

# 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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## COLONIZATION

Boats reaching a new shore

Rock paintings of Mt. Borradaile, Arnhem Land, Australia  
(Photo Anati, 2001 XL-23 Australia, NT)

# EDITORIAL NOTES

## COLONIZATION

Colonization? The intention as stated in the call for papers was clear and simple: How did humans reach all the lands of the planet? From an original land of origins, likely to have been in Africa, the ancestors of humankind colonized all corners of the globe, they reached faraway islands in the oceans and remote highlands in the mountains, territories in deserts and in deep forests. Other primates still survive in their limited habitat; humans live in the equatorial regions as well as near the Arctic pole. How did colonization take place? What are the traces of human expansion? How did present-day populations reach their homelands? Each case is a special case: the first inhabitants of Easter Island and those of the Falklands have different origins and different stories. The first inhabitants of America and those of Australia have different stories. But also the quality and size of our knowledge differs for each one of these events. Authors from five continents replied and a selection of their papers appears in the following pages. Some of the replies were dealing with other matters, outside the goal of the query. A few expressed critical views on modern colonialism, others claimed that, like ants, human beings have always populated the planet all over; one used the opportunity to criticize diffusionism, claiming the local nature of cultures: 'my ancestors have always been in this land'. Another writer elaborated ideas about the role of supernatural powers. Most of these replies may make sense but our intention was limited to the initial statement: how did humanity acquire its regional identities? Where is the primary homeland of humankind? How did our ancestors reach all the lands of the planet? Apparently the word colonization, like many other words, has different facets and awakens different emotional reactions. Some archetypal features, like the care of the newborn, are shared by humans and by

other animal species, other habits are specific to the entire humankind: the presence of an elaborate language and the use of communication by speech, socialization, the solicitude for weak, ill and old people, the care for the deceased, the presence of visual art, music and dance, are common to all peoples of the world. But languages and the arts, burials customs and the cult of the dead, rituals, patterns of kinship and human relations and other habits differ from place to place. Processes of cultural diffusion concerning art and material culture, traditions and myths, reveal relations between continents, expansions of certain cultural trends and the restriction or disappearance of others. The entire story of humankind is made of bits and pieces of colonization. Many open questions are awakening interest and concern: how and why did human beings expand from their land of origin? How did they reach and colonize Australia or America, or an island like Iceland, or the top of a mountain like Machu Picchu? How did people penetrate and occupy the forest in central India, Borneo, the Congo or Amazonia? How did the first inhabitants reach New Zealand in the Pacific or Malta in the Mediterranean? Who were the first Australians? Where did they come from? How did they reach what became their homeland? How did various human waves colonize Europe? From the early hominids that reached Europe, to the Neanderthals who evolved and spread over Europe, to the early waves of *Homo sapiens* to the Neolithic colonizers, to recent arrivals, the secret of European success is likely due to the overlapping and encounter of different people and cultures. Waves of colonization made Europe what it is today. The same can be said for America or Australia. And what about Japan or Madagascar? No one, not even the local natives of five continents, were originally born in their land,

though some believe they were. From a primary core humanity reached everywhere. Each culture, like each village, like each clan, has a story or a myth of origin. The papers appearing in this issue are an introduction to a topic likely to develop further. The editors may not agree with some of the ideas expressed, but both, good and bad ideas will awaken debates and debates are the source of culture. Colonization started with the first hominids exploring the next valley, and still goes on expanding the human presence in deserts and mountains, bringing people from one continent to the other, bringing ideas and customs from one land to the other. **EXPRESSION** journal is provoking debates that then expand, both orally and in writing, in this journal and elsewhere. Is that another aspect of colonization?

## 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 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 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.

## SEXUAL IMAGES IN PREHISTORIC AND TRIBAL ART

Since the earliest figurative art, sex appears to be a theme of primary concern. Why were such depictions made? The phenomenon is worldwide; the motivations vary from culture to culture. In some lucky cases oral traditions allow us to identify the cause or the inspiration, which range from memorization of myths, to educational and initiation practices, seduction witchcraft, fertility rituals, plain pornography, the recording of personal events and other things. The typology varies from schematic images of vulvas to detailed representations of sexual acts, to narrative images of complex stories and myths related to the sexual relations of supernatural or human beings. The depictions may be realistic or metaphorical. Wherever there is figurative art, in every corner of the world, there are images related to sex. Are you acquainted with such figures in your region or research field? Experts and students may share their knowledge, present papers and notes on images, myths, rituals and customs related to sex, in prehistoric and tribal art, thus contributing to a worldwide debate on a topic relevant to the understanding of the moods and customs of different cultures

and ages and beyond, chapters of the roots and facets of human history.

