houses: the mobiliary art, which corresponds to the figurines, generally representing animals (zoomorphs) and sometimes human beings mixed with animals and the appliquéés showing different animal shapes, especially mammals, amphibians and birds, thus revealing the perspective associated with the cosmologies that involve mythical concepts. The black and red paintings on white and cream *engobe* of the ceramic vessels stand out in the graphic art; they have geometric shapes that make two distinct geometric fields, forming motifs resembling the skins of predatory animals.

The feast of animals, the title of this article, is suggestive. It is very probable that the representation of animals in appliquéés and painting of stilt house ceramics are close to the creation

myths among the peoples who inhabited the Amazon in the precolonial period. Snakes, in general, are associated with the origin of human life, and their principal dwelling in Amazon is the rivers. And the Amazonian rivers have many meanders reminiscent of the undulating movement of snakes. Serpents are also associated with fertility and in an aquatic environment where stilts were found, these myths could be very important as social cohesion (Reichel-Dolmatoff, 1971; Roe, 1982).

Frogs are another important animal in the Amazon. These amphibians were associated with fertility and they produce hallucinogenic substances that allowed the shaman to make his spiritual journeys. Many vessels have frog-shaped appliquéés and it is possible that they served for the consumption of drinks by the Indians. The small size of these vessels indicates their use for the consumption of liquids. Scholars have argued that the abstract drawings we see in ceramic paintings and appliquéés may originate from the view of the phosphenes afforded by hallucination (Knoll, 1963; Schaan, 2007).



Figure 5. Small vessel with turtle ornament, possibly associated with rituals. Dimensions 8 centimeters in circumference. Armindio archaeological site. Photography by Áurea Costa.



Figure 6. Figurine in the shape of squirrel monkey. Dimensions 15 centimeters in circumference and 5 centimeters in height.

On the other hand, the representation of mammals at the top of the food chain, such as jaguars and monkeys, may be associated with Amerindian perspective (Viveiros de Castro, 2002). It is possible that Indians represented animals with aggressive characteristics in the ceramic appliqués as a metaphor of power. It may be that these vessels might have belonged to the chiefs. Sometimes it is not the animal itself represented, but the paintings of the ceramics which allude to the skin of these animals. Finally, it has to be considered that the contemporary stilt houses, most of them dating from 770 to 1000 AD, and the long range of their artistic ideologies in a very extensive area, indicate, on the one hand the cultural homogeneity of these societies, and, on the other, make us think, even if hypothetically, of chiefdoms of a large regional scale between the 8th and 10th centuries AD, whose existence coincides with the pinnacle of precolonial Amazonian societies.

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Figure 7. Vessel with serpents geometrics motifs. Dimensions 25 centimeters in circumference and 20 centimeters in height. Armindio archaeological site. Photography by Áurea Costa.

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Figure 8. The skin of the serpent *surucucu* and the geometric motifs represented in previous ceramic pot of the Stilt Houses.

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SYMBOLISM IN NAVAJO ROCK ART

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Abstract

Navajo rock art in the Chaco canyon, US, is a unique place to provide precious information in the field of rock art. Located in the Chaco Culture National Historical Park (CC NHP), in the arid and sparsely populated Four Corners region, we find a place that is hosting the densest and most exceptional concentration of pueblos in the American southwest.

In this paper the question of symbolism is approached and how we can better understand the meaning of the concept. As we will deal with symbolism, that may be confusing at some level, because this kind of term is adapted by arbitrary convention, we will enter into some contextualized references. Revisiting these concepts will develop mainly into three terms that have not been very much used in archaeological discussion: memetic traditions, referential symbolism, and fully elaborated culture.

Keywords: rock art, Navajo, symbolism

Introduction

Chaco Navajo rock art is an interesting and worthwhile area of study. It is a living culture, and therefore gives access to knowledge about the Navajo at a certain level of understanding. As we can see, vestiges of the Navajo persist and continue to expand and renew themselves. The connection to the Navajo culture and value persists and what we may call tribal and personal ownership continue to be involved in the Navajo people of the present day.

In April-May 2006, Jane Kolber, Donna Yoder and Thomas Windes led the Chaco Area Inventory of Resources on Navajo lands (CAIRN) outside the boundaries of the CC NHP to document evidence of prior occupation that had been previously neglected. This survey was conducted under the auspices of the Navajo Nation Chaco Protection Sites Program. In this project both the traditional archeology and the rock art were recorded simultaneously, a rare example of a site being studied at the same time instead of fractionally over a long period of time. Kolber and Yoder recorded all the rock art, while Windes and his team determined the limits of each site, assigned site field numbers, and mapped and recorded each site. The majority of Navajo rock art sites in Chaco Canyon has been seen and studied and many questions have been answered. In the field more than 138 rock art sites were recorded, including Navajo images. We also dwell on some insights about the symbolism and style of their produced art, and how we can approach an understanding of these terms in this contextual framework.

Navajo rock art at Chaco Canyon

In a land that is most parched, the primitive Navajo people set their homes and lived within their beliefs and traditions. Although there are no precise data for the arrival of the Navajo people in Chaco, there are the traces that are left in rock art. Concrete evidence of the Navajo living in the Four Corners area has been found dating to the late 1500s. Researchers think that probably the Navajo entered the canyon from the north and began to create rock art images soon afterward. They probably began rock art images by making the ceremonial holy figures which they ceased to make after about 1750. Traditionally, like other Apacheans, the



Fig. 1 - Image of canyon in Four Corners (photograph by Jane Kolber)

Navajo people were semi-nomadic from the 16th through the 20th centuries. Their extended kinship groups had seasonal dwelling areas to accommodate livestock, agriculture and other items of their practices.

The term Navajo pueblitos refers to a class of archaeological sites that are found in the northwestern corner of the American state of New Mexico. The sites generally consist of relatively small stone and timber structures, generally found in defensible locations along mesa rims

and on isolated outcrops and boulders. The structures themselves can consist of from one to six rooms, and take the form of multi-storied towers, cliff dwellings and fort-like enclosures.

Symbolism in rock art

If we use the word symbolism I think it will better to try to clarify what it means, as several assumptions may need to be taken into account. There is, I suppose, a little consensus on its definition. By symbolism, we mean



Fig. 2 Pueblito 2 in Four Corners (photograph by Jane Kolber)

something whose meaning is determined by arbitrary convention. It stands for the focal point shown by Pierce's (Pierce 1932/1960) definition of a symbol as a referential sign. However, as Byers (1994) points out, in culture symbolism goes beyond reference to fulfill other functions. The key characteristic of all symbolism is that its meaning is assigned by arbitrary, socially constructed convention.

In order to deepen the level of analysis, we now explain the definition of memetics, which is usually used by a major branch of sociology that analyzes human culture. The term meme was coined (Dawkins 1976: 192) to refer to particles of information or behavior analogous to genes. When an individual learns a meme from another individual, it is reproduced and transmitted. It is a kind of Darwinian analysis of cultural evolution through natural selection, at the level of memes rather than genes. This model is grounded in observation of both human and non-human behavior and learning. If we compare this to a symbol, to a word for

example, the creation of such a symbol is a social not a private act. By the same token, the benefits of a symbol depend on its acceptance by everyone involved. Finally, the social nature of symbols means that an individual who fails to adopt important symbols will be excluded from the social system. Adopting or refusing to adopt a symbol is a social not a private act. Another important concept is referential symbolism, for example, at its simplest, language consists of a set of conventions for communicating meaning. These conventions are both phonological and syntactical. We may be clear that in contemporary society, language goes beyond reference, but reference is the heart, the *sine qua non* of language, and symbolic reference makes human language a much more powerful and flexible tool for communication than any system found in other species.

The notion of culture discussed here is one created by social convention, rather than by individuals. It implies a clear distinction from a definition based on memetic traditions.

It seems that human culture goes beyond reference, as Byers (1994) made quite clear, and almost nothing we do can be separated from its place in the symbolic system, because that system provides rules for defining what is or is not appropriate. Almost any action, large or small, is judged not only in terms of its practical consequences, but also in terms of its symbolic meaning or value within the cultural system.

Navajo symbols

The Spaniards introduced the horse into New Mexico probably between 1600 and 1638. After acquiring horses, the Navajo began to draw horses in the cliffs and boulders and have continued to do so, up to the present or as long as they had access to a particular rock surface. Horses are still very special and loving belongings for them, and as a result they left lots of images of them, and they been very well represented in the general framework of Navajo rock art.

The Navajo mainly created representational rock art elements. There are animals others than horses, transportation vehicles and other objects. Many of the themes are presented in a kind of scenic interrelationship. Less than a third of the elements are non-representational and these include geometric and abstract forms.

Below we find another example of a representational depiction. This is the case of the Sand Rock, that contains impressive symbols from Navajo mythology. As the Navajo people possess a very spiritual culture, related to nature and shamanic healing, their practices are obviously shown in their rock art, sometimes in a very direct way.

The name Sand Rock may be related to a spiritual healing ceremony that is part of Navajo mythology. It is said the first Enemy Way

ceremony was performed for Changing Woman's twin sons (Monster Slayer and Born-for-the-Water) after slaying the Giants (*Yé'ii*) and restoring balance to the world and to people. The patient identifies with Monster Slayer through the chants, prayers, sand-paintings, herbal medicine and dance. All their paintings are in sheltered places, which could indicate that perhaps unprotected paintings were destroyed by natural erosion. There is little rock art next to the prehistoric ruins, possibly because of the taboo against visiting places where burials were found, and this being a way of preserving that tradition. The Navajo believe that certain ailments can be caused by violating taboos. Contact with lightning-struck objects, exposure to taboo animals such as snakes and contact with the dead create the need for healing afterward. The Navajo nation is a very spiritual community and their practice in this matter is about restoring balance and harmony to a person's life, to produce health. Magic-religious ceremonies are used to heal illnesses, strengthen weakness, and give vitality to the patient. Ceremonies restore *HózhO'*, or beauty, harmony, balance and health. The rock art they produced is most certainly an art of magic-religious nature (Coimbra 2008; Lewis-Williams, 2002).

Furthermore, we know that the traditional Navajo home is the *hogan*, built as a shelter either for a man or for a woman. Male *hogans* are square or conical with a distinct rectangular entrance, while a female *hogan* is an eight-sided house. Both are made of wood and covered in mud, with the door always facing east to welcome the sun each morning. The Navajo construct *hogans* out of poles and brush covered with earth. They have several types of hogans for lodging and ceremonial use. Today they are rarely used as dwellings, but they are used especially



Fig. 3 Navajo animals carving (photograph by Jane Kolber).



Fig. 4 The Sand Rock, with connections to ceremonial magic (photograph by Jane Kolber).

for ceremonial purposes that they still perform.

As to the question of symbolism, it is useful to understand it into all encompassing cultural system. Since cultural symbolism may be explained as adaptive, then it follows that simple memetic traditions could be responsible for geographical and temporal variation in the pattern of determined form.

Conclusion

Navajo rock art's connections and values continue to be placed in the remains from the past, from the most recent inhabitants back to the prehistoric Chacoans.

Until contact with Pueblos and the Spanish, the Navajo were largely hunters and gatherers. They adopted crop farming techniques from the Pueblos. When the Spanish arrived, the Navajo began herding sheep and goats as a main source of trade and food, with meat becoming an essential component of the Navajo diet. Sheep also became a form of currency and a status symbol among the Navajo. based on the overall quantity of herds a family maintained. The practice of spinning and weaving wool into blankets and clothing became common and eventually developed into a form of highly valued artistic expression, as well as silver smithing, also an important art form among them. The origin of spiritual healing ceremonies is part of Navajo mythology, preserving their cultural particularities. Navajo rock art presents some special features. They mainly created representational rock art. They probably began rock art images with the ceremonial holy figures and before horses became regular possessions. So there are horses and other animals, transportation vehicles and other objects. Many of the themes are presented in a kind of scenic interrelationship. Less than a third of the elements are non-representational and include geometric and abstract forms. Much of their rock art is probably of magic-religious origin (Lewis-Williams 2002) and is strongly connected with their tradition and beliefs.

Finally, we conclude that whatever answer we give must be subjective, and this means that any inferences about symbolism and symbolic culture must be likewise subjective. However, since the evidence presents less ambiguous grounds for inferring the presence of culture (artistic, mythological, ritual, etc), it seems that there is a useful tool to proceed.

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SHADOWS OF STONES, SHADOWS OF ANCESTORS - STUDIES UNVEILING THE PLANNED SEXUAL DRAMA OF THE HIEROS GAMOS, THE SACRED MARRIAGE

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Abstract

The importance of the action and meaning of shadows cast by standing stones at recumbent stone circles of the Irish and British Neolithic and Bronze Age is demonstrated. The visual drama of events planned for the first minutes after sunrise is crucial, scenes of action that can be watched today and which the author has witnessed at several monuments. The Irish stone circle at Drombeg is an appropriate archetype for study, for which a necessary new survey was carried out. An archaeological explanation for the core symbolism planned into the Drombeg monument is a principal purpose of this article. It is shown how the stones were intelligently positioned such that shadows created at sunrise between specially selected pairs of shaped stones demonstrate their intended functions.

The primary discovery is that, by embracing knowledge of the symbolic intentions for the shaped stones, the shadow-casting stone upon which the rising sun shines is always figuratively masculine while the shadow-receptive stone is always female-symbolic. This paper aims to resolve the beliefs behind the planning of such watchable occurrences that can still be witnessed today. The answers are based on recognizing a prehistoric belief in the

much-loved worldview known as the *Hieros Gamos* (ΙΕΡΟΣ ΓΑΜΟΣ) or the sacred marriage between the divinities of sky and earth. The drama imitates the act of sexual union that the community could witness for themselves. Calendrical features were built in as well, by which eight dates of the year, likely festival dates each separated by 45–46 days from the next, can be read back from observations of shadow union. These dates, starting with the winter solstice, are the traditional dates as known historically for the farming communities of Europe and beyond. Knowing this enabled the spiritual leaders at the stone circle to predict when every agricultural festival would next be due.

Introduction: what were stone circles built and used for?

Unresolved until now in the study of the stone circles of the Neolithic and Early Bronze Age is what their deepest purpose was, that is to say, beyond the reasonable inference that a circle, whether of stone or timber or circular ditch-and-bank construction (a henge), delineates sacred space.

Since those remote times between 3,500 and 5,500 years ago, there has been no oral transmission of information and little by way of helpful legend and folklore. Fortunately, among surviving undamaged stone circles there are several for which useful clues as to meaning and use can be deduced by recognizing and explaining the inbuilt symbolism.

In that non-literate age the people could express themselves using symbolism built into their monument designs. This was achieved by careful stone selection and positioning. In these circles the stones are of different shapes, of different heights and different spacing, positioned accurately in relation to specific sunrises or sunsets.



Figure 1. Drombeg stone circle, Ireland. At the right lies the 2.05-m long recumbent stone with the carved vulva. Extreme left is the straight-sided Stone 2 (a major shadow-casting male stone). Next to it but nearer to the camera are the

Drombeg is typical of the Irish Cork and Kerry stone circles, many of which have an axially positioned recumbent stone (Figure 1).

In terms of general typology and approximate dating as known for other stone circles in the British Isles, the Drombeg settings are typical of the Neolithic and Early Bronze Age.

Significant planned features are recognized for the first time, since when additional fieldwork and survey have demonstrated applicability to other stone circles in Ireland, Scotland and England including those at Stonehenge and Ave-

bury (Meaden 2016 and work in progress). shadow-casting portal stones: Stone 1 (with its potential human form) and Stone 17 (with its carved phallus). Closest to the camera are the short and narrow phallic pillar stone (Stone 15) and adjacent female lozenge stone (Stone 14).

Drombeg stone circle was ideal for reconstructive analysis because the crucial perimeter stones are still present and their positions accurately known by a new survey. The 17 stones stand in a circle 9 m in diameter; 15 are the original stones. (The shortest stones, numbered 7 and 13, are unimportant dummy insertions introduced by the excavator (Fahy 1959) at two empty stone holes).

The 6-tonne recumbent stone, 2.05 m long with flat top 1.1 m above ground level (Figure 1),

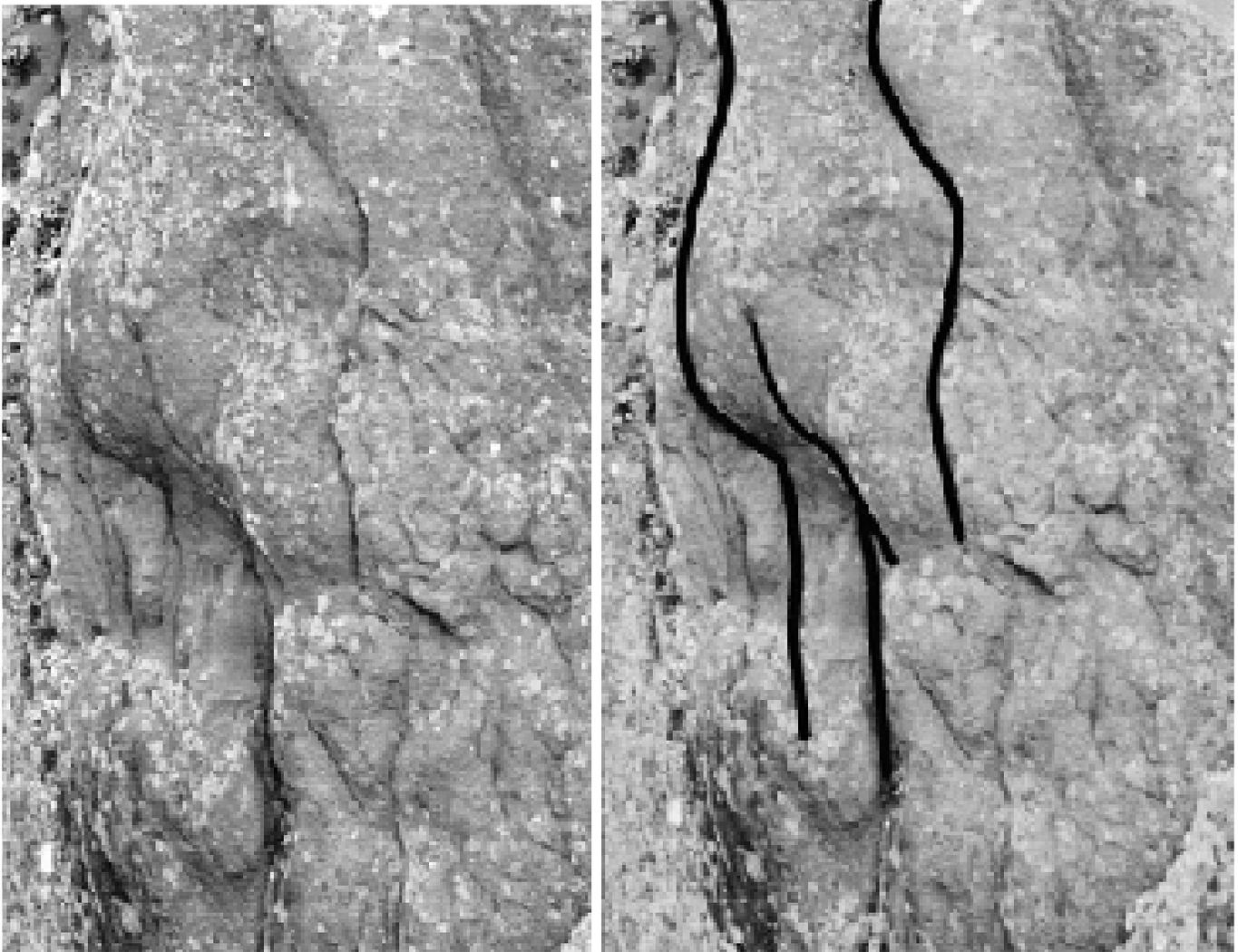


Figure 2. Anthropomorphic features on the portal Stone 1 where there is a natural is impressive. The axis of the monument bisects the recumbent stone and the gap between the pair of tall portal stones standing opposite, along a line directed to a point on the hillside where the midwinter sun sets. What the present author found was that the planners and builders had carefully selected and intelligently positioned perimeter stones such that a watchable sexual union by shadow at sunrise between particular pairs would result. In terms of constructive analysis and discussion it is

geological feature, probably the reason that the stone was selected and positioned thus.

important to note that the two sexual motifs, male and female, were carved on megaliths that themselves bear the shape or outline characteristics indicative of the same gender (Meaden 2017).

Notes regarding a Neolithic calendar

If our Roman calendar date of 21 December is assigned the day number DAY 1, then 21 June is DAY 183 and 20 December is DAY 365. The quarter dates, approximating to the equi-



Figure 3. This explains the shadow phenomenon for the May Beltane and August Lughnasadh occasions. The shadow of male-symbolic Stone 2 was for several minutes after sunrise noxes, become DAY 92 (22 March) and DAY 274 (20 September). Last, the four intermediate cross-quarter dates of DAYS 47, 137, 229 and 320 are respectively 5 February, 6 May, 6 August and 5 November.

This reconstruction of a realistic Neolithic calendar is fully explained in detail by Meaden (2016: 20-27, Chapter 2). The recording of and subsequent ability to predict significant dates are easily achievable with the limited arithmetical knowledge of the era by the use of a tally stick. This is achieved by cutting notches equivalent to up to 45-46 days at a time.

engulfing the vulva on the horizontal flat surface of the recumbent stone. In this photograph the shadow after initial union with the open vulva has moved aside allowing the sun to arrive.

The actual counting of numbers is unnecessary. Examples of tally stick usage have been provided by this author who notched such a stick. When progressing from DAY 1 (the winter solstice) the subsequent optimum dates are separated by 45-46 days.

They appear to correspond to the eight traditional dates well loved by agricultural communities and known to literature throughout historical times. Seeing that a calendar of dates can be read back from the stones by watching for inter-stone pairing by shadow, it is feasible that festivals were celebrated on these

shadow-action dates in Neolithic times.

The summer six months at Drombeg stone circle

Midsummer. At midsummer sunrise crucial for Drombeg is the position of a male-type perimeter stone (Stone 1, tall, narrow, bearing an anthropomorphic image, Figure 2) such that its phallic shadow at sunrise covers a vulvar engraving on the flat top of the recumbent megalith (Stone 9) diametrically opposite, 9 m away. That the union by shadow at midsummer is deliberate follows logically. The fact that the shadow union is cast by a male stone implies that the shadow, too, would have been viewed as masculine by the planners. During the first minutes after midsummer sunrise while spectators watched – and today do still watch, as the author has done – the shadow steadily moves aside and sunshine eventually arrives at the female symbol which is a well-carved vulva. (Shee Twohig 1980: 123 noted that Fahy 1959: 15 suggested it is ‘axe-like’.) In fact, the portal stone (Stone 1) that casts this shadow bears a geological feature suggesting anthropomorphism (Figure 2). The builders, having noticed that the stone had this feature, deliberately positioned it as a portal stone to be the key summer sunrise indicator in an arguably male-female partnership.

The companion portal stone, also tall and narrow (Stone 17), bears an ithyphallic image that strongly declares its masculinity. This feature is introduced below (see also Meaden (2017: 52–54) in a previous issue of *Expression*).

The two cross-quarter dates in May and August.

The shadow casting on to the recumbent stone (this time by the tall narrow Stone 2) is much the same for 45 days previous to midsummer’s day at sunrise at Beltane (Day 137 in early

May), and 45 days later on Day 229 at Lughnadsadh (early August).

In the photograph, Figure 3, the male shadow is shown moving away after spending several minutes in union with the vulva carved on the recumbent stone.

The quasi-equinoxes relative to the recumbent stone

At the two quarter dates, DAY 92 (22 March) and DAY 274 (20 September), shadow casting on the recumbent stone again takes place. These are the nominal equinoxes, or quasi-equinoxes, and would be more satisfactorily named the mid-spring and mid-autumn dates because that is what they really are, midway between the midwinter solstice and midsummer solstice.

For these occasions the alignment of the rising sun with the main carved feature on the recumbent stone through cast shadows is very instructive.

Stones 4 and 5 are carefully positioned such that the rising sun rises within the notch created between them when viewed from the vulvar engraving on the recumbent stone (Figures 4, 5, and 6). The shadow from the tall narrow straight-sided perimeter Stone 5 is the one that couples with the female carving before the light of the sun arrives. These facts are beautiful to behold (Figure 6). Anyone can watch. Everyone can verify.

The winter six months at Drombeg stone circle

Another fine megalith is lozenge-shaped (Stone 14, see Figure 1). Next to it, a pillar stone (Stone 15) was positioned offset and inwards from the circle’s circumference. It was sufficiently offline that at the quasi-equinoctial sunrises the light of the sun passes through an arranged gap between the next two perimeter stones which are Stones 16 and 17.



Figure 4. This photograph of Stones 3, 4 and 5 well illustrates their irregular spacing that was deliberately and intelligently arranged for the purpose clarified by Figure 5.