The topic is particularly relevant for sociology and psychology. The social structure and male-female relations, as reflected by the typology of sexual depictions, is a topic of major concern for conceptual anthropology.

Colleagues and other readers and friends are cordially invited to propose papers contributing to this common debate.

Minor notes or photos and tracings of sexual images in prehistoric and tribal art, adding captions and comments, are welcome.

For submitting papers or for further information contact: <atelier.etno@gmail.com>.

## HOW TO CONCEIVE YOUR PAPER

Please consider that the magazine reaches 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. We recommend authors to present papers pleasant to read, avoiding dry scientific reports or inventories. Their readers are cultured people involved in the various disciplines of the human sciences. The average size of each paper is 1,500–3,000 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- **DECODING:** The messages behind the images in prehistoric and tribal art.

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

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

5- **SOCIAL STRUCTURE AS REVEALED BY ROCK ART:** how depictions reveal social relations

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

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 reveal conceptual and social trends.

*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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## TRAVEL AND MIGRATION TALES IN EUROPEAN PALEOLITHIC ART

Emmanuel Anati (*Italy*)

In the last issue of **EXPRESSION** (no. 13) the problem of recognizing the figures and ideograms representing fire in prehistoric and tribal art was a topic in the Discussion Forum. The starting point concerned the images of a Magdalenian, Upper Paleolithic engraved bone from Les Eyzies, c. 20,000 years old. The interpretation of such a figure presented in *Decoding Prehistoric Art and the Beginning of Writing* (Anati, 2015) was criticized. The book included examples of decoding following the method of conceptual anthropology, which has not yet been accepted by some archaeologists.

### The engraved bone of Les Eyzies

The type of analysis is the result of a wide comparative study leading to the decoding of Palaeolithic art. The engraved composition of this fragment of bone includes the presence of an ideogram (or pictogram) claimed to repre-

sent fire, which is repeated twice, once behind a group of walking anthropomorphic figures and once above the head of the same figures. The debate focused on the meaning of the ideogram. To the best of our understanding, the comparative analysis presented in the Discussion Forum confirmed its meaning as 'fire'. The analysis of a number of Paleolithic graphic compositions leads to the hypothesis that the repetition of the ideogram makes it plural: *fire+fire=fires*.

The position of the double ideogram above the head of the people represents a recurring associative pattern indicating identity. These people are then defined as the people of fires. The walking people have another similar couple of the same fire ideograms behind. Meaning: fires behind, or land of fires behind. The proposed reading of these details is: the people of the Land of Fires are leaving or have left the Land of Fires.

The bone engraving represents a well-conceived deliberate composition. A group of eight schematic anthropomorphic profiles appear to be on the moving. Each one of them holds a forked stick (*bâtonnet*) on his shoulder. As acquired by other examples presented in the same mentioned book, the forked *bâtonnet* ideogram



Fig. 1- Les Eyzies, Dordogne, France. A fragment of decorated bone from the Magdalenian period, Upper Paleolithic. A group of eight anthropomorphic figures in profile are holding on their shoulders the forked bâtonnet. On the right side there is a bison in profile and on the top and the left side are two double signs. It represents the story of a travel or migration of people identified by two "fire marks", from a region indicated by the same ideograms to the bison or the "land of the bison". (After Anati, 2001b; 2015).

signifies traveller. The ideograms behind the group are likely to indicate the locality from which they come. The group of people is travelling leaving behind their land of denomination, the Land of Fires.

On the right side there is the profile of a bison, and the team is moving in its direction.

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

The Land of the Bison, toward which these people are moving, is tentatively suggested be the place where this document was found during excavations in an archeological level, in the Franco-Cantabrian region of western Europe, the Land of the Bison that Paleolithic men depicted on many objects and on the walls of caves. The bison may well have been the symbol, or rather the totemic symbol, of Dordogne or of some of their inhabitants.