Figure 5. When Stones 4 and 5 are instead observed from the position of the feminine carving on the recumbent stone, the quasi-equinoctial (or mid-spring or mid-autumn) sun rises within the notch and shines through the vertical narrow space between Stones 4 and 5. Refer to Figure 6 for what happened at sunrise on 21 September 2012.



Figure 6. The vulvar carving on the recumbent stone is covered by the male shadow of Stone 5 while bright sunshine edges ever nearer.

This allows the sun to shine through and cast a shadow of the pillar stone on the middle of the lozenge stone. This has happened year after year ever since the stones were raised thousands of years ago, but had never been noticed in modern times until the author predicted the occurrence by calculation, and first photographed it on 21 September 2012. Two photographs were published in *Expression* (Meaden 2017: 56, Figures 7 and 8).

The excavator Edward Fahy (1959: 20–21) recorded that the lozenge stone ‘seems to have been fashioned into its present shape in antiquity.

Note the small spot of light on the flat top of the recumbent stone (caused by the sun shining through the little notch between Stones 4 and 5).

Lozenge-shaped boulders associated with pillar stones have been recognized at Avebury and are taken to represent or to be symbolical of the male and female sexes and to be connected with a fertility cult (Keiller and Piggott 1936: 420). Fahy quotes Gordon Childe (1952: 102): ‘They are clearly male and female symbols.’ The excavator concludes ‘that at Drombeg we are dealing with another instance of symbolism which by its nature ought to be connected with a fertility cult.’

The lozenge stone and the phallic pillar stone are 1.2 m apart measured centre to centre. At sunrise on 21 September 2012, and in other years



Figure 7. The erect phallus carved on the tall straight-sided portal Stone 17 at Drombeg stone circle.

subsequently, the shadow of the narrow pillar stone was seen occupying the middle of the lozenge megalith. The deliberate offset alignment of the pillar stone was essential for this to happen.

A few minutes later another circumstance develops. The moving shadow of the 'male' portal Stone 17 gets to occupy the front of the lozenge stone. Again, there is a visible, watchable, male-female union. Not only is the shadow-producing portal megalith tall and straight-sided, it powerfully declares its masculinity by the ithyphallus engraved upon it (Figure 7). The carving, noticed by Austin Kingsley on 22 September 2016 and accepted as genuine by the author and rock art experts, is on the northern side of the tall straight-sided stone. It is 200 mm long.

For the rest of the winter half of the year (including Samhain, the December solstice and Imbolc), the target stone for shadow reception

continues to be the lozenge-shaped megalith. However, for the occasion of the winter solstice at Drombeg the original shadow-casting stone (described by Franklin 1903) is missing. It was removed by the Drombeg circle landowner between 1903 and 1909 but rediscovered in December 2012 by the author in the garden of Drombeg House 500 m away (Figure 8). This is now called the Franklin stone.

The author made a cardboard replica of the Franklin Stone (Figure 8) and glued photographs of the stone on to both sides of the replica, before positioning it within the stone circle in anticipation of the clear-horizon sunrises of 19 and 22 December 2016. The splendid shadow cast upon the waiting lozenge stone on the latter date is shown in Figures 9 and 10. The latter photograph was taken by Matthew Kelly using a camera fitted to a hovering drone.

Figure 11 illustrates how at sunrise shadows are thrown from a sequence of stones



Figure 8. This is the flat-bottomed, colored, mottled stone found by the author in 2012 in the garden of nearby Drombeg House that is likely to be the stone removed from the central area of Drombeg stone circle. Almost 1 m long, it meets the description by Denham Franklin as

reported in 1903.

The lithic material is closely similar to the geology of a slaty fine-grained sandstone stratum extant in Drombeg quarry less than 100 m away. The coloring is caused by limonite iron hydroxide.



Figure 9. The winter solstice sunrise at Drombeg stone circle on 22 December 2016 with the replica of the missing stone in position.

(numbers 15, 2 and the Franklin replica) on to the great lozenge stone at ancient festival dates in the winter half of the year.

The interpretation is inherently calendrical, but a spiritual element appears to be present too, as discussed below.

Conclusions

Three expedients are recognized by which prehistoric tribal cultures in Britain and Ireland treated fertility concepts using meaningful symbology that was planned into the structure of specific stone circles, as demonstrated for Drombeg which served as an archetype.

The shadow falls in the middle of the female lozenge megalith, Stone 14. Author's photograph

First was the symbolic deployment of well-understood lithic outlines, the second was the pecking and positioning of select engravings, the third was drama enacted by the play of moving shadows.

1. The first used symbolic shapes (viz. straight-sided pillar stones together with a lozenge stone or a recumbent stone) to transmit known meanings with which prehistoric devotional communities were familiar.
2. Next were engraved symbols, instance vulva and phallus, pecked into stones whose shaped outlines further suggest the two genders.
3. The third introduced watchable drama in

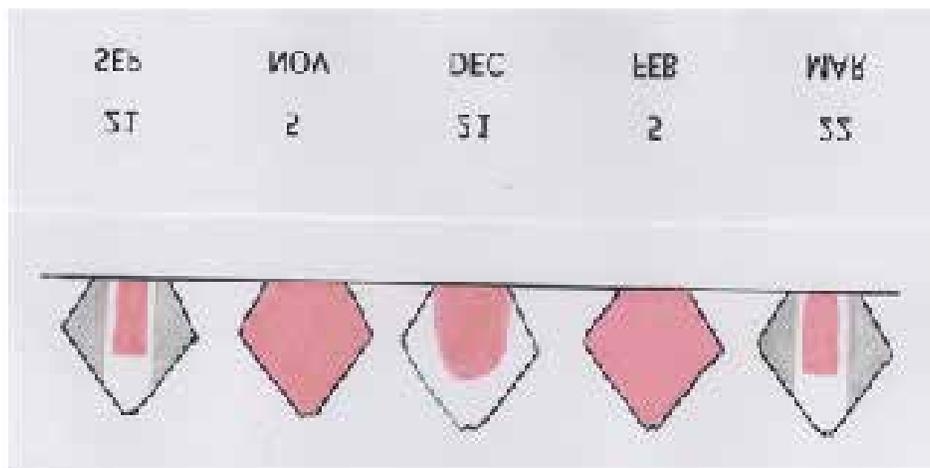


Figure 10. The shadow of the replica Franklin stone meets the lozenge stone (Stone 14) centrally on 22 December 2016 (drone photograph by Matthew Kelly). These male and female stones are united at the rising of the sun at the time of the winter solstice.

Figure 11. Diagrammatic illustration of how sun and shadow combine on the agricultural festival dates of the winter half of the year at Drombeg. At the rising of the sun the coupling is between different male stones and the waiting female lozenge-shaped stone, as if signifying a union between sun and earth.

which solar movements at optimal sunrises create male-like lithic shadows which are moving images that cross the surfaces of one or other of two positioned standing stones having feminine qualities.

The latter action was another means by which non-literate communities expressed their spirituality within the medium of their fertility religion. This paper suggests how the integrated symbolism can be decoded for its innate mythology, thereby enriching our understanding of this aspect of the people's culture. Stone positioning and purposeful choice of shape of the shadow-casting stones are features of a long-lost heritage that bore messages now being recognized and interpreted once again.

Because union by shadow is always between a symbolically-male, shadow-casting element and a waiting symbolically-female element, it is proposed that the observed male-female coupling relates to implied sexual union according to the story of the well-loved worldview known as hierogamy, the *Hieros Gamos* or ΙΕΡΟΣ ΓΑΜΟΣ .

This form of the sacred marriage may have been perceived by the community as established proof of the consummation of marriage between deities representing the sky/sun and earth. The universal myth of divine marriage between sky father and earth mother is rendered watchable by a visibly dramatic union of the sexes. Each male stone serves as the sky father's representative on earth. The waiting female stone represents the earth mother or goddess.

This is the core activity, a dramatic spectacle that a whole community could watch. At Drombeg union takes place on eight dates of the year at intervals of 45–46 days through the intelligent positioning of the stones, beginning with the winter solstice. Similar findings also strengthen the logic behind the planners'

stone selection and emplacements at Stonehenge, Avebury and other stone circles, where the present author continues his observational fieldwork at sites in Ireland and Scotland.

The grand myth of hierogamy is a concept well known to historians familiar with the literature of classical times and earlier written accounts for Middle Eastern and Fertile Crescent societies. Moreover, the myth, and indeed other aspects of fertility religions in general, continue to be encountered by anthropologists when interviewing tribal communities who have not been affected by later patriarchal religions.

In ancient Ireland and Britain the vision of divine union by shadow was unmistakable and very reassuring for hard-working farming people who toiled the land and suffered the vicissitudes of changing fortune according to the nature and times of arrival of seasonal and unseasonal weather.

The sun-and-shadow display is a dramatic, visual effect that still occurs and can be witnessed on the intended occasions by any visitor to Drombeg and Stonehenge (Meaden 2016) under clear sky conditions. The author has tested it and found it befitting at several other stone circles too in Scotland and Ireland. The key to discovery was the finding that investigations must be done in the minutes after sunrise when shadows are long and the shadow-casting is optimum for the occasions of particular prearranged dates of the calendar.

Proposals for future work

A completely new approach to the study of stone circles has been developed and is announced by the author who recognizes that for particular sites the stone circles and choice of stones were intelligently planned for spectators to observe, during the minutes after sunrise, the movement of shadows that unite pre-selected stones bearing symbolic elements before allowing

the sun to replace the shadow. For future study researchers should best choose stone circles having standing stones of differing heights and irregular spacing, and attend at sunrise under clear horizon conditions for the specified range of target dates indicated in this paper.

Those stone circles with arguably female stones, like recumbent stones or lozenges or stones with medial vulvar symbolism, and where also there are tall potentially male stones, are most promising. Advice is given in a new book in which the author spends 15 chapters on Drombeg and six chapters on Stonehenge and Avebury. Likely fertility aspects at sunrise at Newgrange and Knowth are also examined. A reconstructed 365-day tabulated calendar appropriate for the Neolithic and Bronze Age is introduced as well.

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'THIS IS A BUTTERFLY AND IT IDENTIFIES A WATER CONTAINER': THE RELEVANCE OF INDIGENOUS KNOWLEDGE IN ARCHAEOLOGICAL INTERPRETATIONS

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Abstract

Indigenous knowledge such as toponyms (place names), works of art and oral traditions are pools of information that archaeologists should be tapping into for the development of archaeological interpretations. Visual works of art are the most important sources that by far have not been adequately used, even though we know that items among local or indigenous communities usually reveal some information about their past or present role at the individual, family and society levels (Harris 2010).

Introduction

The approach to pottery analysis in most of southern African archaeology has led to it being seen as craft that can be used to identify cultural groups or ethnic groups in the landscape through typologies (Huffman 1989; Phillipson 1974, 2005; Pikirayi 1993, 2007). The creation of these typologies was usually based on several attributes of which the decoration motifs were principal. These were used in some case studies to look for cultural linkages through ceramic styles and these patterns would be used to identify movement of people throughout the continent and this led to multiple debates such as those that focused on migration of people throughout southern Africa (Huffman

1989, p.155; Phillipson 2005). At the same time certain decoration motifs have been used to identify cultural groups, such as Moloko pottery being used to identify Tswana people in southern Africa (Pikirayi 2007, p.287). The popularity that these approaches have had in the field of African archaeology has somehow stifled the growth of other viewpoints that could have been explored at the same level. An ethnographic case study conducted in Molepolole has shown that the process of pottery making which includes the decoration motifs is coded with subtle and sometimes very loud messages that tell the life story of the potter, their socialisation, their origins and their identity. This is an aspect that most typologies would hide, as typologies are not sensitive to the individual; they rather highlight group characteristics.

The message behind the decoration in a pot: the case of Mrs Mmamontshonyana Ditshekiso

An ethnographic study was conducted in Molepolole in 2013 documenting the process of making pottery. During this study, it was evident that the process of creating pottery incorporated multiple decisions and activities, some of which were informed by the functional aspect of the pot, some by the cultural and ideological principles of the potter and some by challenges that come with the process of pottery making. For example, the decoration motifs that were inscribed on the surface of the pot were closely linked with the mindset of the potter at the time of creating them. The pottery making process by Mrs Ditshekiso was heavily loaded with cultural, social and functional meanings and the most important thing was that these were 'meanings' or things that were relevant to her as the potter, an elderly woman of the Bakwena tribe and as an individual. It has to be noted that the motifs that she inscribed (Fig. 1) were



Fig . 1 Butterfly decoration motif

similar to what is there in the archaeological record but at the same time the reasons given for the motifs were totally different from what is there in the archaeological and even historical records.

Mrs Ditshekiso: Reminiscing about her youth

According to Mmamontshonyana Ditshekiso, a traditional Mokwena potter in Molepolole (Fig. 2), a village 50 km west of Gaborone, the capital city of Botswana, pottery making is a happy process. Mrs Ditshekiso is of the view that one cannot create pots when in an unhappy or stressful space emotionally. She believes that making pots while unhappy or stressed can

lead to a lot of them breaking up because you will not be paying attention as you go along. According to her, being in a happy space emotionally gets translated into the decorative motifs that one inscribes in the pots. The function of the pot may be predetermined by the need for either a cooking vessel or something to use for storing water. But as the creation process progresses it becomes part of the potter's thought process. In her happy thought process, she may be thinking about all creatures and other things associated with water and hence she may pick one of those creatures to represent that which she sees as appropriate.

For example, Figure 1 shows the decorative motif

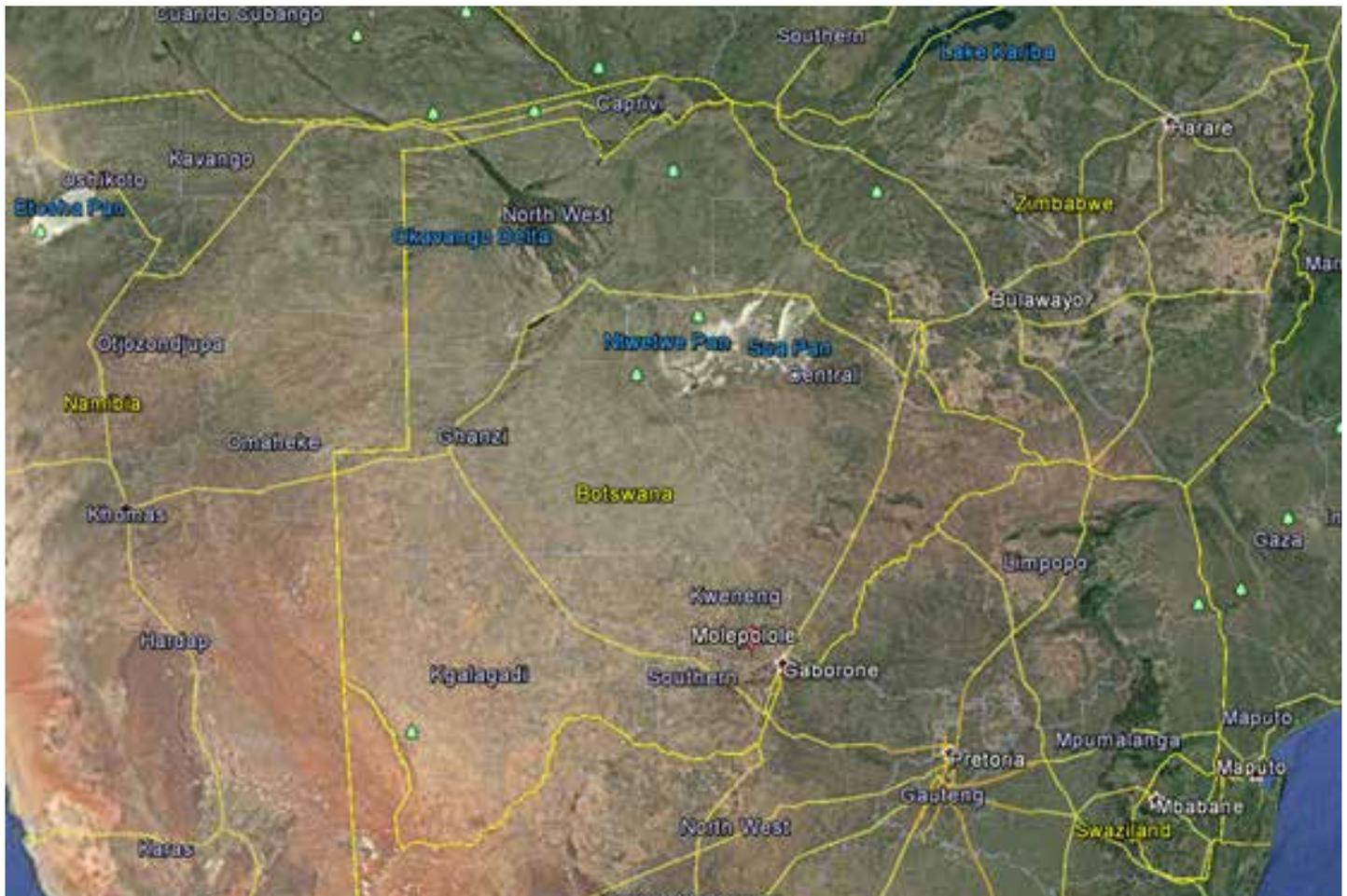


Fig. 2 Location of Molepolole Village in Botswana

that she describes as a butterfly and the butterfly component of it is showcased by what she describes as the wings of a butterfly (Fig. 1 insert).

She told us that ‘in her mind’s eye, she is seeing a butterfly flapping its wings by the river’s edge’. This would have been an incident that she would have witnessed on several occasions as a young girl sent to draw water from the river or pond by her parents and elders, or even herself making that decision to go draw as a mature woman. It is important to note here that drawing water from rivers and water ponds using pots was a traditional and necessary activity that was common in pre-colonial and post-independent rural Botswana, as there were very few if any

water stand pipes, let alone a networked drinking water system. At the same time, these water drawing trips were part of the key social engagement and entertainment of teenage girls. The water source was usually used as a meeting place where age mates met and shared key social skills relevant for their age, gossiped and shared banter. A trip to draw water could at times take most of the afternoon, and in that time young girls would play, sit and talk as they took turns to fill their pots before heading back home.

Mrs Ditshekiso also indicated that there are times when the decorative motifs can be influenced by aspects of cultural customs nuances, such as dress codes.

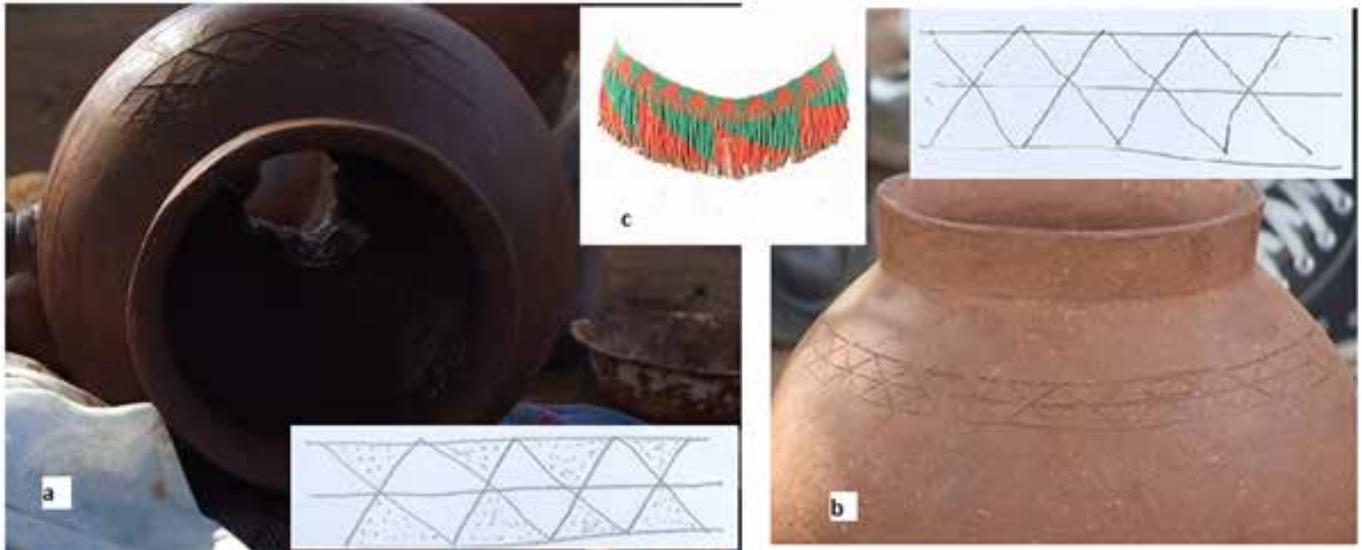


Fig. 3 Illustrations of what Mrs Ditshekiso calls 'belt' decoration motifs. Makgabe Picture (3c) was sourced from <https://www.bing.com/images/search?q=makgabe+pictures&id=59E435B-60191BF191E1B980C6525CDDE3B26B39E&FORM=IQFRBA>)

Traditionally, young Tswana girls (Bakwena, Mrs Ditshekiso's tribe are part of the Tswana) who have not reached puberty used to wear makgabe (Fig. 3c). As a youngster, Mrs Ditshekiso would have worn makgabe, just like all girls her age. The Bakwena girls would have had their makgabe belts decorated in a certain way specific to the creators. In our interview, she was of the view that the decorative motif in Figure 3 is an example of how the belt of her makgabe used to be decorated by her mother. It is important to note that this type of decorative motif has been noted to be common in a lot of Iron Age and historical pots and pot sherds (Fig. 4).

Unfortunately, clothing items such as *makgabe* do not survive well in our archaeological contexts; the beads that are used would survive but the string and the cloth used as part of this attire would deteriorate quickly. Furthermore, Mrs Ditshekiso is of the view that the belt decorative motif can have two variations; one can be plain with just the reflective triangle shape

or the reflective triangle can be filled with punctuates or a solid colour inside (Fig. 3a and b). Another decorative motif that she uses with a sense of nostalgia is that which she calls *ditselana*, whose direct translation will be small pathways or roads. Here, Mrs Ditshekiso is of the view that she would decorate a pot using this motif as she reminisces about the numerous pathways that she has walked or travelled in her life's journey. She was of the view that you walk on pathways or roads on your way to the river, to meet people, life is a journey and so forth, and as she makes her pots sometimes she may be thinking about these and she would decorate her pot just as well (Fig. 5). This decorative motif can also be said to be a metaphor of the potter both as an individual and as part of a family and community. The inscription of this motif may have nothing to do the function for which the pot would be used, but may be for how the pot is going to be handled after it is finished. For example, currently the potter creates for commercial purposes and as she

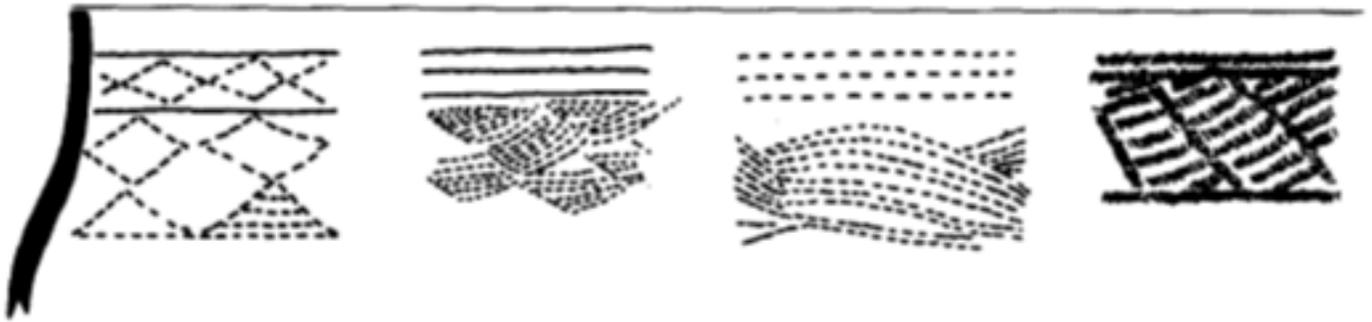


Fig. 4 Naivundu pottery (from Ancieaux de Faveaux and de Maret 1984; Huffman 1989, p.163)
Fig. 5 'Ditselana' decoration motif



decorates the pots with the **ditselana** motif, she may be thinking about how far her pot is going to travel, or she may be thinking about her life journey from the time when she started making pots as a necessity to the present where she is now using her skill to generate income.

What does this mean for archaeology?