This piece of bone is likely to be an exceptional historical document: the testimony of people coming from the east, reaching western Europe. Is that the tale of migrants from the east who settled down in Les Eyzies 20,000 years ago?

The proposed reading of this document is: 'The team of the eight people (or clans) of the Land of Fires, leaved the Land of Fires, being directed to the Land of the Bison'. It sounds like the account of a myth but could be the memory of a historical fact. It may tell a story about the peopling of Europe by a group of Paleolithic *Homo sapiens*, an event of migration and colonization reported by the protagonists 20,000 years ago.

The reviewing of European Paleolithic art using the methods of conceptual anthropology reveals that tales of travel and migration may have been a popular theme of Paleolithic

myths and story-telling, as represented by the iconography.

Such documents are likely to have a didactic purpose connected to initiation. They are memorizations of events or myths, part of the oral tradition that had to be taught and transmitted to future generations. Stories of migrations, myths of origins, legends of exodus towards a promised land were probably part of traditional accounts millennia before the compilation of the Old Testament. Writing appears to be older than previously imagined.

### **The engraved bone of La Madeleine**

The engraving on a bone at La Madeleine, Dordogne, France, provides another equally old example of travel or migration. It shows a marching person holding a *bâtonnet* on his shoulder. This ideogram of the stick, 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 his destination. He is bound to the image of a horse's head and moves toward another horse's head: 'Mr Horsehead is going to the land of Horsehead.' He is probably going back to his homeland. The space behind his back, where he is coming from, is marked by a snake with a tail in the shape of an *arbolet*. From numerous other cases we know that this means male. The image indicates the name Male Snake, probably 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.

The process of decoding these ideograms is described in the book mentioned above. In the present case it is plural: territories or lands. The



tentative reading is: "The three territories of the Male Snake". It is suggested that this engraving on bone is the memorization of the story of a journey, 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 a myth of migration: going back to the land of origins after a stay in foreign lands, 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, "going back to the land of the fathers", could have produced a nostalgic bestseller. Similar themes are still emotionally present in many different people today: people migrated to a foreign country dreaming of returning to the land of their fathers.

### The flute of La Vache Cave

We shall consider another example of Paleolithic stories of travel or migration. 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 culture. The engraving describes six human figures, at least two of them are naked 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 center of the engraving and of large dimensions, is a horse. On its body is engraved a rectangle with parallel lines. Such ideogram often means "territory". Between the human figures and the horse there is the figure of a bear in the front view. On the right there are two pictograms, a fish on which there is an ideogram of "bâtonnet" (male value) and a ru-