Pikirayi (2007, p. 296) lamented that archaeological studies of ceramics in southern Africa are lagging behind in engaging aspects of gender, class, power and status. I would like to go a bit further and include an aspect of an individual artist or potter and how their views affect the creative processes. The Molepolole potter (Mrs Ditshekiso) was of the view that pottery making is a happy process that engages the soul of the potter. She strongly believes that pottery cannot be created when you are not in a happy place and it is this stance that will influence the types of decorative motifs that you will produce. The motifs may be similar to what is available within your community, but there may be a slight variation in the motif depending on your thoughts and that which you wish to communicate. In her view, pots that will be used for cooking or fermenting beer, fermenting sorghum to create sour soft porridge, or fermenting milk to create sour milk cannot be decorated because the process of fermentation involves the creation of gases that may lead to the contents spilling over on the pot surface, and this usually results in permanent stains on the outer surface. Pots that are usually decorated are those that would be looked at and admired. These pots are usually used to store such things as water and dry grains because even when they spill they do not leave a mark. What this case study is demonstrating is the fact that in pottery analysis, we create typologies that are rigid and without a soul; we tend to focus more on how a slight variation in the

types that we have created may be an indication of newcomers or someone showcasing contact with others. What is left out is how the society and the individual see the pottery making process. The view that pottery creation or pottery making is a happy process maybe a learned behaviour that later on became personalised as the student potter became the master potter. The patterning of the motifs may be nothing new, but their meaning to the potter and maybe to the recipient of the pot may have some deeper meaning other than just being an incision or a punctuate on the rim or neck of a pot.

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CIRCULAR ARCHITECTURES AND CYCLICAL ETERNITIES IN ARCHAIC PORTUGAL

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Rolando Melo da Rosa: *Translator of the text*

The historically correct is even more destructive than six nonstop months of rain and fog in Denmark. Naturally, no one appreciates it unless under the influence of the usual tranquilizers. But the historically correct is more suffocating than its equivalent in politics, the state being the sole producer of historical narratives in Portugal, with no critics or opposition. And producing only gray.¹

This allergy to controversy leads to the question posed by Diogo Ramada Curto concerning the growing trend of the monopolization of cultural life by the university, knowing as we do that it represents an endogamous matrix favorable to the multiplication of obedient profiles, and thus is insensible to the circulation of ideas and adverse to the ensuing debate. In history, the risk of removing the circulation of sap from a non-lived narrative leads to the mortification of speech, something that the systemic poor performances of high-school pupils in the subject denote.²

History became an uncontroversial state product with no one defying it, as the likes of Jaime Cortesão, António Sérgio, Alfredo Margarido and Vitorino Magalhães Godinho did during the rule of Oliveira Salazar. The present-day state monopoly of the past results in fast food information, estranged from the stew of ideas, that produces ideas disconnected from thought, unable to approach an 'alternative memory', as José Manuel Sobral puts it.³

Romans and Carthaginians, describing the people who dwelled here back then, said they were shepherd people. And so we start.

Suddenly we catch a glimpse of an ant line, in its round-trip track from corner to corner, although that is not manifest in the official charter. It is not on the map, but much of what is important in the history of Portugal happened to derive from it. It is transhumance.

The pastoral economy outlines itself in the landscape by a precise architectural profile. It is not nomadism, but rather transhumance. The shepherds do not bring with them their dwellings or their families. The shelters, corrals and their dwelling places offer us the record of a cultural matrix driven by the principle of circularity as a cultural program, something that has only begun to be documented in the last few decades, from the mid-twentieth century.

Abílio Mendes do Amaral noticed it with the shepherds of Serra da Estrela, with their dwelling huts and their cheese shops, both of them with thatched roofs, as well as their compounds. In the 1940s, Ernesto Veiga de Oliveira's team found a house with a circular plan, thatched walls and roof, still inhabited.⁴ Its builder was still living there permanently in 1947. Alongside were the goat pens. This man was a head shepherd of goats (*maioral*), and the authors mentioned above were following his footsteps

¹Terá a Universidade monopolizado a vida cultural? *Jornal Público*, supplement Ípsilon, May 4, 2012.

²According to Portuguese newspaper *i* (July 15, 2011), History, was one of the subjects systematically met with failing grades by Portuguese students, along with Portuguese language.

³José Manuel Sobral. *Memória e identidade nacional: considerações de carácter geral e o caso português*. Lisboa: 2006

⁴Ernesto Veiga de Oliveira, Fernando Galhano and Benjamim Pereira. *Construções primitivas em Portugal*. Lisboa: 1988, p. 144.



Fig. 1. Cape St. Vincent. Photo by Filipe da Palma.

while surveying that kind of dwelling (although in its more perfect version of carved stone and thatched roof), when they unexpectedly found the greatest continuous area in Portugal, in the depth of Algarve's mountain range and its southern Alentejo foothills. They found them again in a diagonal swathe from Algarve northward to Portalegre, Crato, Campo Maior and Valência de Alcântara. Alongside the Algarve, this area was the most prominent in Portugal. However, between these two, around Serpa, there were others of smaller dimensions and a transfrontier triangle with vertices in Alandroal, Reguengos and Olivença.

In the north of Tejo there is another transfrontier area near Idanha, in the region of Beira Baixa, close to Monsanto, Zarza la Mayor, Rosmaninha and Alcântara. There is also a nucleus in Viseu, which was studied by Jorge Dias, and finally, in the north of Douro, another set near Freixo de Espada à Cinta. With the exception of

Viseu, we see an interior triangle.

In fact, according to Ernesto Veiga de Oliveira, houses with circular plans in thatch and stone are 'very rare' in the northern regions, which I would put differently: they do not exist inside the limits of the ancient county of Portugal. But what makes this mysterious is the fact that the *castros* and *citânias*, pre-Roman settlements in the north of the county had circular plans. But this architecture was and is dead. However, the diagonal swathe from Cape St Vincent (including Aljezur, Odemira) to Poiães and Freixo de Espada à Cinta, has been in use almost to the present day, demolished, rebuilt, burnt down and reinhabited. And this diagonal coincides with the herding route.

It is the hypotenuse of an interior triangle based on Algarve. Granted, Jorge Dias has disarmed both the theory of the exclusive pastoral use of these dwellings and its ascription to the Celts. Possibly more than just sheltering shepherds,



Fig. 2. Shepherd. Photo by Filipe da Palma.

these structures also precede the Celts.⁵ We are facing a wide range and a great inertia. It is common to attribute to circular-planned buildings a technical backwardness vis-à-vis their quadrangular congeners, but the inertia indexes make us think otherwise.

When Jorge Dias found the exiguous nucleus of Fão and Pedrinhas by the sea, with its anachronous circularity vis-à-vis the surrounding majority of quadrangular plans in Portugal's northern littoral region, as if a graphic freezing had occurred, he may have wondered if an apparent conservatism would have been enough for this to happen. The same thing happened in

several examples of Algarve's mountain range, where the multiplication of circular-planned buildings has familiarized the populations with that *modus habitandi* in such a way that even when moved to the quadrangular model, people had great trouble dealing with the angles of their houses, thus developing a specific piece of furniture to round the corners (*cantos*), that have become known as *cantoneira*, with a triangular plan.

But this cultural resistance is confirmed by

⁵Jorge Dias. O Problema da Reconstituição das casas redondas castrejas. Porto: 1949, p. 41.

the consecration of circular constructions, making them into temples, which were abundant in Alentejo in the context of the diagonals we have outlined: Viana do Alentejo (S. Sebastião), Monsaraz (polygonal), Ferreira do Alentejo, Serpa and Safara. In fact, the inertia weight has less to do with technical backwardness than with the exercise of a communitarian spirit, since circularity is incompatible with a scenic government, contrary to quadrangular plans that have at least three tops available, of which the high altar and the two lateral altars constitute the obvious transposition of a monolithic discourse to quadrangular-planned temples. The quadrangular plan requires a master, but the circular does not. These round shacks with thatched roofs would have occupied a significant part of Portugal's human landscape until recent times. At the start of the 15th century we see it confirmed in the negative. Zurara, in the chronicle of the conquest of Ceuta, comparing the dwellings of the North African littoral (stonework or rammed earth, quadrangular-planned, almost always topped with a terrace roof) with the Portuguese house, could not but express his dismay: in comparison with the North African ones, the Portuguese homes looked like 'pig shacks'. These shacks are what Jorge Dias defined as circular buildings with false domes, lower than thatched ones, the latter being habitable, the former set apart for the animals, but both possessing a significant element in common, their circularity.

Zurara exaggerates a little. There are four characteristics of circular architecture in Portugal: communitarianism, pastoral and mining activities, geographical mobility and persistence (in the interior and the south). It has survived the angularity of the Celts and Romans, and considering the natural seduction in terms of technological novelty and military might, the mere survival of such an architectonical

design until recent times means that that inertia is supported by a strong, unshakeable culture. Only in the more Romanized *castros* 'the quadrangular or rectangular-planned houses appear more frequently'.⁶ In this invasion of Roman design among the Iberian people, the Lusitanians and their chief Viriatus have the floor. Jorge Alarcão⁷ notes that the permanent motive of dispute between the Romans and the Lusitanians was the loss of land that the former have imposed on the latter. This land was not managed by an agrarian – therefore sedentary – economy, but rather by agro-pastoral programmes. When Hannibal the Carthaginian came to recruit the Lusitanians to the campaign against the Romans, 40 years before they started fighting them on their own, he reminded them that they had 'always lived following their herds through the hills', in the account of the archaeologist Jorge Alarcão. On the other hand, Scipio the African, who had also hired Lusitanians to wage war, deplored their custom of starting the attack by capturing the enemy's cattle and only after that fighting the soldiers. The Lusitanians were shepherds, transhumant, eventually miners, on the eve of losing their winter pastures, the location of which coincided with the copper mining belt, from Aljustrel to Minas de Rio Tinto, Andalusia, passing by S. Domingos, Mértola. It was not random that historians were able to trace back the location of Viriatus's headquarters in those years of war, in the middle of the second century, to the very nerve centre of Iberian transhumance, in the Spanish Extremadura, field of many similar battles between Christians and Muslims, some

⁶Irisalva Moita. Notícia de um catálogo e carta da distribuição dos castros no território português, quoted by Ernesto Veiga de Oliveira.

⁷Jorge Alarcão. O domínio romano em Portugal. Lisboa: 1988, pp. 18-20.



Fig. 3 - 4 - 5. Circular architecture, Mealha, Algarve. Photos by Filipe da Palma.



thousand or so years after.

Whoever lost the winter pastures, which are the southern ones, lost the war. Viriatus's resistance symbolizes generically the indigenous resistance in its every aspect, material and cultural. It would be precisely in this nerve centre, the hub of Badajoz, be it Extremadura, Alto Alentejo or Beira Baixa, that traces of a great religious fever devoted to sacred entities endowed with an indigenous identity would appear vividly, particularly Endovelicus and Ataegina. More significantly, in the inventory of every religious entity, none has more mentions than these two. None of the approximately 100 indigenous divinities indexed to Roman Hispania enabled us to unveil more than one votive inscription, while Endovelicus amassed 70. But a feminine divinity, Ataegina, reached the top, not precisely due to the number of inscriptions, 40, but because of the geographical area that she covers. The space between Tejo and Guadiana was by no means enough for her, so she headed to Guadalquivir, entering Andalusia. Her cult was extensive, while Endovelicus's was more localized. More inscriptions were found recently, but the trend persists.

Mostly known by the epithet of '*sancta*', she is exclusively associated with the image of a goat, known in this region as *chibato* (young billy-goat). She is an infernal and nocturnal entity, but has an eclectic popularity, encompassing both the slave and the free men, either indigenous – as at a given time a certain Viriatus (inscription no. 8, Leite de Vasconcelos⁸) – or Roman citizens. Leite de Vasconcelos, Portugal's great archaeologist, has tried to associate her with the mysteries of the Roman Proserpine, which followed the mysteries of Demeter/Persephone, from Greek mythology. However, her association with the *chibato* leads us to Dionysiac areas too, in the etymology of tragedy, i.e. goat song, and also the word caprice.

Ataegina is associated with not only the pastoral universe. The duality in the contrast between the king-like pose and the super-sexual capacity of a *chibato*, with the infantile bleat, as well as the contrast between his appealing stately pose and his repellent smell, are contradictory duals that shape the profile of a being that performs his own opposites, both a virtuous and an orgiastic (and here lies the beginning of the mystery) entity. Consequently, Ataegina is difficult to reach. Her huge range of representation is only possible because of her fragmentation. The only way she has to represent multiplicity and the cycles of the universe is to be represented in plural and heteronymous poses. Ataegina's epithets are diverse. She is *domina*. She is *dea*. She is *sancta*. She is *invicta*. She is *servatrix*, meaning liberating.

This multiplicity matches the diversity in the places where the cult is observed: Cáceres, Ibahernando, Merida, Medellin, Arronches, Elvas, or Vila Viçosa, Quintos (Beja), Castilblanco, in Andalusia and so on. The diffusion of her cult was such that, according to the historians, in the words of Blásquez,⁹ she is the one to whom Avienus's *Ora Maritima* alludes, when he describes the sanctuary of an infernal goddess in the region of the Rock of Gibraltar, set in a cave difficult to reach or even invisible (verses 241-243).

Inaccessibility through invisibility is as an attribute of a hidden world in which sight or its absence plays a role. Thus, in Castulo's fragment of *terra sigillata* in which Ataegina appears alongside Proserpine, confirming Leite de Vasconcelos' observations, her image has veiled eyes and naked breasts, much like playing

⁸ Leite de Vasconcelos. *As religiões da Lusitânia*, Vol. II, p. 111 and following.

⁹ José María Blásquez. *Diccionario de las religiones prerromanas de Hispania*. Madrid: 1975, p. 41.

blind's man bluff (*cabra cega*). This image sends out a double-meaning message: the subject is unidentifiable to the observer, while enacting a giving motion with no identifiable recipient. No one knows who is who, that is the question. Leite de Vasconcelos also mentions three tombstones in which the goddess's name is represented by the letter A, and by the initials AD in a fourth, presuming that the goddess was well enough known and therefore one letter was enough to recognize her.¹⁰ Still, it is possible that Ataegina, not always but cyclically, is not mentionable or may even be the object of a seasonal taboo, during which she appears in an inaccessible pose, endowed with the status of omission and thus being indescribable, even on a tombstone. This leads us back to the inaccessible characteristics of her sanctuary and to invisibility in the sense of both non-identity and obscurity that Ataegina reveals in the *terra sigillata*. No one knows, no one tells.

The existence of this taboo in the Hispanic Peninsula was stressed by Gomez Tabanera,¹¹ who drew a diagonal between Cape Sagres and Cape Creus (Girona) dividing two distinct religious worlds: the North Atlantic half, in which divinities are named, and the Mediterranean southern half, in which probably 'the name of the divinities, either quoted or written, was an object of taboo'¹². Although Ataegina's etymology has a Celtic origin, that does not make impossible that the cult preceded the Celts. Again, Leite de Vasconcelos presents a setting of momentary 'disappearance'¹³ between the root *ate-gena* (re-born) and Proserpine's paradigm (descent to hell with spring emergence), that matches the seasonal taboo of the non-designation of the divinity, its retreat into the darkness (the cave) and the closed eyes metaphor. All of this mounts a discourse of incompatibilities, visibility and invisibility, that is resolved through a cycle of time. The ocular metaphor

is primary, since when she who not only does not see but is the very darkness herself, reappears, she produces such a blaze that those who cease to see become the ones watching her, such is the dazzling intensity of her gaze. This is also a calendar metaphor, as Ataegina's appearance coincides in a specifically agro-pastoral way with the plants' growth in spring.

The emergence of the indigenous cultural formations of the vanquished, in the midst of the Roman *status quo*, bears witness to the strength of such stubbornness. Manuel Maia has underlined more than once the precocious Romanization of the area between Tejo and Guadiana.¹⁴ If circularity has survived Viriatus's defeat and still endures, it is due to the fact it has cultural weight, because it traces the visual matrix of other circles, from the solar day and night sequence to others mediated by a representation like the cycle or the circular trajectory of disappearance and rebirth, which is an indispensable part of Ataegina's intervention. In the performance of the sacred, as in the theatre, there are good and bad actors. Ataegina seems to have been an excellent actress, performing the leitmotif of the humanity of the time well, building drama and comedy simultaneously, translated by some of our contemporaries as the myth of the eternal return, the renewable and updatable cosmic circle at any moment in life, be it the birth of a child or the symbolic death which was her first initiation.

Ataegina's dramatic capacity convinced the Roman audience, as one can safely guess from the ex-votos

¹⁰Leite de Vasconcelos, op. cit., pp. 161-162.

¹¹José Manuel Gomez Tabanera. Las religiones prehistóricas y antiguas in "Las raíces de España". Madrid: 1967, p. 410.

¹²Idem, p. 410.

¹³ Leite de Vasconcelos, ibidem, p. 164.

¹⁴ Manuel Maia. Os castella do sul de Portugal. Verlag Philip von Zabern. Mainz am Rhein: 1986, p. 214.

that were offered to her.

Nevertheless, under the evident risk of acculturation, 'the adherence to the myth of the eternal repetition' was generalized at that time in 'the totality of the Roman society of the first and second century B.C., through the popularity of Stoicism and Neo-Pythagoreanism'.¹⁵

The infernal attribute (*infernae deae*, according to Avienus) is what ensures that Ataegina takes the lead in the cycle of the return, as this cycle always implies a chaotic moment, the ritual interpretation of which offers to the common mortal the paradox of an unrepresentable representation, in topical (underground), spiritual (death) and social (chaos, disorder) terms, or more aptly, infernal. Yet the necessary representation seems to require a redisposition and a reharmonization of the social. Ataegina's methodology is based on light, and thus light or its absence become the signifiers of the mechanics of the universe, because the Iberian divinity appears to assume a seasonal or even chronic invisibility, either by omission (darkness) or by excessive action (dazzle). In this way, she is graphically unrepresentable and that is why the only figurative testimony that has reached us was designed by a craftsman who protected himself in advance, blindfolding her eyes. And so she conducts us to her dolmenic ancestors, whose religion and architecture we would lose access to in the absence of the Hispanic terminal link represented by this important divinity. *Ora Maritima* is a description from the fourth century, but is based on a route from the sixth century BC. If the description of the infernal goddess is based on this century, if her cult is centred on the Spanish Extremadura and in the eastern High Alentejo region, then she is contemporary with the *estelas estremenas* (Extremaduran steles), one of which, found in Megacela (Badajoz), features a dagger and an anthropomorphic sword, both representing

antennas, which would not have been possible before the sixth century BC.¹⁶ That and the fact that both manifestations are associated with Indo-European people clearly point to their contemporaneity.

The fact that the *estelas estremenas* have been objects of a vast diffusion with no underlying archaeological context binding them to a definable culture makes us think that the graphics were interpreted by nomadic people. However, the fact they were not present in the western foothills of Serra da Estrela but in their eastern foothills, that is, in the continental/Mediterranean slope (Sabugal, Penamacor), and in the southwest in Aljustrel and Lagos, yet in the southeastern part of the Guadalquivir valley, while the lion share of their estate lay in the swinging hub of Badajoz, invites us to conclude that we are facing a transhumance featuring pastoral people who were also warriors and even miners, seeking winter pastures either in Campo de Ourique or in Andalusia.

This is a pseudo-occupation of a vast territory. That is the only way of understanding the paradox of these people's simultaneous warrior and commercial activities, the former confirmed by the steles and the latter leaning towards the Mediterranean (adoption of the mirror and of the comb as fetishlike objects, almost always represented in the steles) and the dolmen cultures, as in the case of the menhir that they reconverted into a stele found in S. Martinho (Castelo Branco).

Were they pre-Lusitanian Celts, Lusitanian or related people, what is certain is that they remained in Badajoz more than in any other place, forecasting the stage of the future strife between Lusitanians and Romans, as well

¹⁵ Mircea Eliade. *O mito do eterno retorno*. Lisboa: 1969, p. 137.

¹⁶ H. N. Savory. *Espanha e Portugal*. Lisboa: 1969, p.242.

as the later strife between Christians and Muslims. Ataegina also dwells here, producing the synthesis of several cultural trends – pre-Celts, Celts, indigenous, Mediterranean – in such a way that her wide-ranging mediation will touch them all as nothing else in the entire Iberian Peninsula. Thus, her numerous installations in the territory that would become Portugal in the future are worthy of attention.

That is also why the projection of Ataegina into dolmen culture is so illuminating, in much the same way that Octávio da Veiga Ferreira and Manuel Leitão's rebuke of the diffusionist theory prevented the Iberian cultural forms from being considered as mere imported products.¹⁷ These archaeologists have argued that the civilization of the *tholoi*, apparently Mediterranean, is contemporary with the third stage of artificial caves and megalithic monuments of the centre of Portugal and so is a civilization that came after what was already in place.

What prevails in these three manifestations (caves, dolmens, *tholoi*) is their almost total circularity (even when dolmens are polygonally planned). The round enclosures' typology makes manifest an idea of cycle and therefore implies return.

Furthermore, as prevalent in these sacred buildings, is the almost unanimous presence of an access corridor, which, beyond its obvious utility, offers two attributes to those constructions: the corridor's entrance, the existence of which prehistorians consider to be *a sui generis* characteristic of 'Portuguese' dolmens, invariably faces east, and the access through the corridor is not always physically simple, either too low or too narrow, creating the perception of voluntary difficulty and distress.

The third constant has to do with the corridor's direction. Being oriented to the rising sun, it only captures the sun's rays during a very short time-span and only in the period in

which the sun is lower in the sky, in the autumn and winter, as well as during brief moments at daybreak. It is almost as if it was a photographic moment, when the dolmen performs the role of camera obscura. The rays of light enter a collective tomb, as if their action would make possible a sudden revival, a world renewal, a return. Besides, the graphic material placed next to the bodies, the slate plaques, feature a geometrical design that frequently displays a binary alternation, much like stereographs. In a mere eyeblink it is possible to see what had no existence a millisecond before. In an instant, positive becomes negative, passive becomes active and the invisible becomes evident. And here is the idea of denial of stability. Everything moves, although everything returns to the same point. But it never stops there. Therefore, in view of the permanent unfaithfulness of the states, any external and distant perception as our own is tempted to intend the opposite thing, i.e. to halt and stop the world. That is why designations like goddess or mother, fertility cult or cult of the dead are rigid categories that cannot translate what was happening 4,000 or 5,000 years ago. To look at one of these people's polished stone axes is enough to realize that they have mastered plastic configuration and that the geometrics of the design of the plaques or circular architecture are not due to some cultural backwardness, but reveal a taste for abstraction.

The energy resides in light, in such a remarkable way that Ataegina has to close her eyes in order not to petrify her devotees, a number of centuries after the dolmen culture, but still significantly close to it in terms of those ritual ceremonies.

¹⁷ Octávio da Veiga Ferreira and Manuel Leitão. *Portugal pré-histórico, seu enquadramento no Mediterrâneo*. Lisboa: 1979, pp. 197-198.

And if we consider the Lady of Guadalupe, feminine entity at the height of her mediation in the first three centuries of Portuguese nationality, she also follows the same lighting and hypnotic discourse. Frei João de S. José compares the pilgrims' itinerary to Cape St Vincent with the pilgrimages to Monserrat and Guadalupe in the second half of the 16th century, equating Guadalupe with St Vincent in popularity.

The Lady of Guadalupe comes from the same camera obscura. She appears in the colour of darkness. She is a black virgin, extracted from the interior of the earth ('dark-skinned, though beautiful', Frei Diego de Montalvo said about her in the 17th century,¹⁸ being clear that he does not know why she is colored the way she is). Just as Ataegina had her place in a cave and based her discourse on a light and darkness dialectic, in a dual rhythm like the slate plaques 2,000 years before. Guadalupe surrounds herself with pastoral paraphernalia; the one who finds her, according to her mythology, was a cowherd looking for a stray cow. Once unburied, the virgin had a cowbell with her. Ataegina was also associated with caprine flocks and most probably the shepherd people that travelled to the southwest as far as the area of Cape St Vincent, according to the footprints left by the Extremaduran steles. The slate plaques in the dolmens appear intimately associated with croziers, also made of slate, and Victor Gonçalves hesitantly highlights the formal complicity of these croziers with the shepherds' crooks of 'some shepherds of sheep' of Alentejo.¹⁹

Thus, the cultural vein common to the three manifestations described above has apparently been the same for millennia. Studying Crato's megalithism, Rui Parreira²⁰ verified an 'indexation of monuments (megalithic) to areas with pedological features more prone to silvo-pastoral activities (91.5%), while only 8.5% of the

monuments were located in soils more suitable for agriculture'.

Then, all activities and celebrations were suspended, Guadalupe retreated to her subterranean abode, her dark colour mixing with the darkness in her midst; Ataegina retreated to her cave and probably during that time her name could not be mentioned; dolmens were closed after the ritual entrance of the photographic ray of light and they were voted into darkness. We were climatically approaching winter, a widespread retreat. The herds moved away and went south.

We are seeing the ritualization of an absence, a retreat of both the sacred and the calendar, symbolic death, ground zero. The stoppage would only be suspended between 20 January, St Vincent's day, and 2 February, Our Lady of the Lamps' day. These are the two chronological milestones that mark the beginning of the carnival.

And so the cycle turns again after the silent stoppage. In March or April, the first sheep fairs take place. For transhumant people, the exercise of circularity does not seem to exist, as most of these people come from the mountains and go south looking for winter pastures, but there is always a return. They will always be centric, not circular. However, that is not how things work. Once they go, they never stop, losing all the centrism. They remind me of the trawlers' masters I met or of whom I have heard, in Algarve's harbors. When they set foot on land, they become seasick, as they have internalized the movement of the sea as a stable condition, and their feeling will only stop when

¹⁸ Venida de la soberana virgen de Guadalupe a España. Lisboa: 1631, f. 3.

¹⁹ Revendo as antas de Reguengos de Monsaraz. Lisboa: 1992, p. 97.

²⁰ Colóquio internacional sobre o megalitismo. Monsaraz: October 1996.

they sail away again, having spent the least possible time on land. The same goes for the transhumant shepherds.

The herds cannot stop or be kept without people, even if they are guarded from wolves by *serras-da-estrela*, *rafeiros alentejanos* or mastiffs. Visits to family are as infrequent as visits to fairs, where these shepherding people would listen to the Gil Vicentes and Antónios Aleixos who also dwelled there. The transhumant circularity will increasingly lose any centrism and it will assert itself as a permanent rotation, back and forth. What will then happen when this cyclical vision of the world meets a univocal, rectilinear and finalistic discourse, as Christianity came to be?

The very name of Ataegina denoted a cyclical vision: in the translation of Leite de Vasconcelos it means reborn, clearly denoting a return. Naturally, the Christian discourse would not be viable unless it had adapted itself and accepted sequences between both modes. According to M. Justino Maciel,²¹ it is in 'Lusitania that this characteristic is more obvious'. This emphasis on Lusitania vis-à-vis other regions of the peninsula is not by chance. Pericot Garcia²² has localized the apex of the dolmen culture in the territory currently occupied by Portugal, and Justino Maciel, who mentioned an example of a Roman mosaic in Conímbriga, was surprised that different seasons were given the feminine gender, with winter represented by a woman with a veiled face, much like Cástulo's reproduction of Ataegina. Guadalupe will continue Ataegina, the same for St Irene, in Évora.²³ In Alandroal, St Michael will not be able to acculturate Endovelicus and both will be lost. But Ataegina survives. In Trampal, in the Spanish Extremadura, another line of continuity made her St Lucy, in an obvious confirmation of the light associated with Ataegina.

Vincent (victorious is the translation of from

the Latin *vincens*) was also the best medium granting continuity between both worlds. It was the best way Christianity devised to connect with the archaic world, but as 'victorious', not as vanquished.

To arrive with the flocks at Campo de Ourique and skip a visit to Cape St Vincent would be like going to Rome and not seeing the pope. It is the great reference. Here the sun falls into the ocean every afternoon and is born again 12 hours later on the opposite side; it dies; and is born again; visibly. This cyclical movement is what the Christian theoreticians have difficulty accepting. But the cyclical understanding was the Hispanics' approach to the drama of Christ. Iberian Christianity became more convivial to the popular classes and more alien to fanaticisms and orthodoxies, while notables and elites accepted asceticism as the only answer to the sacrifice of Christ, of which Priscillianism was a pedagogical example.

The Visigothic liturgy, which would later be known as the Mozarabic rite, was not enthusiastic about images in churches, thus making the ceremonies a more intellectual than emotional religious exercise.

Rome, however, took precautions, and in 1080 eradicated the Mozarabic rite from the Hispanic liturgy. Christianity, which was now Roman, imposed itself permanently with the Crusades movement, which was extremely aggressive in its militarism, filling the temples with images and adopting the technique of comics for pedagogical effects, while transforming the mystery of Christ into something that could be described as a soap opera.

²¹ Antiquidade tardia e paleocristianismo em Portugal. Lisboa: 1996, p. 110.

²² A Pré-História, in História Universal, Vol. I, Edição Público: 2005, p. 308.

²³ José Maria Blázquez, El Mediterraneo. Madrid: 2006, p. 193.

Certainly grafting a static discourse like Christianity on to a cyclical and permanent mobility was difficult. As noted, there is a risk of rigid categorization. If someone states that Our Lady of Light, Our Lady of the Lamps, Our Lady of Candlemas (Brazil) or St Lucy are dark virgins, then they will cast ridicule upon themselves. A fifth-century Christian or a contemporary historian will naturally associate Our Lady of Light with the image she produces of luminosity. But this attribute is no more than a moment in the transit of a rotating cycle, never conveying definite property ascribable to the entity that the image represents. Thus, Dea Sancta Ataegina, who is certainly dark in her crypt, will emit luminosity when appearing in daylight. This metamorphosis really happened in the Spanish Extremadura, when Ataegina became St Lucy during the Christianization in Trampal. Christianity tended to adapt only to one aspect of the acculturated entity, crystallizing it, a mistake, for the light is only produced when the entity is publicly present. Once removed and personified by its absence, the entity will adopt the color of that retreat, that is, it will be as black as the darkness that envelops it. We are in the presence of the same binary structure—presence and absence—that we surprised in the slate plaques. She is only momentary, then she ceases to be and becomes its opposite. Both the black virgin and Our Lady of the Lamps, St Lucy, etc. are mutants.

Christianity had considerable difficulties adapting itself to the cyclical world, being mono rather than stereo.

The annual cycle has two episodes: first, when the light one fades and we are subject to darkness and quietism; and second, when what was switched off is suddenly switched on, propelling the action forward. Two metamorphoses operate in diametrically opposed moments of the cycle. One of these metamorphoses

happens at the autumnal equinox, and the other in the vernal equinox: the former is the consecration of absence and the latter is the consecration of presence, which, by the way, is well attested in the words Entrudo (Shrovetide; introduction) and Abril (April; verb *abrir*, to open).

There is mystery in the consecration of absence and joy and splendor in the celebration of presence. The axis of the world, or of the cycle, are the equinoxes, not the solstices. The cycle moves from east to west and from west to east. It does not happen in the north-south longitudes. It was Christianity that adopted this other rotation, for its hero was born in the winter solstice (Christmas) and was sacrificed at the following equinox (Easter), comprising only one fourth of the annual cycle. The remaining three fourths were left empty, therefore belonging to those who were there before, diverse communities and their respective cultural formations. That is when the Virgin Mary, the supposed mother of Jesus, was brought to the fore, as her appearance was not foreseen in the Christian set of ideas. These people abandoned the summer solstice to a merry-maker St John, who was not canonical to begin with, and ran to the autumnal equinox with all the Our Ladies and fire trucks they can find in order to control that mysterious calendar zone, the consecration of absence. When they arrive, on 15 August, the celebrations were already prepared, but the main month is September. And finally they founded the great pilgrimages: Our Lady of Piety in Loulé, Our Lady of Cola, Ourique, Our Lady of Good News, Terena, Alandroal, and Our Lady of Almortão, in Beira Baixa, plus all the way up north to Trás-os-Montes and then Sameiro, an endless world.

The church reacted, resorting to the technique of delocalization, or, more aptly put, deportation.



Fig. 6. "Everything moves, although everything returns to same point". Photo Filipe da Palma.

First, it tried to stop the autumn pilgrimages, moving them to May, as happened in Sameiro,²⁴ when the pilgrimage that was performed in the last Sunday of August was moved to the end of May by a decree by Braga's archbishop in 1934. Paraphrasing José Gil, a process of disenrollment (preferable to non-enrolment) was in question. Second and more frequent, a systematic attempt to achieve a geographical delocalization was made. These last attempts at deportation are centuries old and thus already belong to local mythology: the entity subject of devotion dwells in a secluded location (hermitage), near a fountain, on the top of a mountain range, in a cave, etc.

Invariably, the priest tried to bring the image to the urban agglomeration, and invariably it returned to its original place. These examples of attempts at geographical deportation mark the systematic failure of the integration initiative, because confinement is an indispensable requirement for the performance of the rituals of devotion. Moreover, the spatial eccentricity permits a disturbance of the social codes in place, which is a *sine qua non* condition to convey an ambience of revelry, in the absence of which the two key components of the pilgrimage, the sacred and the dissolute, would have no chance to meet.

But the defining moment is not properly the

pilgrimage or the folly, but the return to the hermitage, entering the cave backwards. Here the climax is reached while the church bells ring shamanically and other sounds accelerate the rhythm. It is the return to the cave, or in this case, to the hermitage. Examples are Ataegina or Guadalupe, re-entering the dark.

This is the moment when the retreat is consecrated, the moment that inaugurates absence in the cycle's autumnal period. Mythology is being fulfilled. A feminine entity dramatizes its return to precincts where it will be enclosed for a long period of time, lurking in the shadows. The great revelry does not start until this simulacrum is concluded. Then, chaos is organized and the allowed and the forbidden trade places, tearing the social order into pieces, festivals and more festivals. As they used to say in the 1970s: sex, drugs and rock and roll. 'The preacher felt that that nocturnal gathering, with music, fireworks, descants, lights, liquor, dances and contredances, in which boys and girls blended with barely no control (...) was a very dangerous thing to morals and religion.'²⁵ Here, the metamorphosis of light into darkness does not look like the result of a simple switch, but of an infraction: the magnitude of the light and the excellence of purity are produced by their opposites.

She will reappear at the other end of the year, at the equinox, always heteronymous, either performed by Candlemas (Iemanjá, in Brazil, 2 February) or by other saint names, but always paving the way for another moment of disorder, like Shrovetide, Carnival.

According to Mircea Eliade, that nightly inauguration in autumn pictured the return to the primordial unity.²⁶

However, accessing the presence in spring is also a return, for these communities, being rotational, cannot be centric. That is why they do everything in order to avoid being centric, adopting two equinoctial centres and vitalizing them equally. It is a two-stroke engine. The cycle rotates along the seasons, the phases of the moon, the domestic circularity in architecture, the to-and-fro of the transhumant.

The rotation is semestrial. We are before a biunivocal system that extends itself circularly, alternating the opposites, its matrix being based on a calendar shared between genders. But the univocal regimes are exclusively masculine and have materialized in the religions of the book. The biunivocal systems do not adopt the yoke (the counterpoint of which will always be heresy or rebellion), but the metamorphosis of a state into its opposite as *modus operandi*. It unfolds itself without folding. It unfolded till yesterday without us noticing it.

²⁴ Romarias, I, Ed. Olhapim. Lisboa: 1996, p. 72.

²⁵ J. A. Marrana, in Romarias, I, p. 224.

²⁶ Op. cit. Mircea Eliade, p. 84.

Credit: Photos: Filipe da Palma

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SHAMANS, SPIRALS, AND WARRIORS - ROCK ART IN CASTLE ROCK PUEBLO COMMUNITY, COLORADO, USA THROUGH NATIVE AMERICAN ORAL TRADITIONS AND ARCHAEOLOGICAL INTERPRETATIONS

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Abstract

For the archaeologist, every additional bit of information about the culture studied is like striking gold, and can contribute to a more complete and credible reconstruction of prehistoric reality. The ability to read and decode the information and content of Pueblo rock art from the canyons of the central Mesa Verde region, located on the border between present-day Utah and Colorado, is precisely this type of valuable information source. However, interpreting the information contained in the paintings and petroglyphs left on the walls of Colorado and Utah canyons hundreds or thousands of years ago is as fascinating as it is difficult.

This paper presents the initial results from the research on one of the settlement clusters that consists of around 40 small sites and the community center that were built by ancient Pueblo people in the Sand Canyon area of the southwestern part of Colorado in the 13th century AD. The scientific investigations encompass the documentation of the architecture and settlement structure, as well as petroglyphs and paintings from selected sites.

The rock art and murals from the area include humans and animals, spirals, concentric circles, as well as other geometric images. The interpretation is based on archaeological studies and the oral tradition of contemporary Pueblo people.

Introduction - Rock art of Pueblo culture in the Mesa Verde region

The genesis of rock art in the Southwest and the Mesa Verde region is much older and predates the arrival of Pueblo culture, and was no longer relevant in later periods only of their culture. However, the Pueblo managed to take over the cultural scene for over 1,000 years, including the iconography of rock art in this area. We owe our understanding of many elements of this iconography to the ethnographic and anthropological studies conducted among the Pueblo Indians from the 19th and 20th centuries up to the present day. In ethnographic sources, as well as the rich sphere of oral tradition, which today also provides enormous help in the analysis of rock art iconography, we find a number of helpful tips for reconstructing the function and significance of rock art in various cultures of the Southwest. It should be clearly acknowledged that the analysis of rock art iconography in this region is also extremely helpful to archaeologists and anthropologists interpreting and reconstructing various phases of Pueblo culture development, including pre-Columbian, as well as other cultures of the region; this applies equally to other parts of the world (Bernardini 2005; Ferguson and Colwell-Chanthaphonh 2006; Rozwadowski 2009).

Rock art in the Mesa Verde region can be found in human settlements, as well as far away from human communities, and in terms of the landscape in niches and rock shelters, on canyon walls, rocks and individual boulders. It seems that especially rock art from the archaic

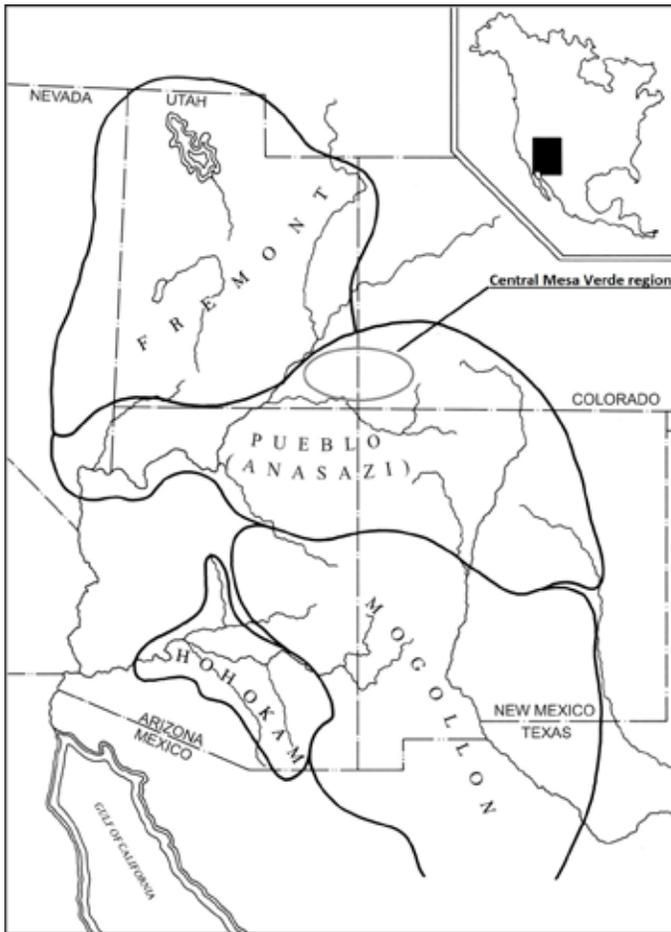


Fig. 1. The location of the North American Southwest and the Central Mesa Verde region (after Cordell 1997: Figure 1.1. modified by M. and M. Przybyła and the author).

period and the beginning of the development of Pueblo culture in this area (the Basketmaker II period, around 500 BC–500 AD) was often placed some distance from settlements, for example, near water sources (Cole 2009: 119). It also seems that the rock art of the Pueblo I–III periods (700–1300 AD) and later was undoubtedly rooted in earlier periods (Cole 2009; Schaafsma 1980), but was most often placed in the settlements themselves, or in their immediate vicinity.

The two main periods of Pueblo culture are as

follows: Basketmaker II–III (1000/500 BC.–750 A.D.), and Pueblo I–V (700/750 AD–present) (Lipe et al. 1999), and in the past, the widest territory inhabited by Pueblo Indians (Fig. 1) was the vast area that today encompasses the southern parts of Utah and Colorado, and the northern and middle parts of Arizona and New Mexico (Cordell 1997; Plog 1997).

Today, there are 20 contemporary Pueblo communities on reservations in Arizona and New Mexico. Consequently, Pueblo culture exemplifies cultural continuity from ancient times to the present day.

In the 12th and 13th centuries AD, this may be due to conflicts of greater intensity and frequency than those of earlier periods, possibly between various settlements and settlement clusters, as well as strangers from outside the Pueblo world (Cordell 1997; Lipe et al. 1999). In this case, life, including spiritual life and religious practice, was centered within the settlements themselves, or very close to them. In addition, unfavorable tendencies, both environmental and climatic, and also connected with social pressure and intensified conflicts and wars, were not a one-time or short-lived phenomenon, but rather extended over time (probably throughout most of the 13th century AD), and were reflected in the rock art of the region. This is seen primarily in more numerous depictions of battle scenes. Figures of armed warriors, often with huge shields covering most of the body, and portrayals of battle scenes appear much more often in rock art (and also in the iconography of pottery and wall murals) of the Pueblo culture in periods of intense conflicts and struggles than in the 13th century AD.

Sand Canyon-Castle Rock Community Archaeological Project focuses on analysis and reconstruction of the settlement structure and sociocultural changes that took place in the

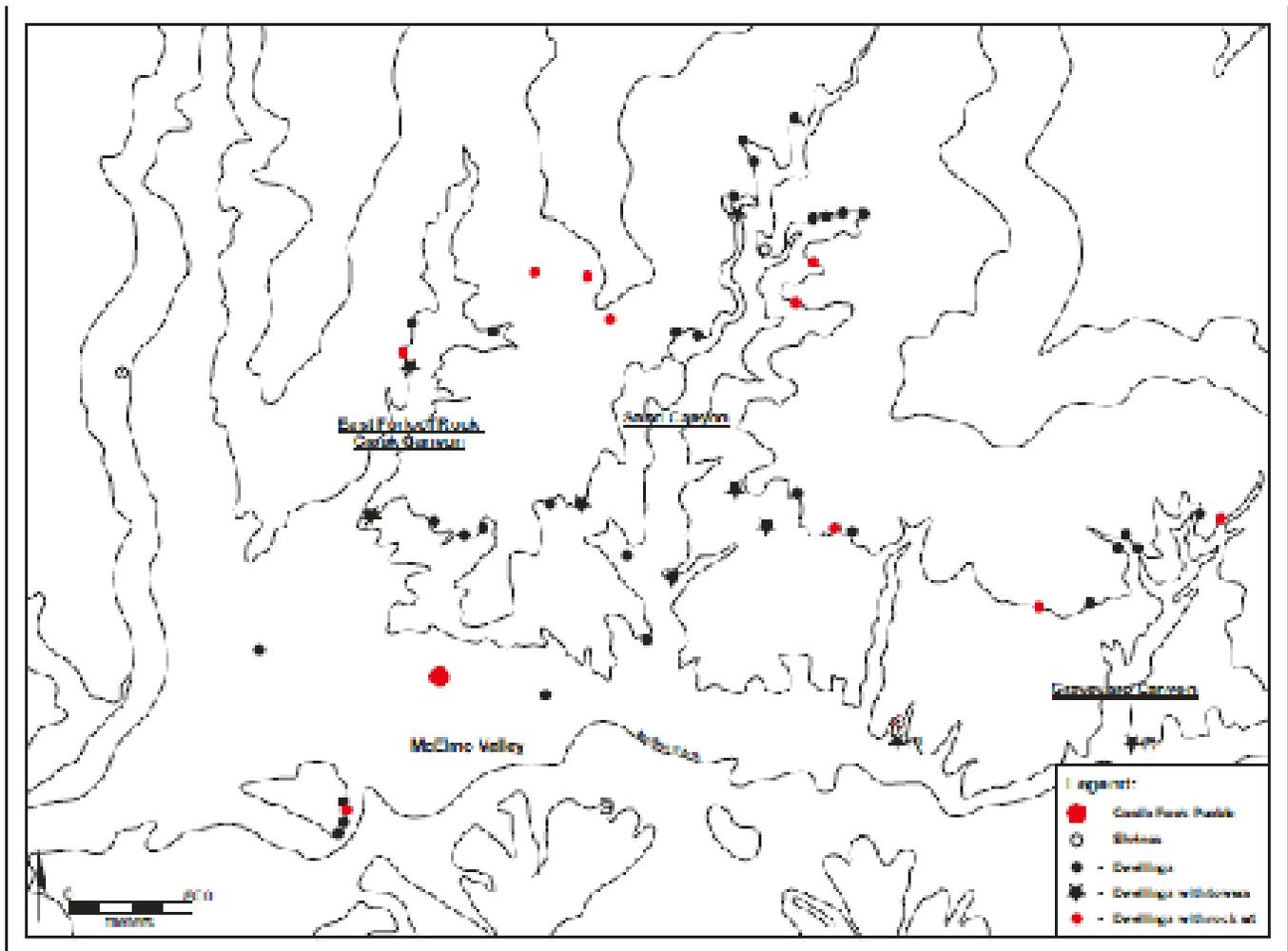


Fig. 2. Location of sites in Castle Rock Pueblo community from the thirteenth century A.D. (sites with question mark are with not certain chronology), by Sand Canyon-Castle Rock Community Archaeological Project.

Pueblo culture during the 13th century AD in the Mesa Verde region (Palonka 2016; Palonka et al. 2015).

The project is carried out by the Institute of Archaeology at the Jagiellonian University in Krakow, Poland and the project director is Dr Radosław Palonka. The research project is conducted mainly in three canyons (Sand Canyon, East Rock Creek Canyon and Graveyard Canyon) that are part of Canyons of the Ancients National Monument, a legally protected

area (Figs. 2, 3). These canyons contain the remains of around 40 small sites and one large community center, Castle Rock Pueblo, which probably functioned as a community of allied sites all dated to the 13th century AD. This paper presents some results of the project work between 2011 and 2017, with a focus on the documentation of the rock art from the area. Rock art in the Castle Rock Community is represented both by Native American petroglyphs and paintings and also by modern graffiti (initials,



Fig. 3. Site 5MT135 (Sunny Alcove), cliff dwelling located on west side of Sand Canyon documented by Polish Project in 2011-2014. Photo by R. Palonka.

names and dates).

Ancient petroglyphs and paintings in different sites in the community include mostly geometric designs, like lines, bird tracks, zigzags, concentric circles and spirals. It also encompasses fighting and hunting scenes, anthropomorphic figures (possibly shamans), hand prints and clan symbols. Most of the rock art is placed within a dwelling site's boundaries, but we have to remember that some paintings and petroglyphs are not contemporaneous with the 13th century AD settlements.

Fighting warriors in Castle Rock Pueblo

At the largest site of the group, Castle Rock Pueblo, at least four places have been confirmed to have various examples of rock art (only petroglyphs). The most famous scene at this site is a panel of three warriors fighting each other (Fig. 4). Two figures are armed with bows and arrows, and stand with their backs to each other (which might suggest mutual defense or a joint attack), while a third figure, holding an object (probably a shield), is falling or sitting down while facing one of the bow-bearing figures.



Fig. 4. Petroglyph panel depicting three fighting warriors from Castle Rock Pueblo, the community center located in Sand Canyon. Photo by M. Znamirovski.

The portrayal of fighting figures in profile with a sort of hump on the back is not very common in the rock art of the region, and it evokes an analogy to similar portrayals in the southeastern part of Utah; likewise for the so-called antennae (probably a type of feather ornament) visible on the heads of the two warriors standing with their backs to one another (Cole 1990: Plate 60; Kuckelman 2000, ed.; Schaafsma 1980: Figure 126).

Castle Rock Pueblo was a community center in the Mesa Verde region in the 13th century AD. The village was probably founded in the 1250s, as indicated by tree-ring dates.

The latest tree-ring date is AD 1274 and the total number of residents has been estimated at about 75–150 (Kuckelman 2000, ed.). Excavations conducted in the 1990s revealed that the settlement was attacked, as indicated by human remains representing at least 41 unburied

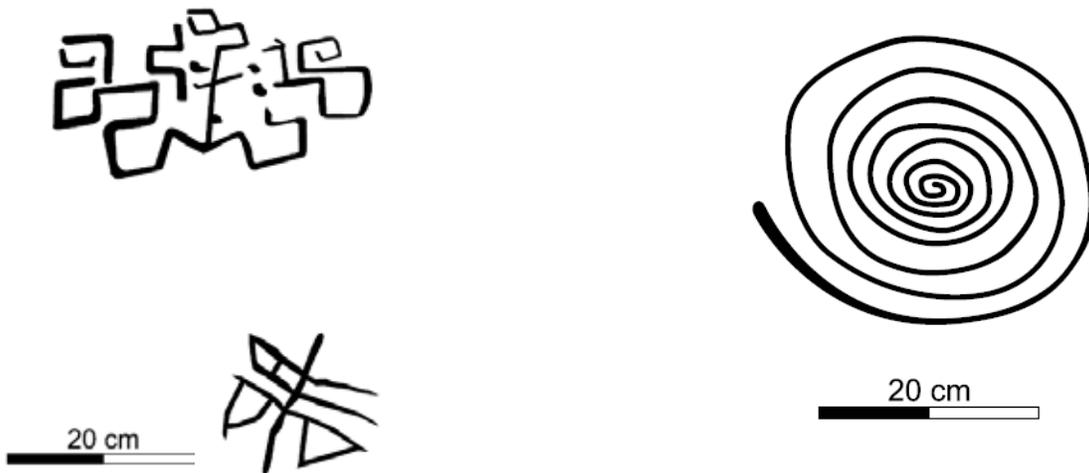


Fig. 5a. Two Story House in Graveyard Canyon during the documentation and the examples of the petroglyphs from the site. Fig. 5b) geometric designs with frog-man in the center as interpreted by Hopi consultants. Fig. 5c) spiral that might have been connected with the astronomical observations of possible winter solstice. Photo by R. Słaboński, drawing by M. Znamirowski.