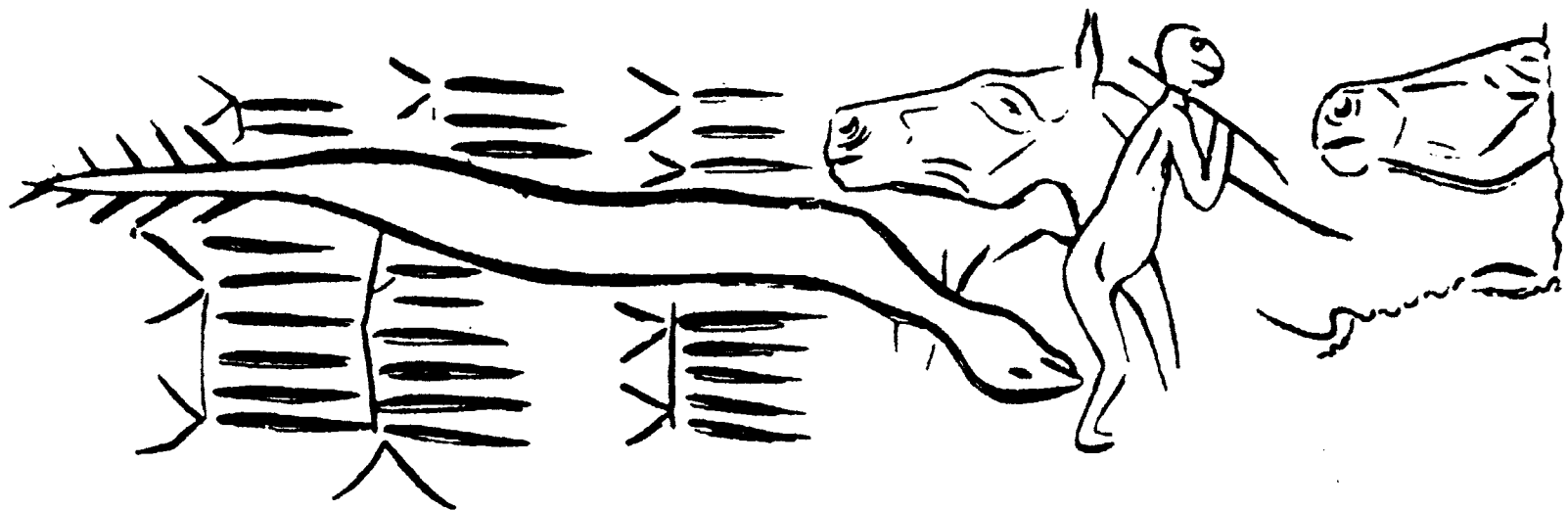


Fig. 2- La Madeleine, Dordogne, France. Engraving on bone, Magdalenian period. An anthropomorphic figure is in walking position holding a 'bâtonnet' on his shoulder. The bâtonnet, often bifurcate, is common in hunters art and is considered the indication of a person travelling (the traveller). A horse's head, above him, defines the personage and 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 of a man or a clan going back to his homeland. (Drawing after Breuil, 1952).

minant seen from behind, next to which there are two parallel lines, “lips” ideogram (female valence). At the right end of the engraving there are three signs in V, 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 in similar ways of representing narrations, among recent populations of hunters, from different areas as Inuit of Arctic Canada, Australian Aborigines of Arnhem Land.

The process of decoding concerns the totality of documents from a determined cultural context and such research is in progress. A fundamental element for decoding is the determination of the meaning of recurring ideograms.

Prehistoric art, like modern literature, is confronting many different topics. Among the numerous items under examination only a few concern migration and travel. The examples presented in this paper are an invitation to open-minded students to participate in this stimulating engagement in reading the messages behind the beauty and aesthetic value of early art.