Fig. 6a. Laser scanning the Site 5MT129 in Sand Canyon with preserved architecture in the alcove and petroglyphs outside it. Photo by M. Znamirovski. Fig. 6b.

The rock art panel from the Site 5MT129 showing spiral (connected probably with the astronomical observations), concentric circles, lines, drilled hole and other designs. Photo by M. Znamirovski.

individuals, some showing signs of violent death, as well as burned structures.

These data correspond with the oral tradition of Hopi people that was recorded in the 1870s about the three-day battle that presumably took place at Castle Rock between ancestors of the Hopi people and possibly Ute ancestors before the final migration of Pueblo people from the Mesa Verde region. According to the information from the Hopi oral tradition, Ute invaders attacked them for food. Kuckelman infers that the petroglyph panel was created during the occupation of the settlement, or it was made by the survivors before or after the battle at Castle Rock Pueblo that forced the surviving residents to migrate (Kuckelman 2000, ed.). This could be one of the possible explanations of the final days of Castle Rock Pueblo.

In addition to the panel of warriors, the northern part of the site has a flattened rock in a rather inaccessible place, with several petroglyphs that, according to some researchers (also based on interpretations of the oral tradition), are related to water symbols (Kuckelman 2000, ed.; Cole 1990).

The water symbol, in the form of a spiral and meanders, is also depicted in the form of petroglyphs on two large stone blocks located in the northwestern part of the site. On the south side, in the narrow passage between two rocks, which was once bounded by architecture, are depictions of two curved lines about 45 cm long and 5 cm wide. Most often, such portrayals are interpreted as specially shaped sticks (a type of boomerang) for hunting rabbits.

Yet here oral tradition provides other possible explanations: one of the Hopi elders visiting this site in the early 1990s claimed that it was a symbol of one of the Hopi clans, the Water Snake clan (Kuckelman 2000, ed.).

Right next to the last of these petroglyphs is a small panel with geometric representations,

including rectangles, incisions and small, hollow recesses arranged in lines, the whole of which is quite difficult to interpret.

Our visit with three Hopi men at this site in 2016 revealed one more petroglyph panel that our Hopi consultants interpret as a map showing particular parts of the canyon with the locations of different sites and water sources. It shows wavy lines with dots on both sides of the lines.

Shamans and spirals

An interesting and very difficult matter to interpret are the images of trapezoidal or triangular anthropomorphic forms. These figures are in several sites of the studied settlement cluster, but only at two are they quite large (40–60 cm) and located in fairly exposed areas in the middle of each settlement. At the Vision House site, located in the eastern part of Sand Canyon, this trapezoidal figure carved on the rock is located above the main complex of buildings, on the ceiling of a rock shelter. The painted panel in the Gallery, a settlement in East Rock Creek Canyon, features at least three trapezoidal or triangular figures, two painted white, and one painted red (this one is the best preserved) with arms down along the torso, or raised up (Fig. 7). One of the figures has a poorly preserved feather headdress, which was only visible after analyzing images using graphic programs and filters (Fig. 8). The middle figure on this panel holds an undefined object in the left hand; analogies to similar representations from the southeastern part of Utah show figures holding large containers (perhaps baskets) woven plant shoots and fibers, or also decapitated human heads. At this point, due to the degree of preservation of the painting, it is difficult to clearly define its character, although triangular and trapezoidal figures are characteristic of earlier periods and are most often interpreted



Fig. 7. Room B at the Site 5MT264 (The Gallery) with preserved plasters and paintings on interior walls of the second story and rock art (paintings) located in the center of the site. Photo by R. Ślaboński

as shamans (Schaafsma 1980: 109; Slifer 2000: 27), while figures with feather headdresses can symbolize chiefs or warriors.

Representations of such anthropomorphic forms (both petroglyphs and paintings) are most characteristic of this region for the period of the third to fifth centuries AD. Often, such representations belong to the eastern variants of the so-called San Juan Basketmaker anthropomorphic style (Cole 2009: 117-143; Rozwadowski 2009: 228; Schaafsma 1980: Map 3, 73, 109-121; Slifer 2000: 26-34), where San Juan mainly refers to the location of this style's occurrence in the San Juan River basin of southwestern

Colorado, northwestern New Mexico, southeastern Utah and northeastern Arizona. The most intriguing thing is therefore the relation of these representations made in the middle of the first millennium AD, or at least several centuries earlier than the first settlements with stone architecture. Undoubtedly, the stone builders had to see these images, and a very intriguing question remains: what significance did the images have for them, since they were found precisely in the middle of their settlements? A fairly numerous group of rock art representations in the settlement cluster our group has studied are geometric

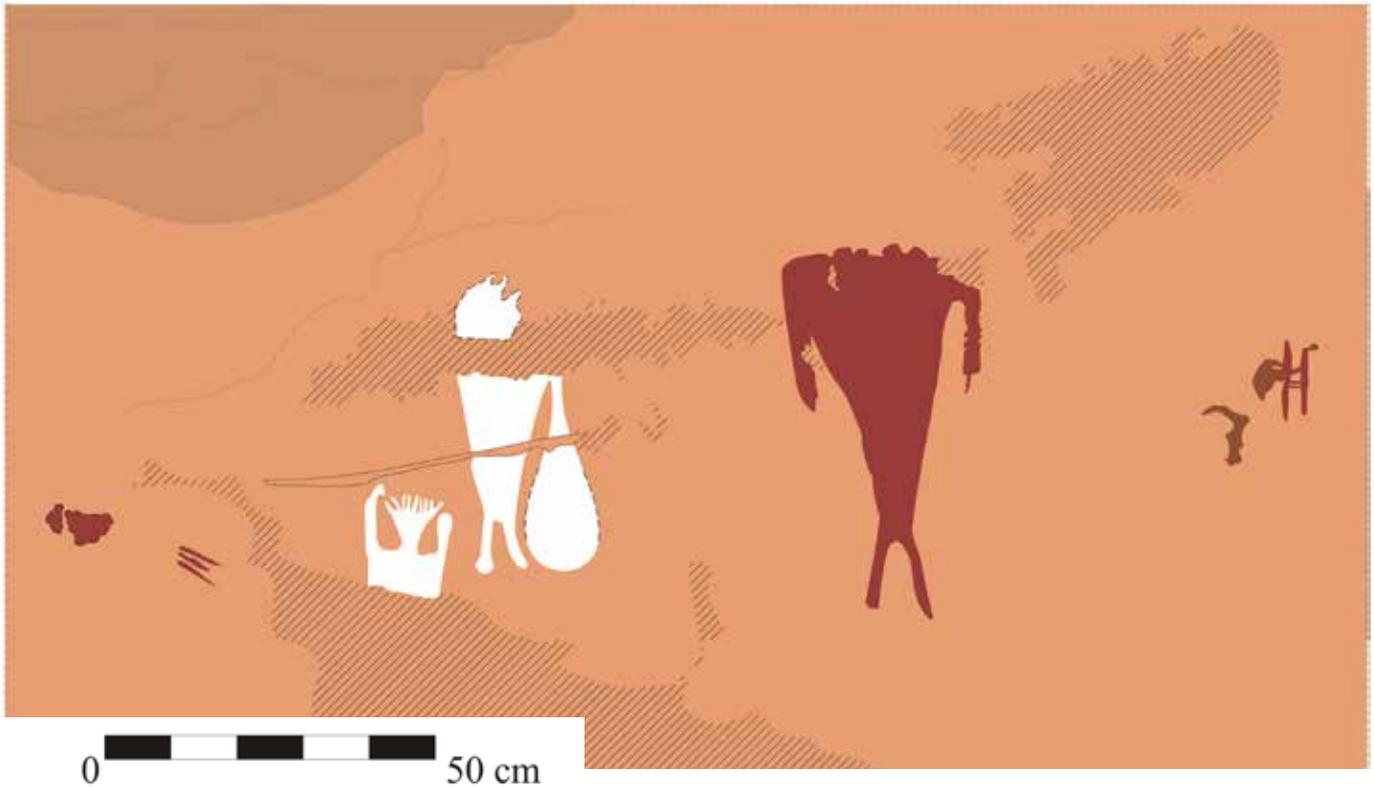


Fig. 8. Drawing of the rock art panel from The Gallery site showing shamans and/or warriors or chiefs. Drawing by A. Kucia.

motifs, such as spirals, concentric circles, zig-zags, lines and abstract motifs. For example, at the site 5MT129 in Sand Canyon, there is a panel of petroglyphs on the western side of a rock niche in which the main part of the settlement was located (the rest of the settlement was located on the slope below this rock shelter). Most typical for this panel are spiral representations and concentric circle, along with other geometric motifs (Figs. 6a, 6b). The spiral motif can have a variety of meanings, but for the Pueblo Indians it most often symbolizes water, including a water source, but a spiral is also often interpreted as a motif related to walking or migration (Cole 2009: 192–193; Patterson 1992: 185–186). Some of the spirals or concentric circles were carved in specific places and have astronomical relationships, insofar

as the sunrise on the days of the summer and winter solstices, as well as the spring and fall equinoxes, falls on specific parts of the spiral, marking those days of the year. A spiral carved on a rock niche above the main complex of buildings is also found at the Two Story House site in Graveyard Canyon. This spiral could have been visible from a path that runs below this site, around 25–30 m to the south, and might have had informational implications for people passing by.

Colored plaster and murals were also found on the rocks and walls of buildings at several sites of the surveyed settlement cluster. At The Gallery site, they were done in reddish brown, white and yellow, and placed on two opposite walls of the second floor of the Room B, from the floor of the first story to about halfway up

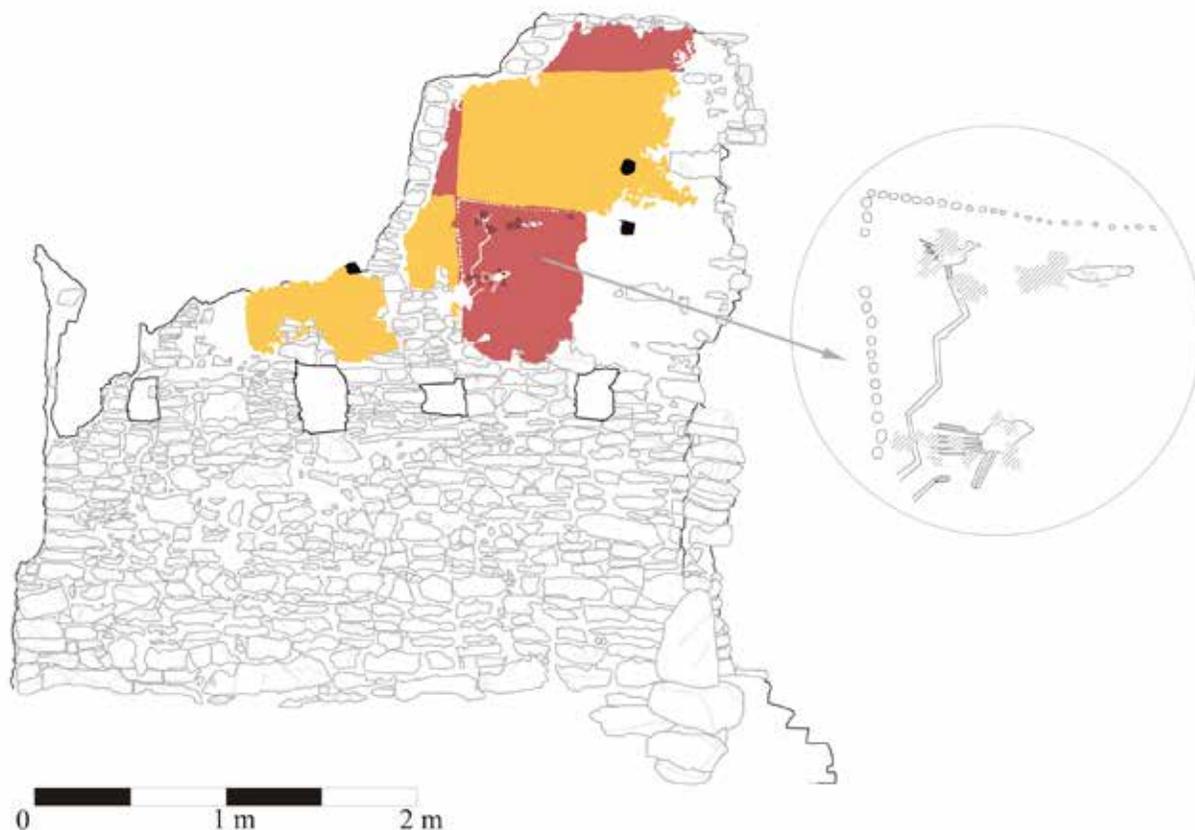


Fig. 9. Mural in Room B at The Gallery in the context of the preserved part of the architecture. Drawing by A. Kucia.

the walls (the ground floor was often used for storage, while the upper floors were for residential rooms) (Figs. 7, 9). Several layers of multicolored plaster have been preserved. In addition to the plaster on one (northern) wall, geometric images have been preserved: dots (about 50), a symbolic depiction of a snake (a symbol of fertility and harvest in the Pueblo culture) and three birds, probably turkeys; some of these images are now destroyed.

At the Two Story House site in Graveyard Canyon, colored plaster and paintings on plaster have also been preserved on the rock that

served as the rear wall of the building. The murals are similar to those used at The Gallery site: reddish brown and white are the dominant colors. Along with the plaster there are geometric motifs, probably in the form of several triangles that might symbolize mountains. The rock shelter where the Two Story House site is located faces directly south to the highest summit in the area (Sleeping Ute Mountain), which rises to a height of 2996 m above sea level, and is 3–4 km away from the site. It is a sacred mountain for the contemporary Ute Indians, who have a reservation there today, and it almost certainly



Fig. 10. Consultations with Hopi representatives in 2017 at the Two Story House one of the sites in Graveyard Canyon with preserved rock art (petroglyphs), probably connected with astronomical observations and religious practices. Photo by M. Znamirowski.

had special significance for the ancient Pueblo Indians (modern Pueblo groups, like the Hopi, claim that this mountain certainly had a sacred meaning for their ancestors, who built stone settlements in rock niches). This is just one example of the relationship of architecture, settlement location and rock art iconography to the surrounding landscape and probably religious practices associated with it.

At the Two Story House site, there are also numerous examples of petroglyphs that can be grouped into at least several panels (at least four). One of the most visible panels is located in the western part of the site at the edge of a

rock niche, just off the path leading to that niche. It contains abstract and complex geometric motifs that are very difficult to interpret (Figs. 5a-5c). Other panels contain small (about 10–12 cm) anthropomorphic figures, symbolic depictions of bird tracks (probably of the turkeys raised by Pueblo Indians), lines and zigzags. These symbols occupy almost the entire length of the central part of the stone wall that forms the back of the building. Above the highest preserved building, on the ceiling of the rock shelter, there is also a petroglyph in the form of a well-preserved spiral which, as previously described, could be associated with a water

symbol or astronomical observations.

Conclusions

The Sand Canyon-Castle Rock Community Archaeological Project focuses on analysis and reconstruction of the settlement structure and sociocultural changes that took place in Pueblo culture during the 13th century AD in the central Mesa Verde region, southwestern Colorado. It includes the detailed documentation, analysis and interpretation of the architecture, and also murals and rock art from the area, including paintings and petroglyphs. The archaeological interpretations are supplemented by ethnographic analogies and analysis of the oral traditions of modern Pueblo people.

Ancient rock art in the Castle Rock community is represented both by petroglyphs and paintings (usually in white, red or brown colors). The petroglyphs include mostly geometric designs like lines, zigzags, dots and spirals. Concentric circles and spirals can be appropriately interpreted as a water source (and thus purely informational), or as a symbol of migration to other world or traveling (symbolic meaning). Some spirals or concentric circles served for astronomical observations, especially as solar calendars or markers of the summer and winter solstices and the autumn and spring equinoxes, when the rising sun shines to cast patterns of light on the middle or different part of the spiral. Such observations were still conducted in the early 20th century AD in different Pueblo groups, including Hopi and Zuni.

Interesting human images are depictions of warriors fighting with bows and arrows (the best known rock art panel from the community, located at the Castle Rock Pueblo that may correspond with the oral tradition of Hopi that was recorded in the 19th century about the three-day battle that presumably took place at this site between ancestors of the Hopi people

and possibly Ute ancestors) and anthropomorphic figures with triangular bodies interpreted mostly as shamans or warriors. The latter are dated with analogies to similar images in Utah and Arizona to the third–fifth centuries AD (the Basketmaker period) and are in the middle of the settlements dated to the 13th century AD. A question thus remains: What did these symbols say to the people who built settlements there, seeing earlier paintings and petroglyphs that might have been religious in nature? What was so attractive about them, that they brought people hundreds years later? Or why didn't the presence of such old paintings and engravings disturb them from choosing these places for their settlement locations? Or perhaps they regarded them as something particularly protective in these times of social and environmental unrest, perhaps appealing to old cults and beliefs to protect themselves.

The murals documented by the project team are preserved in two sites and represent mostly on walls on the second levels of the buildings and covered with white, yellow or brown plaster. In The Gallery site in Room B there are also dots painted in white (around 50 dots in total), a white zigzag line (most likely this symbolically represented the serpent, a symbol of fertility of the land and the underground world), and three birds, probably parrots or turkeys, which were raised at this time by the Pueblo society and in the 13th century AD. In the Two Story House site that faces directly south to the highest mountain in the area (Sleeping Ute Mountain according to Ute Indians and sometimes called Bear Mountain by Hopi) there is also a mural on the cliff face with roughly preserved triangular shapes that may represent the mountains that have been, and still are, important landscape and religious symbols for the Pueblo societies.

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NEURO-ETHOLOGICAL MESSAGES FROM ROCK PICTURES

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Abstract

Anthropomorphism has been considered as evidence of a plenum for religious theology. This sort of idea has been noted by various anthropologists since Malinowski (1948, 1979) formulated the theory that divinities represented agencies of intentions that could not be explained as direct causalities in the contingent world. Malinowski (1979) identified that these symbols were ascribed as carriers of unexplained intentions and also as surrogates of wish fulfillments. We suggest that human configurations from preliterate forager societies appear to have innate psychological objectivity.

A neuro-ethological analysis of these shapes and configurations indicates that animal-human figures (also called patterned body anthropomorphs, aka PBAs) of multiple genders (including standard males and females and notable transgenders) that we see on rock surfaces essentially perform instances of what Lorenz and Martin (1971) called fixed-action stimulation for any contemporary viewer, just as it did for our ancestors. The possibility exists that PBAs contain visual components that evoke intense, though transient, reflex states. These responses of subjects towards their visual characteristics serve to demonstrate that the prehistoric drawings of anthropomorphs

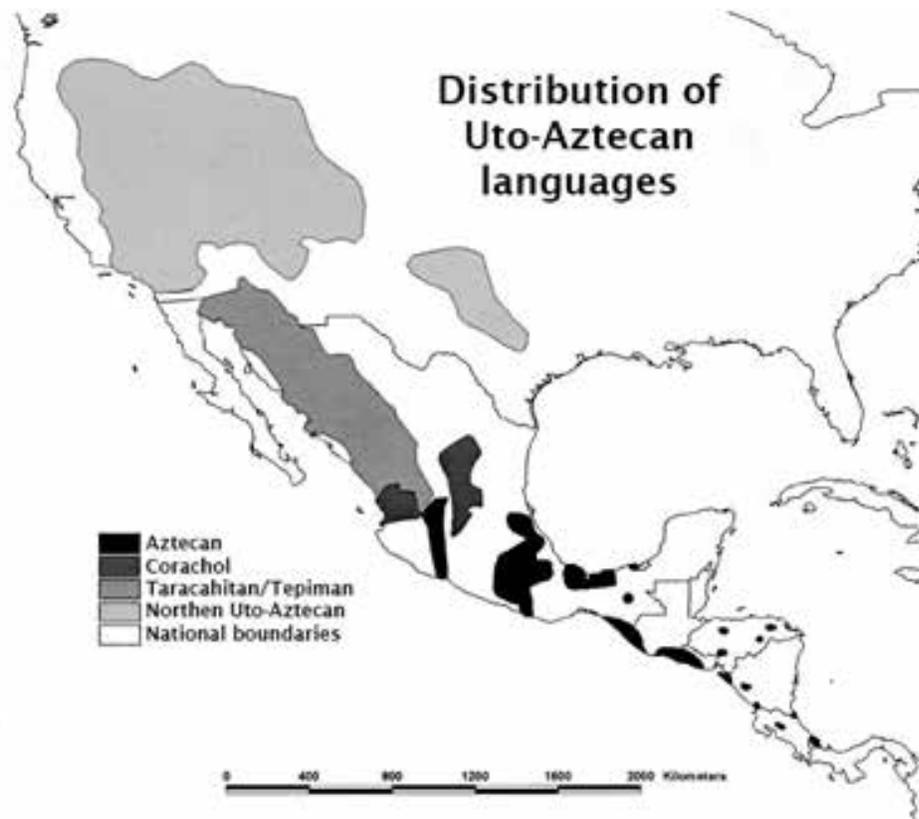
in particular were perhaps meant to sensitize and prepare an individual with what Boyer called counterintuitive experiences, in which common memory combines with unexpected properties and facilitates emotions of transcendence, fear or strangeness. These data support the thesis that such visual images communicate somewhat independently from their social value and utility to create and deliberately nurture an impression of atemporal numinosity. The latter suggestions perhaps help in deducing the symbolic message of these ancient religious symbols.

Keywords: Coso representational rock art tradition, counter-intuitionism, invariances, neuro-ethology, PBAs, archaic Uto-Aztecans, visual representation, symbolic inversion, petroglyph, pictographs.

INTRODUCTION

Decorated Animal-Human (Patterned Body Anthropomorphs) Rock Drawings from Archaic Uto-Aztecans Figurative Imagery

Prehistoric rock paintings and drawings can be observed in a very large region of the Great Basin and also further east to include the American southwest and even south into Baja California and northern Mexico (Schaafsma 1986; Quinlan and Woody 2003; Garfinkel et al. 2009). The latter, like much of the related rock art iconography in the entire ancient archaic Uto-Aztecans rock art compendium includes a distinctive corpus of sophisticated anthropomorphic iconography (Furst 1972; Schaeffer and Furst 1997; Brown and Emery 2008; Amador 2017). These remarkable figures clearly manifest certain consistent attributes, including key design features associated with their forms. In the Coso representational rock art tradition (Schaafsma 1986) in particular, we see a plethora of anthropomorphic representations.



Map 1. The Uto-Aztecan language spread

These decorated animal-human figures are often classified as PBAs. Such depictions often appear to create or communicate a story or narrative with their recurrent visual characteristics. The narrative that they valorize falls in with an impression of numinous existence: their visual structure betrays effects of atemporal appearance, transitoriness and above all a sense of a delimited daze or trance that reinforces their equivalent ethnographic identities, if any. These memes vary widely but in the Cosos, as in many of the other broadly related areas, they have these overarching characteristics: (a) full-front facing somewhat static displays; (b) a concentric circle head often with a central bull's eye like element; (c) a flourishing gesture with raised arms either thrust upwards towards the heavens or extending outwards in an open and

enveloping embrace; and (d) associated smaller figures (like spirit helpers) and ritual/ceremonial objects and adornments (Maringer 1979; Garfinkel 2006; Garfinkel et al. 2009; Maddock 2015). We would suggest that the patterned character of these depictions, their gestural action and head forms all comprise a grammatical trope common to PBAs more widely. We also believe that there are related cultural manifestations across the larger ancient archaic Uto-Aztecan geographical expanse, a vast geographical space spanning from the Great Basin and American southwest in the west to the south in the central highlands of Mexican Mesoamerica and even into the heartland of the Baja California Peninsula (the latter being the ethnographic territory or the Cochimi of Yuman linguistic affiliation).

OBJECTIVES OF THE RESEARCH

Our objective is to show how such visual characters operate as cognitive stimuli for a certain set of behavioral responses, and more specifically to cause the viewer to interpret and sense their numinosity or the feeling of sudden appearance. Predictable characters on humanoid PBAs in Coso, Sevier, Anasazi, Sonoran, Huichol and 'Great Mural' rock art traditions appear to act as purposive markers or codes in a neuro-ethological system, each with its own kind of affect and valence stochastics (Hodgson and Mukhopadhyay 2016). We introduce a brief psychological experiment in order to study the cognitive effects of these visual characters (see below).