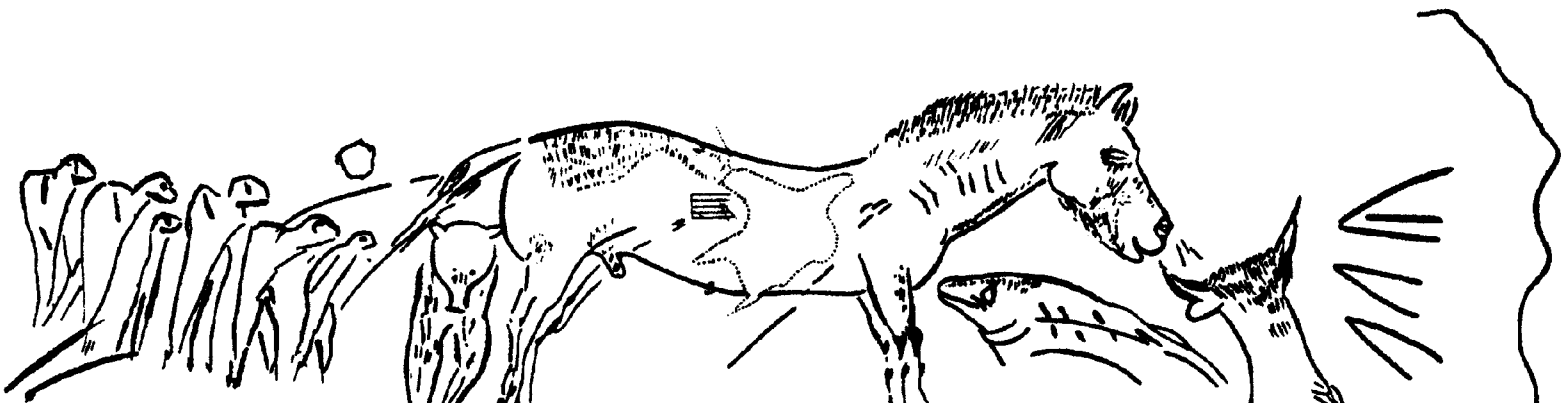


Fig. 3- La Vache Cave, Ariège, France. Magdalenian period, Upper Paleolithic. Engraving on bone of eagle likely to have been a musical instrument, a kind of tube or flute. The engraving describes six human figures, at least two of them are naked males. Above them there is a disk that could indicate the name of the human group or of the territory. The main subject, at the center of the engraving and of large dimensions, is a horse. On his body is engraved a rectangle with parallel lines. Such ideogram often means “territory”. Between the human figures and the horse there is the figure of a bear in the front view. On the right there are two pictograms, a fish on which there is an ideogram of “bâtonnet” (male value) and a ruminant seen from behind, next to which there are two parallel lines, “lips” ideogram (female valence). At the right end of the engraving there are three signs in V, 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 in similar ways of representing narrations, among recent populations of hunters, from different areas as Inuit of Arctic Canada, Australian Aborigines of Arnhem Land. (Drawing after Marshack, 1972).

# THE BIFACIAL PHENOMENON ACROSS TIME, SPACE AND VARIABILITY

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The word “Acheulean” was introduced in the literature in the 19th century by Gabriel de Mortillet<sup>1</sup>, and it was initially used to define European lithic assemblages characterized by the presence of typical instruments shaped on two faces. The term biface/handaxe is introduced for the first time by Vayson de Pradenne in 1920<sup>2</sup>: “The character of shaping of two sides is very obvious and important at least from the morphological point of view. All instruments that share this characteristic deserve a specific name. The one of “biface” it seems to be convenient because it is short, easy and indicate exactly what it wants and mean and nothing more”. Formerly, G. de Mortillet<sup>1</sup> had already split the bifaces in two categories according to their chronological attribution: “Two kinds of “coups de poing”: those large and heavy, more or less thick, vigorous, shaped with by powerful hammering, characterizing the Acheulean; those small, flat, more or less light, shaped carefully, elegant, often much smoother, an almond-shaped”.

The first to propose a systematic classification of the bifaces was F. Bordes in his work on the typology of the Lower and Middle Paleolithic<sup>3</sup>.

The first bifaces appear in Africa about 1.7 million years ago in Kokiselei and Swartkrans<sup>4</sup>. Afterwards, we find them in Ubeidiya, Israel, at 1.4 million years ago<sup>5</sup>, in Isampur in India at 1.2 million years ago<sup>6</sup> and, finally, in Europe about 700,000 years ago in the Arago Cave<sup>7</sup> and in La Noira<sup>8</sup>.

Although during Paleolithic the bifacial shaping

has given rise to very different instruments, the reduction sequence on which it is based can be considered as unique. The fundamental steps are essentially three<sup>9</sup>: 1) creation of a peripheral striking platform along the entire margin of the object; 2) achievement of the bifacial equilibrium through the shaping of two more or less symmetrical convex surfaces; 3) regularization of the cutting edges for the achievement of a bilateral symmetry (perpendicular to the bifacial equilibrium) and, subsequently, retouching of the edges. This latter operation gives to tool the final morphology. All those phases can be done by direct percussion by hard hammer, but the last two can be done also by the utilisation of a soft hammer (made using a deer antler or wood).

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<sup>1</sup> de Mortillet G., 1872. Classification de l'Âge de la pierre, Matériaux pour l'Histoire primitive et naturelle de l'Homme, huitième année, 2<sup>e</sup> série, T. 3, pp. 464-465.

<sup>2</sup> Vayson de P., 1920. La plus ancienne industrie de Saint-Acheul. *Anthropologie*; 30: 441-96.

<sup>3</sup> Bordes F., 1961. *Typologie Du Paléolithique Ancien et Moyen*. Delmas éd (ed.). Bordeaux - èd Delmas.

<sup>4</sup> Harmand S., 2009. Raw materials and techno-economic behaviors at Oldowan and Acheulean sites in the West Turkana region, Kenya. In: Blades BA and BS (ed.). *Lithic Materials and Paleolithic Societies*. Blackwell Publishing.