If the style of these figures is a repetition of effects for the PBA characters (by means of which stimuli are evoked and maintained), then there should be reasonable grounds to argue in favor of the innate power of these images. What this implies is that rock art iconography may owe its origin to cognitive negotiations with the human neural system, especially deep-seated and ancient instinctual animalistic responses in the human ethological systems. It appears that manifestations for such visual-mimetic tendencies are apparent in some of the most ancient preliterate artistic traditions (c. 30,000–40,000 years before present). We would therefore like to suggest that these characters are psychologically efficacious constructions that either reinvigorate or transcend the limits of the socially binding narrative associated with them.

Coso PBAs and Uto-Aztec Counterparts

First, it is necessary to construct a morphology of these neuro-ethological elements in a proto-Uto-Aztec index, where their manifestations are indeed strong and statistically significant (Garfinkel 2006; Garfinkel et al. 2009; Maddock 2015). What is commonly known in the anthro-

pology of the Great Basin as the Numic spread appears to have reproduced some later yet largely cognate image styles in the Fremont Valley and Sevier rock art traditions with respect to a series of patterned anthropomorphic portraits. Thus, there seems to be general agreement in the anthropomorphic representations in such diverse prehistoric cultural rock art traditions as the Fremont-Sevier and Moab anthropomorphs, and in the Coso Range (situated on the extreme western fringe of the Great Basin) with homologues in the Baja Peninsula, Sonora and even similar Huichol or Nayar rock art.

Correlations exist in the southern clusters as well, between Olmec, Mayan, Aztec and the Uto-Nahua iconography (Negrin 1975; Neurath 2013), and especially similar are affinities to the concentric patterns of the heads of the PBAs found within the Coso Range (Schaafsma 1986; Quinlan and Woody 2003; Garfinkel et al. 2009; Maddock 2015). The circle and the concentric lines (Fibonacci spirals excluded) of more southern Mesoamerica, such as were symbolized in the cenotes (circular passage ways) of Mayan cosmology and the centric eyes of Huichol iconography, have been shown to have either direct or derivative correlation with the Coso PBA concentric circle head forms (Mukhopadhyay and Garfinkel 2016). Moreover, floating or flying avian features of the PBAs may be indicative of the central theme of shamanic soul flight and/or an ethereal journey to the spirit world (Vitebsky 1995). This idea may (or may not) constitute an archetype for divinities in much of Mesoamerica, the Great Basin and the American southwest.

Evidence from the adoring posture of PBAs

But simple effects created on the visual plane of PBAs reveal how they tend to jump on the viewer like a numinous character. Such gestures act as if they were some kind of



Figure 1. Three Patterned Body Anthropomorphs in Big Petroglyph Canyon. Concentric Circle faces on each riveting viewers attention, Coso Range, Naval Air Weapons Station, Ridgecrest, California, USA. Largest figure approximately two feet in length.

approaching co-religionist participant or adorant (Maringer 1979). The figures frequently raise both arms extending outwards or thrust upwards. Such a posture may be interpreted variously as supplication, an emphatic plea to the ethereal plane or even as a surprise. Alternatively, the gesture could be interpreted as a communication of endearment and simultaneously caution, perhaps also acting as a bit of an intruder with a reminder of divine fear. Given the considerable anxiety that must have been a constant in the context of the trepidations and stressors in a mobile hunter-gatherer society,

such depictions would appear rather sensible and even predictable (Maringer 1979).

Flat frontal views along with a floating temporality effect generate the numinous experience for any viewer. The frontal posture is statistically significant as it accounts for approximately 95 per cent of the PBA morphologies noted in the Coso corpus ($n = 200$ or the 250 inventoried) (Maddock 2015; Garfinkel 2006; Garfinkel et al. 2009; Kitchell 2010). The Coso Range rock art tradition dates from an ancient age (c. cal 8000 BC), much earlier than the known migrations of the northern Uto-Aztecan branch from



Figure 2. Anthropomorphic imagery from Great Mural Rock Art region, Sierra de San Francisco, Baja California, Mexico. Approximate dimensions, largest figures about 10 feet tall, Baja California, Mexico. Note hands and arms thrusting upwards and skyward in surrender / adoration posture.

the southwest towards Mexico.

Full Frontal Views - Floating and Numinous

The first important visual character is constituted by the full frontal view, always confined to 2D plane, greatly reducing the problem of stereoscopic accommodation of angles and correspondences with 3D real-life objects. The essential lack of solidity in such representations demonstrates that two-dimensionality is a recurrently cultivated feature, and

is consistent with the reductive visual optimization that apophasic perception defines as a consistent feature of the arts associated with many ancient religions (Wujastyk 2009). The frontal view is used in many anthropomorphic forms, including the Coso PBAs, Fremont and Sevier styles (Furst 1972; Schaeffer and Furst 1997; Quinlan and Woody 2003; Garfinkel 2006; Brown and Emery 2008). The frontal, floating appearance continues with prominent representation in the

					
Coso	Fremont	Sevier	Paiute (Utah)	Hopi (Arizona)	Hohokam
					
Sego, Utah	Horseshoe Canyon	Barrier Canyon	Huichol	Baja	Sonora

Figure 3. Frontal, isomorphic, two dimensional projection is a chief feature of the Archaic Uto-Aztec rock art compendium

visual styles of the ancient archaic Uto-Aztec groups (see Figure 1). Perhaps indefinite flotation effects are even more marked in some of the southern Mexican counterparts of these frontal anthropomorphs.

Avian Attributes

The floating and numinous elements are often paired with a medley of avian attributes, sometimes with visual derivations of bird-like legs or feet that are particularly expressed in the Mesoamerican clusters. Many of the Coso figures exhibit avian legs and claws (with three or four talons). This gives a peculiar quality to the image and reinforces some kind of flight metaphor. This is perhaps the last of the most important visual attributes, and is none the less an instance of major cognitive blending and polysemic imagery.

Equivalent elements of combinatorial animal-human correlates (as in the bird-person or the bighorn sheep head-dressed animal-human) are evident in other motifs that demonstrate conscious stylization. The bird's legs and claws may indicate at one level the shamanic soul flight (or passage) to the supernatural netherworld or alternatively an allusion to supernatural travels to the skyworld to capture and ultimately display a message relating to the intercommunication of these supra-mundane beings (or shamans) with human or animal spirits, ancestors or deities (Smith 1985; Garfinkel 2006; Kitchell 2010). In its more southern counterparts of the Tarahumara and Huichol iconography, the flight metaphor is aggrandized by a complete substitution of feet-like anatomy which are replaced with frills or floating appendages, resembling kites and banners or

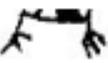
				
Feet with Claws (Coso)	Claw-shaped hand or fingers therein (Coso)	Wings (Huichol)	Feather-like appendages (Paiute, Utah)	Feather or extended hair-like arms (Paiute, Utah)

Figure 4. Avian attributes visible in various locations around Coso, Arizona, and Utah.

even the tail feathers of birds. Similarly, a relatively large number of Coso PBAs have a characteristic fringe at the base of their torsos that some researchers believe are the tail feathers of birds (Jacobson-Tepfer 2015; Boyd 2016:133).

It is all the more probable in the context of the 2D frontal projection that the avian feet attached to a hypothetical torso attribute provides a blended gestalt to the signal, namely that they are thin and delicate entities that are capable of being airborne or in-flight. The effects such visual shorthands generate would be ethologically associated with flight and appearance as well as disappearance (Vitebsky 1995). These dream-like, diaphanous qualities provide an atemporal nature of the visual experience that constitutes its own psychological story. Thus, anthropologically oriented functionalist ideas of signalling agency does not need indispensable support for the already innately operational representational grammar that informs the rich tapestry of Great Basin, American southwest and Mexican archaic Uto-Aztecan PBAs and cognates. Apophasic vision appears to provide power to these representations by means of definitive optical selection, in the case of the flat frontal character making this

association sharper in its outline, and therefore not requiring a 3D perspective (Wujastyk 2009).

Gender Embellishments

Finally, in any discussion of visual motifs, especially of the ancient archaic Uto-Aztecan type, a feminine, divinity-shamanic role is sometimes readily apparent. The frontal motif has been used in Great Basin and eastern California rock art with much more complex effects involving gender attributes. These gender impressions are even compounded with two-spirit (transgender) androgyny supporting their unconventional metaphorical associations (Figure 4). What is relevant to gender attributes is the tessellated mat-like structure decorating the base of the torsos on many of the Coso PBAs, which often have a decorative edging, like frills or a fringe on a skirt or (as above) as tail feathers. This is another key aspect of the hypothesized animal master or mistress figures that are characteristic of this class of Coso PBAs (Garfinkel et al. 2009; Garfinkel and Austin 2011; Garfinkel and Waller 2012). In some other PBAs we come across even more convincing indications of gender. The skirt or frill motif in the PBAs might indicate, as

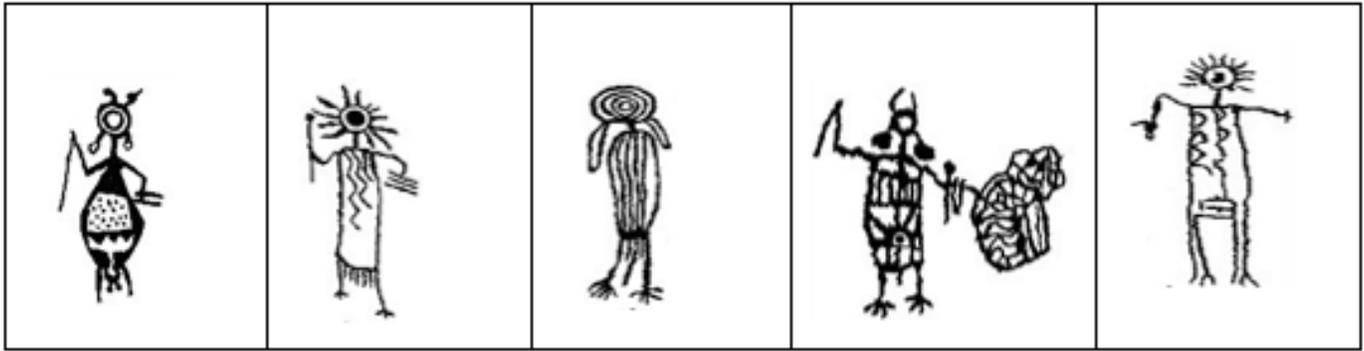


Figure 5. Gender seems to be represented with adornments and with especial reference to characteristics representing genitalia (pendant labia, mid-birthing, pubic fringe, anatomical indeterminance [with both male and female genitalia depicted simultaneously]).

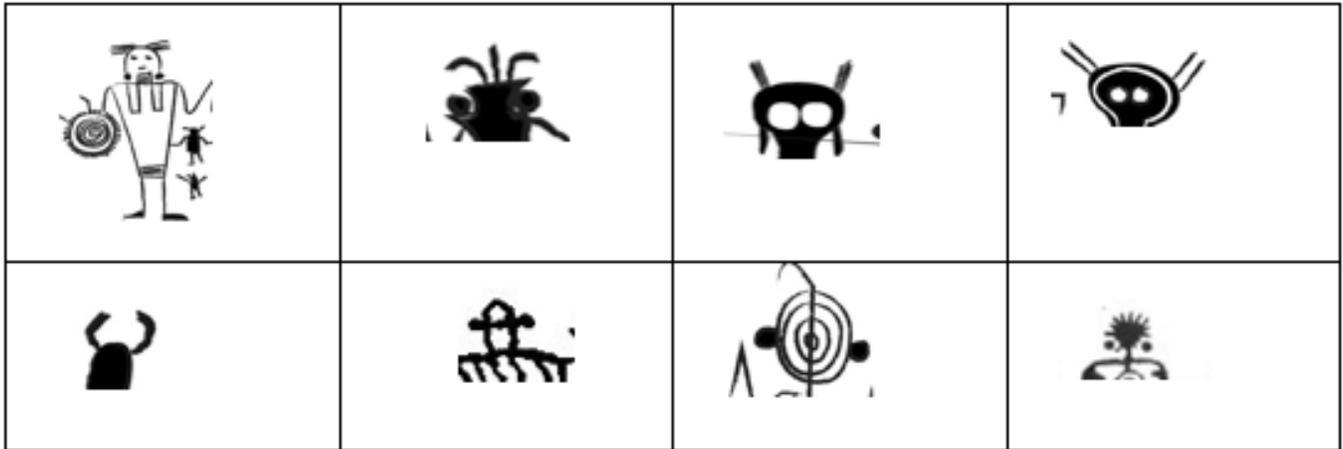


Figure 6. Adornments on hands, heads, ear and related characters ear-adornments, atlatl-like weapons, staff, head ornaments.

Marissa Molinar 2001), suggests a pubic fringe (implying a feminine gender) or even perhaps a vagina dentata motif, akin to representations of symbolic teeth that reappear in the creation stories for several Ute and Numic groups throughout the Great Basin and the Uto-Aztec groups of the American southwest, including the O'otam and Hopi (Steward 1936; Whitley 1992; Myers 1997; Quinlan and Woody 2003; Garfinkel 2006; Garfinkel et al. 2009). Although not adorning every PBA, 75 of the 400 PBAs identified in the Maddock (2015) study

exhibit just such a fringe pattern along the base of their decorated torsos. Hence, it is indeed a common embellishment, although not one uniformly occurring with every figure.

Effect of divinization

A variety of techniques are implicit in Coso and American southwest PBAs, as well as their Mesoamerican cognates, where the figures have a categorical principle that make them stand out as divinities, that is, having prominence and daze or intensity as power-wielding agents.



Figure 7. Apophasic eyes in the middle of a concentric circle, shaped face is exhibited in a large number of Coso PBAs.

It should be relevant to consider the psychological theories of perception of faces and animate objects, especially eyes.

A categorized perception of such arrays of human biological reflexes produces deeply ingrained behavioral impulses and motivations, even to the extent of generating the complex survival mechanisms of animals, including hominins who share them with the rest of the animal kingdom (Mukhopadhyay 2005; Helvenston and Hodgson 2010; Mukhopadhyay and Garfinkel 2016).

As Lorenz and Martin (1971), following Darwin, said, the commonest instances of behavioral responses to visual events like the approach of another individual, man or animal with a preordained set of intentions (like predation or affection), will automatically evoke reflexes in a viewer-percipient (Lorenz and Martin 1971). The visual effects of a predatory approach give rise to very advanced motivational behaviors in mammals and higher animals. The awe-inspiring, opto-motor reflexes of being aghast with fear or round-eyed with wonder, or unexpected, incongruous situations, may be biologically rooted to a primordial reflex of our sense of existence and our fear of being attacked or annihilated in the natural and conscious state of life (Mukhopadhyay 2005). The effects of visually potent representations like biological camouflage or terror tactics

have also been extensively studied (Ristau 1991; Burghardt 1991; Jones 1999; Heberlin and Adolphs 2005). These biologically visual reflexes could also explain how human cognitive subjects are likely to react to visual stimulations from the external world.

Geometrical configurations act as anticipatory stimuli for viewers of rock art especially because they provide the participants with a way to respond to analogical formations in the more complex and culturally charged sign systems characteristic of hunter-gatherer societies. Affective images are played out against a complex cultural backdrop in which shamans and shamanistic beliefs, animism, rituals, ceremonies and sacred oral narratives are conflated with natural, predatory visuals and entities. This is not so much of a social symbolism as one of efficacious signalling methods which carry human beings to a sensational moment. In that moment is an instance in which fear of the unencountered aspects of nature are combined to generate defence, negotiation and incredulous submission (Boyer 2001; Bering 2006). It is not just symmetrical faces that are attractive but also a set of arresting features might recall a range of neural reflexes into play. Any conjecture in this regard could be measured in the manner of the Lane et al. (1999) study of how such visuals actually affect respondents in an experiment on the visual effect of rock art

			
Startle Reflex	Mydriasis/Pupil Dilation	Emotional Surprise	Contralateral Limb Reflex

Figure 8. Examples of possible Startle Reflex categories that may be elicited when a viewer confronts rock art anthropomorphs. Such consistent patterns, if they exist, could be hypothetically utilized in assessment of psychological effects on any viewer. This explains the more detailed selection in Figure 10 (below) (Lorenz and Martin 1971; Lane et al 1999).

abstracts. Similar ethological conditioning has been studied in behavioral, non-rock art contexts (Schmidt 1997; Madsen and Simms 1998; Emery 2000; Dimberg 2000: 86). Positive and negative emotional responses can be unconsciously evoked through emotional face-to-face communication that sometimes occurs at the unconscious level (Schmidt et al. 2015).

However described, it is true that iconographic symbols wield an extraordinary effect on the cognitive process, and creates a kind of shock effect, producing startle reflexes of various gesticulatory visuals and postures. These same modes are employed in the related arts hen crafting masks, totemic dolls, effigies, deities and ultimately rock art. Examples of this communicative effect can be taken to the extreme, even to intangible conditions in the manner in which such symbols might even be magically claimed to create effects without any sensible or visible connections of causality (Spiro 1982; Scholl and Tremoulet 2000; Stern 2000; Sagiv and Bentin 2001). The same issues are now acknowledged in the literature on the subject

(Ruth 1974; McGuire 1990; Joyce 2005). Finally, one can note that rock engravings have been shown to have effects akin to hypnosis (Dimberg 2000).

The same process is visible in masks. Symbols are used in prehistoric art very cautiously and in a rule-bound manner. The affective technique turns a sign into an emotive signal in a sign like that of the eye, often inscribed in proximate or proportionate measurements within a head (irrespective of whether it refers to spirits, shamans or divinities), where it reappears in various combinations of positions and dimensions with great affective power. It is this kind of schematization that indicates a tendency toward a localized visual syntax (Heider and Simmel 1944; Conkey 1987; Guthrie 1993; Cohen 1997; Gosden 2005). The range of face-like, head features that appear on Coso and perhaps related ethnographic images from the indigenous Kawaiisu, Tubatulabal, Hopi or Zuni iconography, and especially Huichol and Nayar, constitutes some sort of ethological animism (Tanner 1948; Negrin 1975; Bird-David

1999; Neurath 2013; Amador 2017).

Interdisciplinary assumptions for experiment

In general rock art imagery is produced by techniques of illusion secured by use of simple outline drawings rather than filled-in content. Perhaps one way in which the efficacy of such sparing but powerfully evocative lineation can be measured is by a statistical analysis of how subjects react to line recognition. According to Wujastyk (2009), representation of an embodied soul in terms of simple outlines alone may function as a striking and evocative vision of the human body, even if it were a mere visual suggestion without all details of representation. A classic study by Lane and his colleagues provides an explanation of how visual cues from pictures affect us emotionally (Lane et al. 1998). The manner in which bodily gestures can affect the viewer and act as a mode of communication is also noted by Halton (2008) and Shusterman (2000; 2012).

A fascinating study has also been completed by Adeline Schebesh (2017), who thought it possible to employ professional actors to consciously reproduce the basic attitudes or body language of the gestural postures of each of four Aurignacian and one Gravettian anthropomorphic figurines (20,000–40,000 years old). The discipline of aesthetics has a long history of recognizing the efficacy of representations that closely follow, or in some way simulate, the human shape or postures. The result of developed motor skills which act as prerequisites for the formation of artistic shapes was evident in the later Holocene with full force, and gave birth to the visual subsets of prehistoric rock art images. Ideographs and finally even linguistic inscription or orthography could have been born out of a very basic method of inscription of visual and emotional responses.

In an interesting and complementary line of

research, Burgess Wilson (2011) has explored what he terms an empathic theory of religion, specifically with an eye toward understanding the neurological basis for how the human mind and body process and embrace supernatural agents and religion. Wilson concludes that such a neurological and physiological effect appears to have selective fitness values especially for small-scale cultures that might be able to better manage their natural resource base more sustainably. In essence, then, both these studies (Schebesh 2017; Wilson 2011) imply that the animal-human figures in prehistoric rock art have a communicative ability to affect their viewers with messages that are relevant for their systems of sustenance. They do so in both a mental and physical realm and have been shown to communicate an element of the vital life-force and a physical sensation of emotion. The latter is sometimes identified with the concept of an embodied cognition (cf. Martin 2009).

We developed the typology of visuals for our experiment from PBA-like forms based on assumptions underlined in such interdisciplinary approaches to the ontological character of visual cues in prehistoric representational systems in archaic Uto-Aztec contexts. The typology could be, in principle, true of rock art universals in other prehistoric cultures (Dowson 1992; Bednarik 2010; Neumayer 2013).

Experiment design

The experiment was designed for assessing the psychological impact of PBAs on a human audience. This simple exercise may be briefly described briefly as follows. A group of students was asked to respond to PBA outline diagrams in a series of PowerPoint slides (see inset in Figure 10). These images were projected on a large screen by a standard digital projector. The room was kept fully dark and silent in order

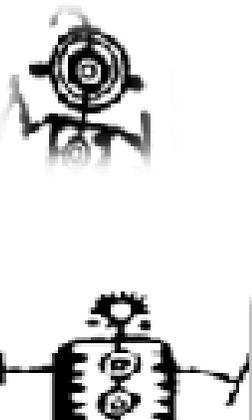
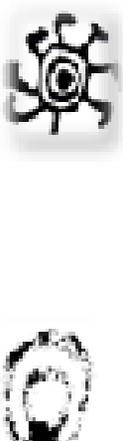
(a) FRONTAL HUMAN FIGURES/ DEITIES	(b) UPRIGHT	(c) CIRCULAR HEAD SHAPE	(d) CIRCULAR/ SINGULAR EYE	(e) FEMALE IDENTITIES	(f) ATLAN CHARACTERS
					
					

Figure 9. A list of the six basic visual categories projected as digital images of the PBA abstracts for reflex elicitation from students (n= 47). Inset shows an individual power point image of an anthropomorphic visual type or character.

	<i>Count</i>	<i>Average</i>	<i>Standard deviation</i>	<i>Coeff. of variation</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Range</i>
Humans	47	1.04255	0.806427	77.3511%	-1.0	2.0	3.0
Divinities	47	0.553191	1.13843	205.793%	-2.0	2.0	4.0
Flourish	47	0.829787	0.916495	110.449%	-1.0	2.0	3.0
Eyes	47	0.574468	0.949707	165.319%	-2.0	2.0	4.0
Gender	47	0.723404	0.826257	114.218%	-2.0	2.0	4.0
Avian	47	0.297872	1.17797	395.46%	-2.0	2.0	4.0
Total	282	0.670213	0.998807	149.028%	-2.0	2.0	4.0

	<i>Std. skewness</i>	<i>Std. kurtosis</i>
Humans	-3.129	2.23987
Divinities	-1.67525	-0.809151
Flourish	-1.48902	-0.50895
Eyes	-1.73698	0.0951614
Gender	-2.47242	2.35755
Avian	-1.02177	-0.940782
Total	-4.96988	0.159956

to minimize extramural noise. Each image, representative of categories of visual typography that recur in Mesoamerican rock art clusters, was projected on a dimension of a 4 ft x 4 ft screen. Students were requested to respond to a questionnaire based on these visuals. We recorded the impressions of empathy or surprise that the images created for a defined length of exposure. No background information or ethnographical references were forwarded to them before this experiment was conducted. In the figure below we define the six categories or typologies that are generally identifiable in the petroglyphic images from Uto-Aztec cultures. These are: (a) human likeness, (b) divinity effect, (c) circular head, (d) concentric eyes, (e) gender identity and (f) avian characters.

Table 1. Summary Statistics of responses for the six different visual typologies (Figure 9).

Table 2. Skewness and kurtosis for responses towards each visual category (Fig. 9). These values reflect the possible asymmetries that may be reflected in a cluster of data. In this case the responses for Human and Gender reflect an extremely large asymmetry. Hence we cannot call the responses as statistical normal distribution. This table justifies why we adopt a specific statistical test to measure the available response data for the PBAs.

PARTICIPANTS

Students were asked to observe these images and respond to non-parametric questions. Example: 'How surprised do you feel to see the human-like shape of this rock drawing?' A total of 47 students were chosen to respond to a set of questions, where each one had the option to respond, to the values of -2, -1, 0, 1 and 2 on a proto-Likert scale, to indicate their level of surprise at the abstracted PBA outline that was projected on the screen (see inset in Figure 10).

RESULTS OF EXPERIMENT CONDUCTED

This was basically a questionnaire based on a proto-Likert scale of -2 to +2 which sought to identify a range of psychological responses.

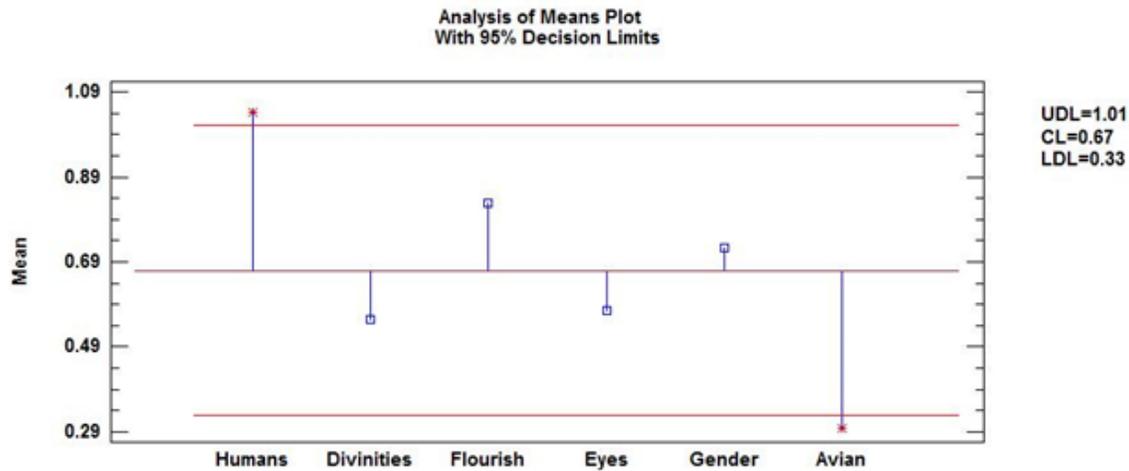
Kruskal-Wallis Test

	<i>Sample Size</i>	<i>Average Rank</i>
Humans	47	171.277
Divinities	47	135.862
Flourish	47	152.277
Eyes	47	131.957
Gender	47	141.649
Avian	47	115.979

Test statistic = 14.4117 P-Value = 0.0131953

Figure 10. ANOM Graphic

Table 3. P-value of 0.0131953 falls below p-value of Null hypothesis. This shows us that we would have to say that not all visual typologies would elicit similar responses, but a majority of them does (Figure 11 and Table 4).



Initial analysis was done in order to evaluate if the data obtained from responses of students corresponded to a normal distribution, since this was necessary for adopting a null hypothesis for our statistical survey. Standardized kurtosis and standardized skewness for responses to 'Humans' (-3.129 and 2.223987 respectively) and 'Gender' (-2.47242 and 2.35755 respectively) are out of range for accepted values of normal distribution (which should lie between -2 and 2), indicating that the evaluation assuming normal distribution can incur bad results (Tables 1 and 2). In the absence of normal distribution patterns in statistics, the Kruskal-Wallis test was adopted

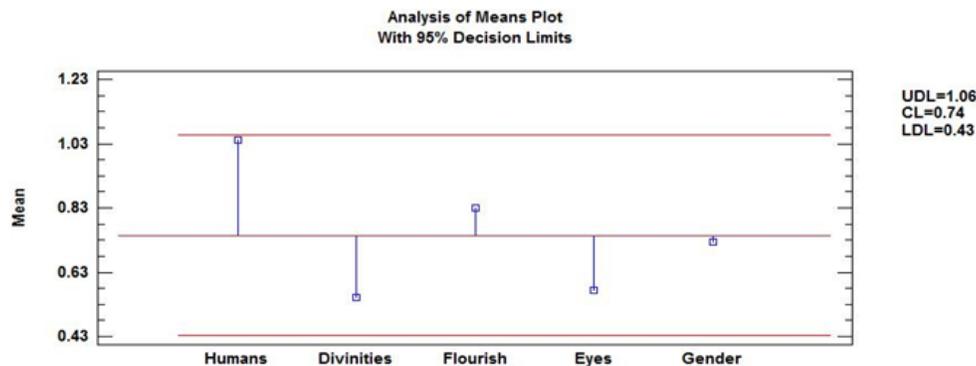
for taking any decision regarding the adoption of a hypothesis about the extent to which PBA visual types affect human percipients. In the next phase we used the STATGRAPHICS software to make a numerical analysis to generate an ANOM graph on the basis of the data collected from respondents (Figure 10). The graph demonstrates a wide variation of the Mean for 'Humans' (+1.04) which is above the UDL (upper decision level of 1.01) and 'Avian' (0.29) that is below the LDL (lower decision level of 0.33). The Kruskal-Wallis test recommends that the null hypothesis is that the median so of responses within each of the six columns (Figure 9) is the same.

Kruskal-Wallis Test

	<i>Sample Size</i>	<i>Average Rank</i>
Humans	47	138.979
Divinities	47	109.319
Flourish	47	122.819
Eyes	47	105.468
Gender	47	113.415

Test statistic = 8.5688 P-Value = 0.0728291

Figure 11. ANOM graph omitting Avian data Table 4. Kruskal Wallis test results for 5 typological characters, omitting avian. Graph for this set of data on the Kruskal-Wallis test gives P-value of 0.0728291, and hence > 0.05 , so, there is no significant difference between medians. This helps us to conclude that such images do have psychologically identifiable effects.



Since the p-value is less than 0.05, there appears to be a statistically significant difference between medians with a 95.0% confidence level. For this set of data (with five categories), the result of the Kruskal-Wallis test gives a p-value of 0.0728291, which is more than 0.05. So, there is no significant difference between the medians (with a level of 95.0% of confidence). Hence, we could safely suggest that barring avian features the responses of students seemed to converge on a close median value, and hence that there were sufficient grounds to believe that the visual typologies of rock art are all similarly oriented for a wide spectrum of visual signals, If this is true, as the five typologies indeed appear to generate, it also contains a clear indication of the innate psychological value of PBA visuals.

What the six-factor psychophysical test underscores is the propensity to be positively surprised for the first five factors: these are namely human-shapes, divinity-shapes, flourish-on-approach, eye or gaze and gender, although this is not without qualifications. Respondents seemed to be confused or unsure about directly deducing a divinity status for the PBAs even though they reacted similarly to the strong resemblance of PBAs to human shapes, and a flourishing 'appearing' gesture (or numinosity character). Respondents definitely failed to associate avian characters on feet with anything surprising, and for the limited time exposures of PBAs this led rather to confusion than association. In a sense, a limited first-time exposure to PBA formats for viewer subjects in an age range of 18–23 definitely recorded surprise and

heightened alert reflex for the anthropomorphic and visually flourishing, surprise-eliciting, gestulatory characteristics of PBA projections. Further, the necessity of excluding avian characteristics arises from the degree of confusion created in the respondents who are not familiar in associating bird physiology with human-like PBAs. The presence of counter-intuitive characteristics like the human body and bird feet is an example of the kind of pre-mythical visual synthesis that – as Boyer stated in relation to the origin of divinities – student viewers may not have recognized out of context. It is possible that avian characteristics embedded within anthropomorphic visuals create a kind of shock effect, but there is no evidence of this shock effect in the respondents to this experiment.

Discussion

The debate between visual innatism and functionalism

The central question of our short paper has been to ask if it is possible to justify ontological validation for rock art by enumerating and qualifying the psychological reflexes that such visual forms elicit from the viewer (Whitley 1992). Indeed, it is our contention that the PBA is in some material sense cognitively powerful and psychically provocative.

The first explanation for this phenomenon may be due to their counterintuitive characteristics, the ability of rock art images to normatively and adaptively hold the attention of their audience of viewers (Boyer 1966; Berring 2006; Schmidt 1997; Porr and Bell 2012; Schmidt et al. 2015). A PBA is a counterintuitive agent because it contains both a human form and characteristic attributes that are non-human, like avian, claw-like hands, thin bird legs and clawed feet, or heads without the standard anatomical features (eyes, nose and mouth),

yet with a face shaped like a series of concentric circles, or exhibiting projectile points emanating from a head or shoulders. Such paradoxical characteristics are at work because they have a strangely disjunctive power to arrest our gaze (Emery 2000; Tomalski 2009). A first-hand impression of visual forms in PBAs suggests that the imagery is, in some sense, physically identifiable and apportioned and yet extraordinarily conditioned and therefore demarcative. It is a product of a symbolizing technique which is exclusive and defined, perhaps best termed as conventionalized for the practitioners of this kind of art.

Rock art does regularly contain signals of this demarcative transcendence achieved in terms of visually generated incongruous harmony (a symbolic inversion). Such effects are achieved, in the case of PBA rock art, by a direct manipulation of visual short-hands, codes or graphic equivalences which communicate, as our experimental results would suggest, an associated ethos or personality to them in spite of the presence in their unconventional and paradoxical featureless faces. Supposed PBA deities successfully contain a configuration of traits that forces the viewer to engage with them and feel their influence (McGuire 1990; Joyce 2005: 152; Walker 2008:298).

Conclusion

A cross-cultural comparison of rock art figures helps identify a psychologically emotive or motivating factor in visual representation. It constructs, as Margaret Conkey observes about Mesoamerican palaeolithic art, a *weltanschauung* or consciousness. If then, there is any one argument for understanding how a rock art image of an animal-human, conflated figure communicates its power, we have to refer to Vinnicombe (1972), Conkey (1987),

Wheatley et al. (2007), Whitley (1992; 2009), Brown and Walker (2008), Porr and Bell (2012), Hodgson and Mukhopadhyay (2016), and Mukhopadhyay and Garfinkel (2016) as providing a range of literature recommending the cognitive approach to archaeology. Experimental statistics reveal how animistic details are conceived. Ancient rock artisans were aware of this knowledge: the figures we come across, even though separated in location, show an awareness and exploitation of the common techniques of making images whose outlines are efficacious enough to generate surprise in any context-free contemporary viewer. Such confluences of patterned characteristics appear to provide a consistent message for the viewers of the enlivening power of these souls and spirits that constitute the remarkable ingenuity and continuing vitality of these arresting, iconic, animal-human rock art figures.

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FRIGG, ASTGHİK AND THE GODDESS OF THE CRETE ISLAND

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Introduction

According to conventional opinion, the well-known memorial stone (Fig. 1a) from the Swedish island Gotland (400-600 AC) depicts the goddess Frigg holding snakes. The unique statuettes of a goddess holding snakes were discovered on Crete (Fig. 1b), and date to c. 1600 BC.¹ The depiction of Frigg shows the mother-goddess with her legs wide open to give birth. In Norse mythology Frigg, Frige (Old Norse Frigg), Frea or Frija (Frija, beloved) is the wife of Odin. She is the mother of the three gods Baldr, Hodr and Hermodr.

The Swedish stone from Gotland island depicts the mother-goddess, who is sitting atop the mountain before childbirth (Fig. 1a). Her hands are raised and she is holding two big snakes-dragons. The composition symbolizes the home/mountain of dragons (volcanic mountain). The composite motif of the depiction on the memorial stone, according to the authors, refers to the archetypes in the Old Armenian song 'The birth of Vahagn'.²

¹The findings belong to Crete-Minoan civilization and are found in the upper layers of the New Palace in Knossos. Two items are discovered (Archaeological Museum, Heraklion)

²Old Armenian song "The birth of Vahagn" (Khorenatsi M. History of Armenia)

To illustrate the natural philosophical and metaphysical description of the processes of interaction between the four forces of nature (water, air, earth and fire), volcanic eruptions and earthquakes, the prehistoric sages and artists model it in graphic mode and present it in the form of celestial and terrestrial snakes-dragons, the models of volcanic eruptions and avalanches. Dragons (masters of the underworld) threaten the life of the deity's beloved, in this case the wife of Odin, Frigg. The heads of the snakes-dragons (Fig. 1a) point at the solar and lunar discs, that is, they convey in artistic form the wish to 'swallow' these celestial bodies, which actually models the beginning of the process of solar and lunar eclipse.

Odin saves his beloved, kills the dragons and they get married. In this context the historical and natural processes are depicted on the stone using mythological constructions, which only at first sight defy interpretation. The mother-goddess is wearing royal headgear. Her head has a three-rayed shape, symbolizing the royal power: she is the wife of the major deity Odin. The woman will give birth to three godlike heroic brothers, perfect in their form and nature, who possess the power of dragons. They are presented in the form of a triad, the three-pointed left-facing swastika symbol depicted in the sky. The ornamental frame on the stone symbolizes the heavenly gate (Fig. 1a).

The whole composition embodies the celestial eminence of the three bogatyr (heroes); their souls rise to the heavenly father. They are powerful and strong as dragon-slayers. The stone is called memorial for a certain reason: it was built as a monument signifying the roots of the Aesir and the original homeland, the volcanic mountains (Asaland and Vanaland, the kingdom of Van), the mother-goddess Frigg, her husband Odin and their sons, bogatyr.



Fig. 1. (a) Memorial stone from the Swedish island Gotland (400-600 AC) depicting Frigg holding snakes. (b) Goddess holding snakes, Crete (c. 1600 BCE)



Relations between Frigg and the Goddess of the Crete Island

Both statuettes (Fig. 1b) were discovered by Arthur Evans during the excavations on Crete in 1903. They were hidden in a cache under the flooring of one of the palace rooms. They are made of faience covered with vitreous glaze colored in bright reddish-brown and yellowish-green pigments, later fired to acquire a vitreous gloss. These depictions with snakes are the only ones in the Cretan art of this period.³ One of the figures depicts the deity 'in a tense posture:⁴ 'Stretching out her hands and her big pencilled eyes widely open, she gazes her concentrated sight at the moment of the snake spell; the two snakes enlacing her waist demonstrate this concept. The head of one more can be noticed atop her high cap.'

The snakes in her hands symbolize the relation of the woman with the Minoan ruling house, why it could be supposed to be the depiction of a deity.

The big breasts of the woman represent the function of the fertility goddess, the supreme mother-goddess. It is supposed that during this period matriarchy prevailed in Crete and old Europe. Some scholars associate the snake with the idea of life extension, as they shed their skin and are renewed, which is why they are associated with the male reproductive ability. However, the true function of the statuettes remains unclear. They depict an unknown deity.⁵

However, according to the authors, the statuettes have an old Armenian origin. They visibly and accurately depict the Armenian goddess Astghik, the beautiful bride of Vahagn (the first man, dragon-slayer and thunderer, liberator of water). Vahagn was the first to challenge snakes-dragons; he defeated them, freeing Astghik and mankind, flora and fauna from extinction. But how did they appear in Crete along with the direct (Greek) marble cross and other artifacts?

It should be mentioned that it was beautiful Europa (the sister of Cadmus, Phoenix and Cilix), the granddaughter of Hayk, the patriarch of the Armenian royal dynasty, who was abducted by Zeus and taken away to the island of Crete. There she gave birth to two sons of Zeus, who later became the founders of the Minoan civilization and the royal dynasty. A similar motif is observed in the story of the abduction of beautiful Astghik/Ishtar (Ishtar, goddess of

Akkadian and Sumerian mythology, originally the goddess/queen of Aratta). Therefore, it is natural that many of the major motifs associated with Ishtar are not Akkadian-Sumerian, but are taken from their Aratta originals).

Motifs in Norse Mythology

Frigg or Frija, like Astghik, is the goddess of marriage, love, the family hearth and the personification of femininity in nature. She (as the wife of Odin, Woden or Wotan) sits next to him enthroned in Hliðskjálf, where the divine spouse observes all the nine worlds. According to the 'Prose Edda', the race of the Aesir descends from Odin and Frigg.

Frigg, though possessing the knowledge of fate, never predicted it. Frigg first tries to save her beloved son Baldr from death (conjuring all living beings to request immunity for him from all kinds of danger, and then bitterly grieves his death). When Baldr was tortured by disturbing dreams, Frigg took an oath on all the things and beings that they will do him no harm. An exception was a shoot of mistletoe, which she had missed. It was a mistake, because blind Hodr, tricked by the fire-god Loki, shot Baldr with a mistletoe projectile and accidentally killed him. Frigg tried to rescue her son from the underworld, but failed, because Loki refused to weep over Baldr.

Frigg reigns over all the goddesses and is as wise as her husband. She greatly resembles Freya: both goddesses are descended from the divine Mother Earth.⁶ The name Frigg (Old Icelandic Frigg) is associated with Yggdrasil (Norse world tree). According to some records, she is the leader of the beautiful Valkyries. According to other myths, it is Freya.⁷ The prototype of the image of Frigg, according to the authors, is the Armenian Astghik (presented in Akkadian-Sumerian mythology as the Queen of Aratta (or Ararat, the kingdom of Van, the

³Sidorova N. A. *Aegean Art. M.*, 1972, p. 126

⁴<http://zagadki-istorii.ru/sokrovishe-6.html#ixzz4rRshmnLOh>

⁵<http://dic.academic.ru/dic.nsf/ruwiki/395673>

house of Askanaz and Torgom, sons of Tiras). The image of the mother-goddess Astghik, the beautiful and beloved bride of Vahagn, as a result of intercultural communication or by direct abduction, is transformed into Anahit/Inanna/Ishtar/Astarte/Frigg.

Motifs in Armenian Mythology

Languishing in suspicion of a friendship between Tigran and Cyrus, Azhdahak had an amazing dream foreseeing the coming events. My courteous, he said, today I was in a foreign country, near a mountain rising high above the earth. Its top seemed to be covered with ice. They say it was the land of the Haykids [the Haykazunis]. As I stared at the mountain, a woman came into sight sitting atop it in a crimson/purple dress with a sky-blue veil, she has got big eyes and was strapping and ruddy; she was in childbirth. Astonished, I stared at the sight, and the woman suddenly gave birth to three god-like heroes, perfect in their shape and nature. The first one jumped on a lion and rushed to the west; the second one made his way to the north on a leopard; the third one, riding a dragon monster, attacked our country. Having such entangled dreams, it seemed to me that I was on the roof of my palace and could see the surface of this building with beautiful colorful tents of the gods that crowned us, representing a memorable spectacle, and me among them, honoring them with sacrifices and incense. And then, looking up, I noticed a man riding a dragon who was rapidly approaching as if on eagle's wings. Approaching, he intended to defeat the gods. But I [Azhdahak] rushed between them and received a powerful attack and fought the amazing godlike hero.

⁶<http://~godsbay.ru/~vikings/frigg.html>

⁷<http://myfholology.info/~gods/~skandinav/~frigg.html>

First, we mangled the bodies of each other with spearheads and shedding blood, made the roof of the palace shine in the sun like a sea of blood. So we kept on fighting for many hours, changing our weapons. But what's the use of going on with this story? After it all, I was defeated. From this anxiety sleep fled from me; since then I feel that I have ceased to live. For what else can the content of this vision mean if not the threat of attack from Tigran Orontid [Haykazuni]? And who if not the gods can help us by word and deed and not expect to be our co-rulers?⁸

Tigran is from the dynasty of Hayk/Haykid/Haykazuni (Hayk is the son of Torgom and the nephew of Askanaz; Cadmus, Europa, Phoenix and Cilix are his grandchildren).

Artifacts

Figs. 2 and 3 present typical archaic images clearly in the form of documentary evidence of the commonality of basic old Armenian-Scandinavian and Christian pictorial and linguistic, cultural and mythical-poetic motifs possessing a historical basis. The acts and deeds of the Aesir (descendants of Askanaz) and the Vanir (descendants of Torgom) formed the basis of sacred legends and mythological motifs of the genesis of the world, the world tree, the tree of knowledge of good and evil, the tree of life, the mother-goddess, the birth of the first man, three heroes, etc. Ancient Armenian ceramic pottery depicts: a volcanic mountain chain with four peaks, snakes-volcanoes, the stylized images of the forces of nature, the three heroes, and fighting against the forces of nature, the forces of evil and death, the snakes, huge celestial birds with beaks and the swastika, the symbol of Vahagn, fashioned as a result of the interaction

⁸Khorenatsi M. History of Armenia



Fig. 2. (a) archetype of baptism in a cradle, petroglyph, Armenia (7-5 millennium BC). The mother goddess, with her legs wide open, holds the infant in the form of a small cross (Vahagn) in a cradle. Under one of her legs (stylized two-headed mountain – the mother mountain) are ideograms of feminine vulva representing the symbol of birth. The mother raises the cradle in her hands to the Heavenly Father, “the Sun” (big winged cross). The moon can be seen above the cradle. Two eyes are looking at the hero⁹. A celestial cow with mammary glands is depicted on the right side of the mother; a lyre and a star (the future bride, Astghik, Armenian “little star”) are depicted below. A bird (eagle) and a celestial snake are depicted above. (b) Birth celebration. The father holds proudly the son in his right hand, next to them is depicted the mother after the childbirth (with typical symbols of childbirth). A bird in the sky and a goat, the symbols of protection of the heaven, life and fertility. (c) Depiction of the genesis (petroglyph in the Geghama Mountains, Armenia). In the centre of the composition is depicted the Mother Goddess after the childbirth with her legs wide open and her hands raised up. The sun rays fertilize the earth. The hero (Vahagn) with his fingers and toes wide open fights the “dragon”, the forces of evil, darkness and death, volcanic eruption, lava (having the form of a sphere above the crater), on the top of the mountain.

of the four fundamental forces of nature. Marija Gimbutas,⁹ who has reconstructed the cult of the great goddess in ancient Europe, based on archaeological research, notes: ‘taking into consideration the myriad of images inherited from prehistoric Eurasia, the source of ancient religious experiences was the great mystery of woman’s life-giving power of creation. The great mother goddess, whose sacred darkness of the womb originated all creations, was the metaphor of Nature itself, the universal source of life and death, constantly updated in the continuous change of life, death and resurrection.

The great goddess was typically depicted in a

pose of raised hands. The great mother of the gods, the mistress of snakes, was always depicted with her hands raised up. Snakes were considered a symbol of the underworld, and the goddess of the mother earth – the master of snakes.

In fact, the first childbirth is described in the song ‘The birth of Vahagn’ (see Azhdahak’s dream). Vahagn slayed the dragons, then his beloved Astghik gave birth to three heroes

⁹According to N. Marr, in Japhetology “the sun and the moon” mean “eyes”

¹⁰Gimbutas M. The civilization of the Goddess: Old Europe. - M.: “Russian political encyclopedia”. 2006. p.243



Figure 2. Old Armenia pottery describing the triad-force, the three bogatyr, the sons of the Mother Goddess (2 millennium BC).

(according to the picture as described in the dream of Azhdahak, atop the mother mountain Masis). Under this mountain lived snakes-dragons, the symbols of the underworld, embodying the forces of volcanic eruption and lava. Serpents threatened the world. Vahagn saved the world from *vishaps*/dragons, defeated the king of serpents. (For more information regarding the Armenian mother-goddess, the mother-goddess Maruts, Tsovinar and others, see bibliography.¹⁰)

Fig. 4 depicts female figures: a snake-legged goddess descending from the mountain (rock art, Armenia); relief of Astghik/Inanna, Ishtar/Astarte (abducted from Aratta); a snake-legged goddess of the Scythians and the bust of the Armenian goddess Anahit (in the British Museum). The facial features and shapes of the goddesses and the mother-goddess from Crete



Fig. 3. (a) Relief depicting the Mother Goddess with the child and a cow (Hittite Empire), (b, c) Virgin Mary enthroned with Jesus (Cathedral of the Holy Cross, Van, Vaspurakan, historical Armenia, modern territory of Turkey)

¹¹“Stone annals of civilization”, “Nzhar”, Yerevan, 2016



Fig. 4. (a) Petroglyph, a snake-legged goddess (Armenia). (b)¹² Astghik/Anahit/Inanna. (c) The Great Mother, the Scythian snake-legged goddess, Api (kurgan in Kul-Oba, Kerch)¹³. (d) Heads of Armenian goddesses in Commagene¹⁴

are similar (Fig. 1b.), which gives grounds to conclude: Astghik is the archetype of the Indo-European mother-goddess, Venus, Aphrodite, Ishtar and Astarte. Her mother-goddess Anahit is the prototype or pre-mother of all the gods: Astghik and Inanna (Maruts and Tsovinar (see Vinar and Venus in Armenian mythology) and Europa.

In 62 BC King Antiochus of Commagene (from the Armenian Orontid, Yervanduni dynasty) built a sanctuary tomb, surrounded by huge statues of two lions, two eagles and images of various gods such as Hercules-Vahagn, Zeus-Aramazd, and Apollo-Mitra, as well as lions and eagles.

The sedentary statues of the gods carry engraved names on them. The fragments of the statues and tablets are scattered around the *kurgan*/tumulus, which is 49 m high and 152 m in diameter. Fig. 4e shows the heads of Armenian goddesses, whose facial features are similar to those of Astghik/Anahit/Ishtar (Fig. 4b, d) and

¹¹"Stone annals of civilization", "Nzhar", Yerevan, 2016

¹²<http://secretsnicholasflamel.wikia.com/wiki/Inanna>

¹³<http://www.iatp.am/ara/sites/articles/antropologiya/index.htm>

¹⁴<http://strajj.livejournal.com/904363.html>

¹⁵<http://ru-sled.ru/velikaya-boginya-minojnskogo-krita/>

the facial features of the women depicted on the artifacts discovered on Crete (Fig. 1b).

The depiction of the pagan mother-goddess holding snakes and wild animals in her raised hands is identified on numerous golden plaques in all the Scythian *kurgans*/tumuli.¹¹ The name of the snake-legged goddess Api is identified in a number of Mycenaean inscriptions. In Greek mythology the goddess Rhea is the pre-mother of all the gods and the mother of the supreme god Zeus. Rhea is the supreme goddess of the ancient Greek pantheon (Mycenaean/Linear B O-re-i = mountains: orei - in the mountains, Greek Ορος = mountain).