<sup>5</sup> Bar-Yosef O, Goren-Inbar N., 1993. The Lithic Assemblages of Ubeidiya. A Lower Palaeolithic Site in the Jordan Valley. Jerusalem: Quedem,

<sup>6</sup> Gaillard C., 2006. Les premiers peuplements d'Asie du Sud : vestiges culturels. *Comptes Rendus PALEOVOL*; 5:359-69.

<sup>7</sup> Barsky D, de Lumley H., 2005. Comportement technologique des occupants des premiers niveaux à Bifaces du nord de la Méditerranée. In: Molines N, Moncel M-H, Monnier J-L (eds.). *Les Premiers Peuplements En Europe*. Vol 1. Rennes: BAR International Series: 135-48.

<sup>8</sup> Moncel M-H, Despriée J, Voinchet P et al., 2013. Early evidence of Acheulean settlement in northwestern Europe--la Noira site, a 700,000 year-old occupation in the center of France. *PLoS One*, 8: e75529.

<sup>9</sup> Inizian ML, Reduron M, Roche H et al., 1995. *Technologie de La Pierre Taillée*. Paris: CREP.

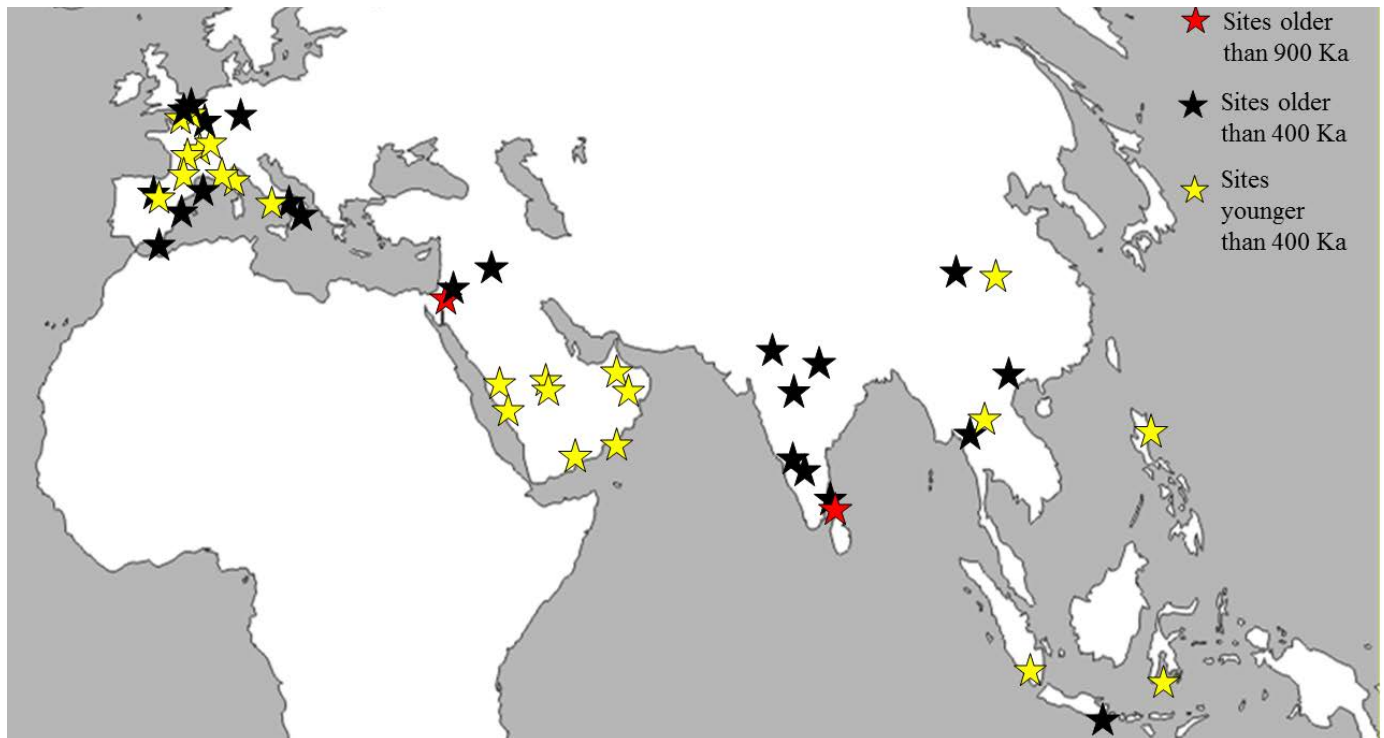


Fig. 1 - Principal Lower Paleolithic sites with Acheulean elements in Eurasia.