In Armenian rock art *vishaps*/dragons/serpents are typically depicted with horns. On a number of *vishapakars* (dragon-stones) reliefs of horned bulls are depicted, which personify celestial dragons. There is a depiction of a hero (Vahagn/Hayk) in the form of a swastika fighting a huge celestial ferocious bull. Hayk's enemy, the defeated Bel (ruler of Babylon), was depicted in the form of a bull. The kings of Urartu (Ararat, the kingdom of Van) were depicted bestriding a lion or a bull. It should be mentioned, that the Old Armenians and the Greeks vied with each other: *Matere teija* = *Ματὴρ Θεία* = mother-goddess. And in the Minoan religion she personified the eternally live nature, earth and fertility.

The great mother-goddess on Crete was depicted as a queen-bee (Latin *apis*, bee), the preserver of the whole swarm of bees, or metaphorically, the human race (Fig. 5a). The vase, discovered in the Knossos palace of King Minos, depicts the great mother-goddess (Fig. 5b) with her arms traditionally raised and ornamented with six swastikas. She is holding two celestial birds. Two roaring lions are depicted on each side of the great mother. Beneath the right hand of the goddess is the head of a sacrificial bull; the frontal part depicts a fish. Such a depiction of a fish was considered a symbol of



Fig. 5. (a) The forces of nature embodied in the image of mother, progenitress, tutelary of fertility and harvest, the master of flora and fauna, household, underworld, tutelary of cities and settlements. (b) Vase depicting the Great Mother with six swastikas. The entire composition is enclosed with vertically twisted snakes (symbols of the underworld) from both sides

the great mother in Harappa (north India). On left and right the entire composition is enclosed with vertically twisted snakes, symbolizing the underworld, embodying the celestial *vishaps*/dragons that emerge during volcanic eruptions and threaten the sun and the moon in the sky, causing solar and lunar eclipses (Fig. 5b).

The researchers consider that swastika symbols reached Crete along with the Indo-European people via Asia Minor, but this point is outdated and needs correction. Swastika and cross symbols reached Crete from prehistoric Armenia (the motif of Zeus abducting the granddaughter of Hayk, Europa, and taking her to Crete). The great mother, depicted next to the regal lions (see monuments of lions and eagles in the Armenian kingdom of Commagene), embodies the protection of every living being on the earth and in heaven. Everything belongs to her: the kingdom of heaven together with birds, fruit on earth and the underworld with snakes, as well as the world water, the dwelling of fish.

Tolkien, referring to the miscellanea of 13th-century novels 'Roman deeds', mentions: A road runs between the two mountains of Armenia, and people often took it [the road] for a long time, then it so happened that because of poisoned air no one could go that way avoiding death. The king asked the sages of the reason for such a misfortune, but no one knew the true reason. Then Socrates was convened and told the king to construct a building of the same height as that of the mountain. When it was done, Socrates told to make a mirror of plane damask, polished on top and thin, so that one could see any place on the mountains reflected in the mirror.¹² Then Socrates went up the building and saw two dragons: the one near the mountains and the other near the valley, which opened wide their jaws and incinerated air. As he was looking, a young man on

a horse, unaware of the danger, took that way, but then he fell immediately from his horse and died. Socrates rushed to the king and told him everything that he saw. Later, the dragons were tricked, seized and slew. Thus, the road was safe again for all the passersby.¹³

The motif of the Tolkien novel might be the source for the mother-goddess and the two snakes depicted on the artifact (Crete, Fig. 1a), personifying the two dragons mentioned in the novel. It should be considered that the two great mountains of Armenia, Masis and Sis, personify maternity. According to Armenian legends, the dwelling of the king of the dragons is under the volcanic mountain Masis. The description of 'jaws' and air incineration symbolize the processes related to volcanic eruptions on Masis and Sis, located next to each other. Moreover, in Armenian tradition, according to the motifs of the song 'The birth of Vahagn', Vahagn defeats the dragon and liberates the people. As mentioned before, the Sumerian Inanna is the goddess of fertility, love and strife, the daughter of the sky Anu (the moon god Nanna¹⁴), the sister of the sun god Utu, wife of the shepherd-god Dumuzi. The myth describing Inanna's descent to the underworld mentions that the goddess went there to attend the funeral rites related to her sister's (Ereshkigal, the queen of the underworld¹⁵) husband's departure for the underworld. According to the authors, the main motifs of Inanna are transformations

¹⁶Rising to the top of the tower and bending a thin iron sheet, Socrates uses a parabolic mirror to see the reflection of the dragons in it

¹⁷Tolkien J. R. R. The Professor and monsters: Essay / Tr. From English, Latin and Old Icelandic - St. Petersburg: "Azbuka-klassika", 2004

¹⁸Nane - is the goddess in Armenian mythology, the daughter of the supreme god-creator Aramazd

¹⁹Mythological dictionary. - M.: Astrel, Tranzitkniga, Scheglov G. V., Archer V. 2006

and the development of the motifs related to the beautiful Armenian Astghik (little star); her beloved Vahagn, the dragon-slayer and savior of water, saves her from the *vishap* (the deity of the underworld, volcanoes of the Araratian Mountains). Ereshkigal is the goddess of death (in Armenian mythology *hresh* = monster, beast, dragon).

During her journey around the underworld, the irrevocable country, the goddess Ishtar passes through the seven gates, enduring the fate of the dead; she is kept by the goddess of the underworld, Ereshkigal, but later the other deities come to force Ereshkigal to free Ishtar and return her to the world of the living. The queen commands her servant Namtar: 'Pour the water of life on goddess Ishtar and send her away.' He pours the water on Ishtar and she comes to life.¹⁶

Circle of the world

According to Norse mythology, the circle of the world, inhabited by people, is mostly indented by bays. Big seas run into it from the ocean surrounding the earth. It is acknowledged that the sea stretches from Norvasund to Hjorsaland. A long bay stretches from this sea to the north, which is called the Black Sea. It divides the parts of the world. The one on the east is called Asia, and that on the west Europe, Eneija. The great or cold Sweden is located to the north of the Black Sea. Some researchers consider the Great Sweden having the same territory as the great country of the Saracen, or the great country of the black people. The northern part of Sweden is a desert of frost and cold, like the southern part of the country of the black people is a desert of the heat of the sun.

²⁰Onians R. On the knees of the gods. M.: "Progress-Tradition", 1999

Sweden is a large place. It is inhabited by many nations speaking diverse languages. Giants and dwarfs, black people and many other amazing people have settled in it. There are huge beasts and dragons there. A river (Tanais) flows through Sweden from the northern mountains, located beyond the inhabited areas. It was earlier called Tanakvisl or Vanakvisl. It debouches into the Black Sea. The area in the vicinity of its mouth was then called the country of the Vans/Vanir, the dwelling of the Vans. This river divides parts of the world.

Afterword

In the Armenian language obsidian (volcanic stone) is called *vanakat*. This word comprises two roots *van* and *kat*, literally meaning van milk, correlated to earth milk, lava, bursting from a crater or from the bottom of sea during a volcanic eruption. In the Armenian language *erkat* literally means iron and comprises two roots *erkir* (earth) and *kat* (milk).

The Aesir and the Vanir are the descendants of Askanaz and Torgom, who resettled from the house of Askanaz and Torgom in Sarmatia, on the coast of the Black Sea, near the sources of the river Tanais or Vanakvisl (Armenian way/path leading to homeland), historical characters who later became heroes due to their wisdom and power, virtue and mind and were worshipped by the people of Nordic countries, becoming Konungs, the founders of the Yngling dynasty. The statuette deities with snakes from Crete of the Cretan Minoan civilization are the witnesses of old cultural relations of the founders of this civilization (the palace where the archeologists discovered the statuettes was destroyed by an earthquake in 1600 BC), with the Aesir and the Vanir; in particular, according to Greek and Armenian historians, Europa, the sister of Cadmus and granddaughter of Hayk Nahapet, was abducted by Zeus and taken to Crete; their

sons became the rulers of Crete and the founders of the Minoan civilization.

Swastika and cross symbols reached Crete through Asia Minor along with Europa. Hayk, refounding the house of Askanaz and Torgom, built the dwelling of the god and passed it to his grandson Cadmus, who created the Phoenician and Greek alphabets. His brother Phoenix became the king of Phoenicia, and Cilix, whence Cilicia. In his search for his sister, Cadmus reached Europe and later became a powerful ruler of Greece. Myths are stories about history: Norse myths bear traces of old prehistoric relations of the ancestors of the Armenians and the Nordic people; and Greek myths bear the traces of the Armenians and the Europeans.

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NOTES AND NEWS

WHAT IS CONCEPTUAL ANTHROPOLOGY?

Conceptual anthropology is the discipline concerned with the arts, rituals, beliefs and other intellectual expressions; it combines various sectors of the human and social sciences in respect of behavior and cultural manifestations, 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 human sciences. It was decided to make of the newly proposed discipline, *conceptual anthropology*, a concern of the International Scientific Committee on the Intellectual and Spiritual Expressions of Non-Literate Societies (UISPP-CISNEP). The goal of this new discipline 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 permanent journey of discovery and emotions.

Archaeology and anthropology can benefit enormously from the cooperation of sociology, psychology, semiotics and other sectors of the human and social sciences. Each discipline has its own memory as the basis of research and 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 psyches.

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 an approach offers an immense contribution to the study of the intellectual and spiritual expressions of non-literate peoples.

One of the purposes of UISPP-CISENP, in addition to the pleasure of meeting and growing together by dialogue, is to promote a 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 shared 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 the 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 world crisis is a cultural crisis, a crisis of values and wisdom that has economic, social and political consequences. Reviving the role of culture is our modest joint effort to contribute to overcoming the crisis.

RETHINKING EINSTEIN KNOWLEDGE VS. IMAGINATION

“The true sign of intelligence is not knowledge but imagination” (Albert Einstein).

May we claim that both of them are needed?

Imagination without knowledge and knowledge without imagination are the two extremes of dullness.

E.A.

APPRENTICESHIP IN CONCEPTUAL ANTHROPOLOGY

The apprenticeship, under the guidance of Prof. Emmanuel Anati, the founder of

conceptual anthropology, may last from a minimum of two months to a maximum of one year. It grants the apprentice the title of **Research Assistant**. The apprenticeship is oriented to the acquisition of practical operational abilities and conceptual formation; it includes participation in research, editorial activities, compilation, organization and layout of exhibitions and publications, the arrangement and cataloguing of ethnological collections, and the planning of cultural and scientific projects. It is a way to touch with your hands and your mind the practical work of producing culture.

Traditional learning as an accumulation of theoretical notions is enhanced by applying the notions in practical activities, learning to do by doing.

During their stay in the Camonica Valley, the student will have access to self-catering accommodation on campus, at a student fee. Preference is given to graduates and other seriously motivated young people with knowledge of the English language and operational abilities on a database. Application in an informal letter should specify the motivations and skills of the candidate and be accompanied by: a curriculum vitae; a copy of record of studies; a copy of identity card or passport; 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>.

LEARNING TO BE AN EDITOR

Readers interested in learning editorial work may apply for three months' editorial training at **EXPRESSION** Quarterly Magazine. Skills required: perfect knowledge of the English language ; ability to manage various relevant

computer programs; ability in public relations; special interest in anthropology and archaeology. For applications or further information, please address a letter expressing your interest and motivation, including a copy of an identity document, to: <atelier.etno@gmail.com>.

POSITION OF ASSISTANT CURATOR OF ETHNOGRAPHY

Graduate students in anthropology and ethnography are given the opportunity of training as **curator of ethnography**. The engagement consists in classifying old ethnographic collections of art objects from Oceania and Africa. The expected result is the compilation of a catalogue of a given collection, eventually to be published under the name of the compiler. The successful experience gives the apprentice two important additions to his or her curriculum vitae: the publication of a scientific work and the position of **Assistant Curator of Ethnography** for the period of time of his/her engagement. The experience takes place in the Camonica Valley, northern Italy, and is expected to last a minimum of three months. Candidates should have mastered the English language and possess a university degree in human sciences.

During their active presence the accepted candidates will have access to self-catering accommodation on campus at a student fee. Applications should include a letter expressing motivation, a record of studies, a copy of an identity document and any other document worthy of consideration. Applications should be addressed by email to: <atelier.etno@gmail.com>.

HOW TO BECOME A MEMBER OF THE UISPP

EXPRESSION, this e-journal, is produced by ATELIER, the Research Centre in Conceptual Anthropology, in cooperation with the UISPP-CISENP (the International Scientific Committee on the Intellectual and Spiritual Expressions of Non-Literate Societies), an organ of the UISPP. UISPP also offers other facilities, including participation in its World Congress. Membership of the UISPP will ensure your official status as a 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.

HOW TO BE A MEMBER OF CISENP

Very simple. Be active and you are a member: you express your ideas, participate in debates, develop dialogues with other members, orally, by email, or through the pages of **EXPRESSION** magazine. If you have something to say this is your home. Membership to CISENP is free of material charges, no fees requested; it just implies your active conceptual presence. Membership is not exclusive of prehistorians; it is open to all the human and social sciences. It is advisable, but is not compulsory, to be a member of UISPP. CISENP is a free association, free also from bureaucratic procedures.

Join the session at the UISPP congress, Paris, June 2018

THE INTELLECTUAL AND SPIRITUAL EXPRESSIONS OF NON-LITERATE PEOPLES

The visual arts, music, dance, rituals, myths, traditions and other aspects of human conceptual expressions reveal the peculiarities of each society and, at the same time, the common intellectual and spiritual heritage that unites humanity. The CISENP (International Committee on the Intellectual and Spiritual Expression of Non-literate Peoples) is convening its session at the forthcoming UISPP Congress, in Paris, 3–9 June 2018. As on previous occasions, colleagues from various disciplines are invited to share experiences, ideas and scientific approaches for a better understanding of human creativity and behavior and a broad-minded study and understanding of the past. You are invited to submit your paper before August 20, 2017, to Session CISENP 2018, <atelier.etno@gmail.com>, providing your full name and postal address.

Prehistoric archaeology is in urgent need of this new landscape of conceptual anthropology, in order to make steps forward. It is a new academic approach for building up a solid future for the study of man. Archaeology, both

prehistoric and historic, needs a constant and open dialogue with other disciplines. The study of man includes anthropology, sociology, psychology, human geography, semiotics, art history and other disciplines that have to join efforts. This is the aim of conceptual anthropology.

What is to be the image of prehistoric sciences in the future? How can we convey to a large public the notions and wisdom accumulated in the study of roots? Understanding the past is necessary to build a future. And not only that, it is necessary to understand the present, our present. The knowledge of roots is the elementary base of culture. Even in the tribal world young people are initiated into the knowledge of their past. The study of prehistory has to awaken interest and passion in the public: there is nothing more fascinating than discovering the background of human behavior, the emotions and passions that have caused the intellectual and spiritual adventures of humankind. This is the message that we can convey to our society. Let us join efforts to develop public awareness, education, formation, engagement, research, for a broader understanding of our past and our present. We can convey this passion only if we have this passion. You are welcome to join.

Emmanuel Anati
President of UISPP-CISENP

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Anati, E. (ed.) 2017 *Male and Female*, Capo di Ponte, (Atelier), 119 pp. 60 ill. € 40

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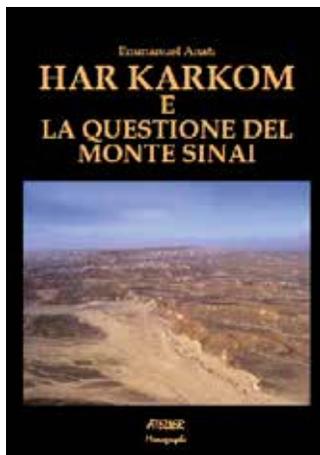
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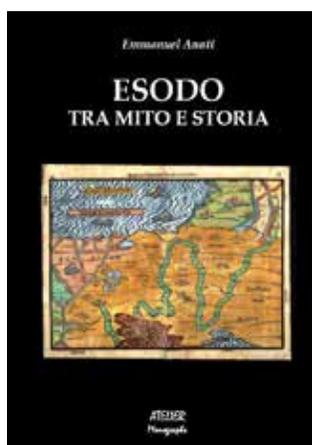
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Anati, E., 2016: *Har Karkom e la questione del Monte Sinai*, Capodiponte (Atelier), pp 220; 138 ill., Italian edition, (€30,00)

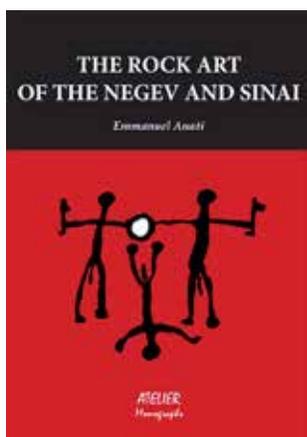
The findings of shrines and encampments of the Bronze Age at Har Karkom, a mountain located in one of the driest places and inhospitable parts of the Negev desert, in the north of the Sinai Peninsula, arouses a global debate on the hypothesis that this mountain can identify with the biblical Mount Sinai. The book presents a summary of the discoveries; it calls into question previous assumptions about the reliability of the Exodus Biblical narrative, both on the location of the mythical Mount Sinai, and on the chronological discrepancies proposed by various researchers. The book is richly documented by photographs, maps and other illustrations, it updates on recent discoveries, analyzing their possible historical significance, suggesting a new vision of the events narrated in the Bible.



Anati, E., 2016: *Esodo tra mito e storia (Exodus between myth and history)*, Capodiponte (Atelier) pp. 340; 138 ill., Analytical Appendix. Italian edition, (€ 40,00)

Different opinions divided the academic world about the historic reliability of the Biblical narrative of Exodus. The events in Egypt, the wanderings in the desert under the leadership of Moses and the events at the foot of Mount Sinai are they based on facts or are they just legend? Broad and systematic explorations on the ground and new archaeological discoveries open up the possibility of tracing back the geographical and environmental context, by providing elements that bring new insight on the historical roots of this magnificent epic passed down from the Bible.

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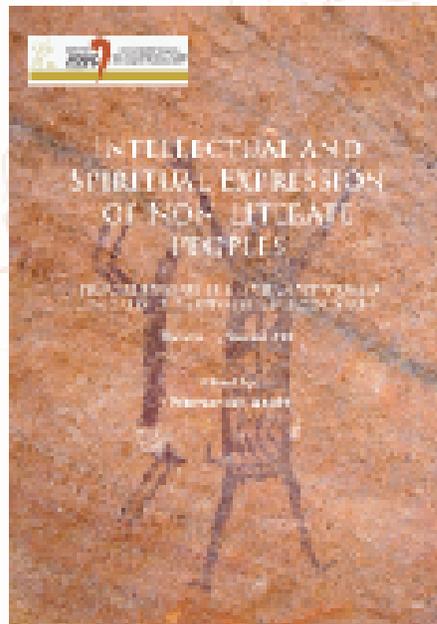


Anati, E. 2015, *The Rock Art of the Negev and Sinai*, Third English edition, Capodiponte (Atelier), 248 pp. 248; 196 ill., €20,00

The book deals with a new theme of Near-eastern archeology: the rock art of the Negev and Sinai. It presents new discoveries and reconsiders content and assumptions of previous articles and of a book by the same author that dates back to 1979. The richly illustrated book is offering a new vision of this immense archive engraved and painted on rocks that reveals events and beliefs of the desert. The rock art of the Negev and Sinai illustrates stories and customs of the Sinai Peninsula over the past 10,000 years. Some depictions of the Bronze Age may refer to people mentioned in the Pentateuch. Others, of Roman-Byzantine times, illustrate life and customs from the age of early spread of Christianity.

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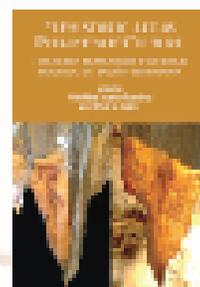
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This volume presents the proceedings of the session 'Intellectual and Spiritual Expression of Non-Literate Peoples' part of the XVII World UISPP Congress, held in Burgos (Spain), 4th September 2014. The session brought together experts from various disciplines to share experience and scientific approaches for a better understanding of human creativity and behaviour in prehistory.

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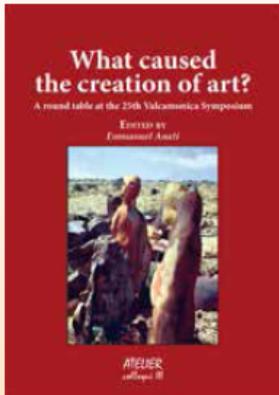
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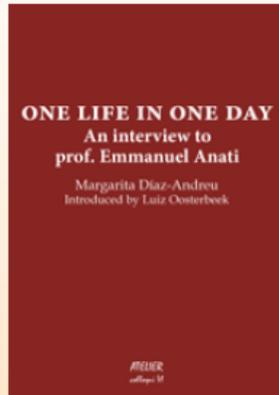
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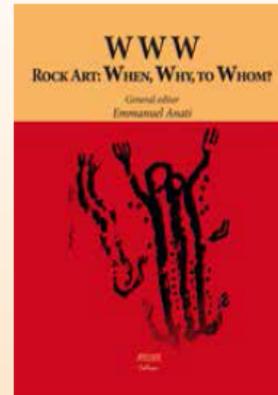
Anati, E. (ed.) 2013. *What Caused the Creation of Art? A Round Table at the 25th Valcamonica Symposium*, Capo di Ponte (Atelier), 44 pp. € 10.

'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.



Diaz-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 Diaz-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.

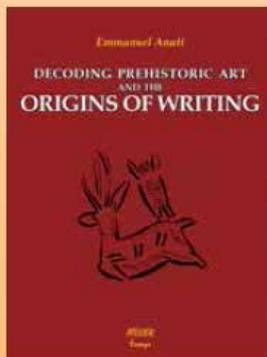


Anati, E. (ed.). 2015 *WWW. Rock Art: when, why, to whom?* Capo di Ponte, (Atelier), 218 pp. 184 pls. € 40

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?

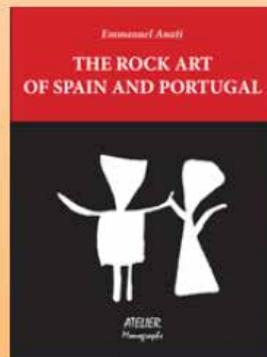
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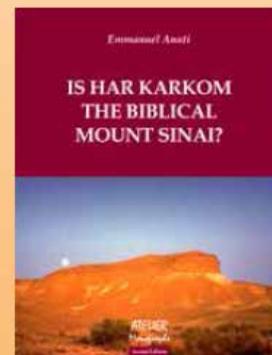
Anati, E. 2015. *Decoding Prehistoric Art and the Origins of Writing*, Capo di Ponte (Atelier), 152 pp. 83 pls. € 20.

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.

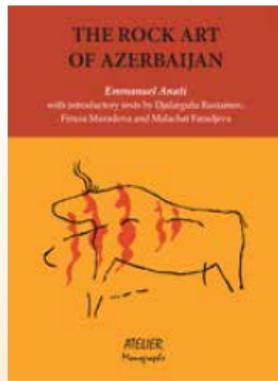
An analytical synthesis of the rock art in the Iberian peninsula from the conceptual anthropology approach. The major concentrations of rock art are considered as expressions of their different cultural and social patterns.



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

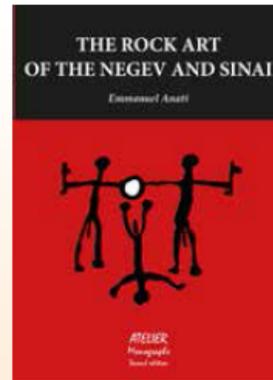
Remains of ancient sanctuaries and camp-sites tell the story of a hitherto unknown mountain in the heart of the desert of Exodus. Is Har Karkom the biblical Mount Sinai? To what point can we consider the biblical narratives as a source of historical documentation?

MONOGRAPHS



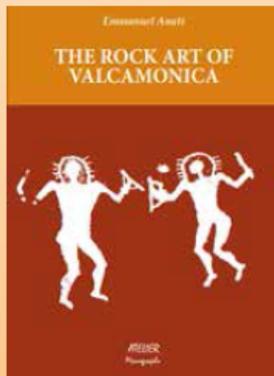
Anati, E. 2015. *The Rock art of Azerbaijan*, Capo di Ponte (Atelier), 156 pp. 190 pls. € 20

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.



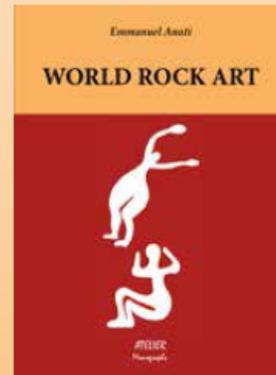
Anati, E. 2015. *The Rock Art of the Negev and Sinai*, second edition, Capo di Ponte (Atelier), 242 pp., 190 pls. € 25.

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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