The handaxes are considered as a sort of fossil director for the definition of the Acheulean culture. Nevertheless, the Acheulean is characterised by the coexistence of different reductions sequences of knapping (finalized to the production of flakes that represents the final instruments and that can be used directly or retouched) and shaping (the flakes are removed in order to shape a specific form, that will be the formal instrument) and the handaxes never represents the most numerous element. The discussion about the attribution of a site to the Acheulean is often based on the presence/absence/characteristics of the shaped elements, but is evident how a discussion based on the totality of the lithic assemblages is needed. The bifaces diffusion is a controversial phenomenon as their emergence seems to be sporadic in some places and continuous in some others. Most part of the authors suggests that the Acheulean, and consequentially the

bifaces, replaced or evolved from the Oldowayantechanical behaviour, implying a multiregional origin, especially in what concern the Eurasia. For some regions, like Western Europe, the Acheulean diffusion correspond to a progressive climate deterioration started in the Early Pleistocene. The Acheulean culture, moreover, can't be associated to a unique human species: in Africa the bifaces have been shaped mainly by *Homo ergaster/erectus*, in Europe by *Homo antecessor* and *Homo heidelbergensis* and, if we consider also the Mousterian' bifaces, we have to add to this list also *Homo neanderthalensis*.

On the basis of this short premise, it is clear that it is still very difficult to reach a clear definition of the times and the ways in which bifaces are arrived/emerged in Europe and Asia.

In northern Asia we have no clear evidences of bifacial tools presence and if we consider in more detail the Southeast Asian evidences we

can underline a non-linear Acheulean tradition.<sup>10</sup> The Asian Acheulean is subject to a big debate originated on the theories of Movius<sup>11</sup> (1949), that considers that no Acheulean exists in the northern Asia, and the lithic series attesting bifacial shaping are attributed to the Acheulean or to local traditions. In China (Luonan Basin, Southern Qinling Mountains) some handaxes very similar to the East Asian ones have been dated from 800 to 100,000 years ago, but, generally, the shaped elements are rather different from the African and European ones as they are mainly prepared by few removals and minimally shaped.

In India, the Acheulean tradition is more attested by Large Flakes Assemblages similar to the ones described in Africa and in the Levant, elements that could support the African origin theory, but the researchers do not have an agreement on the fact that it is, or not, Acheulian.

In Europe, the handaxes are quite frequently attested from 700.000 years ago and the Acheulean assemblages show a high variability in terms of bifacial technology and heavy-duty component. The European Acheulean can be divided in two phases<sup>12</sup>: a first one (between 700 and 500.000 years ago), probably linked to sporadic arrivals, and a second one (from 450,000 years ago) characterized by a generalized spread of

<sup>10</sup>Moncel M-H, Arzarello M, Boëda É et al., 2016. Assemblages with bifacial tools in Eurasia (second part). What is going on in the East? Data from India, Eastern Asia and Southeast Asia. *Comptes Rendus Palevol*, DOI: 10.1016/j.crpv.2015.09.010.

<sup>11</sup>Movius, H.L., 1949. Lower Palaeolithic archaeology in southern and eastern Asia. *Stud. Phys. Anthropol.* 1, 17-81.

<sup>12</sup>Moncel MH, Arzarello M, Boëda É et al. 2015. The assemblages with bifacial tools in Eurasia (first part). What is going on in the West? Data on western and southern Europe and the Levant. *Comptes Rendus - Palevol*. DOI: 10.1016/j.crpv.2015.09.009

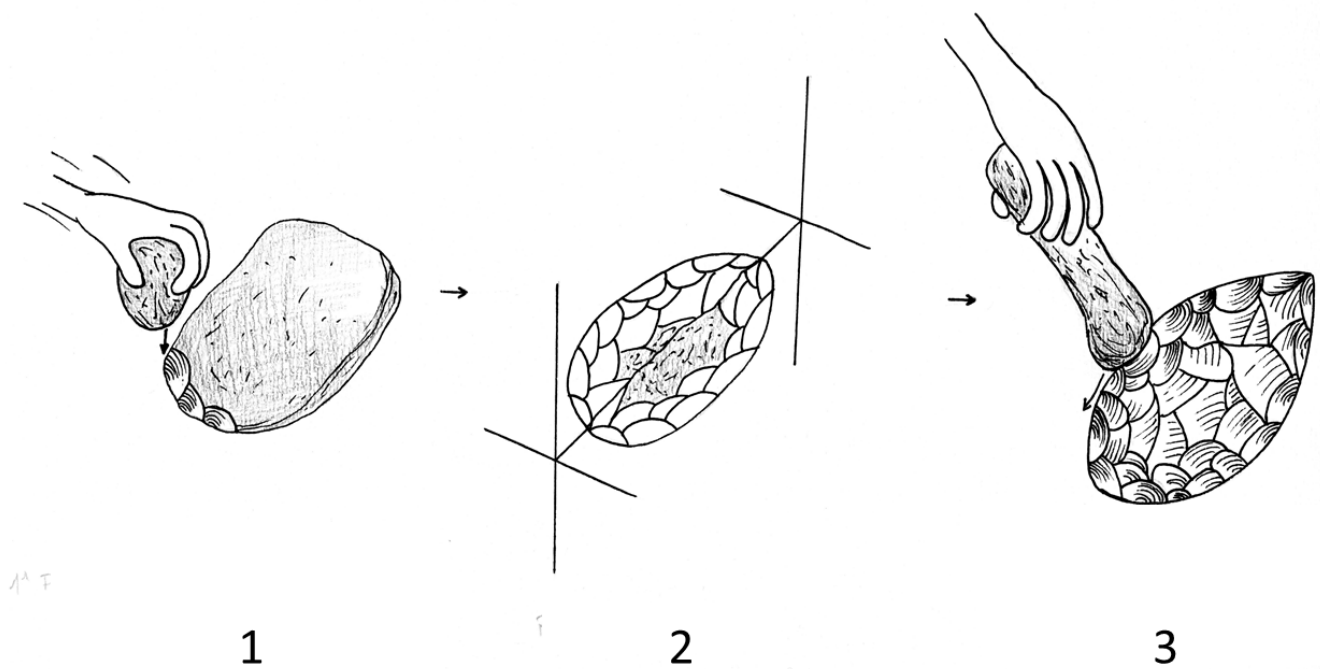


Fig. 2 - Principal steps of an handaxe reduction sequence (draw C. Buonsanto, 2011).

the bifacial tools, which, however, are characterized by often very different technologies. The mosaic character of the Acheulean is evident on the basis of the available data but we must stress that is hard, in lithic technology, to precisely define the meaning of this variability. The lithic production, indeed, is influenced by several factors (environmental, cultural, technical..) that are not always discriminable between them. The raw material, for example, can influence the shaping reduction sequences both in terms of quality of the raw material and in terms of morphology and availability of the blocks. Alike, the activities carried out in the sites may require different kind of instrument and the lithic production cannot be the mirror of the real *savoir faire* of a human group. The main question mark is related to the significance, in a global perspective, of the bifacially shaped tools<sup>13</sup>. The two main hypothesis are linked to the possibility of a technological convergence (as shown by many ethnological data<sup>14</sup>) or to migration movements. We cannot, however, rule out that the two hypotheses are correct for different areas and / or chronologies. At the current state of knowledge, we can see a massive presence of Acheulean elements in Eurasia from 700.000 years ago, with some spot of early appearance especially in Asia and Near-East<sup>13</sup>. This evidence shows a complex scenario that can't be explained by a single theory and that need to be integrated by more radiometric dating and by an interdisciplinary approach to the so called "Acheulean assemblages".

### Handaxes, functional hypothesis

The functional aspects related to handaxes are still argument of discussion as very few studies exist about this issue, especially for the Acheulean ones. Generally, they are considered as

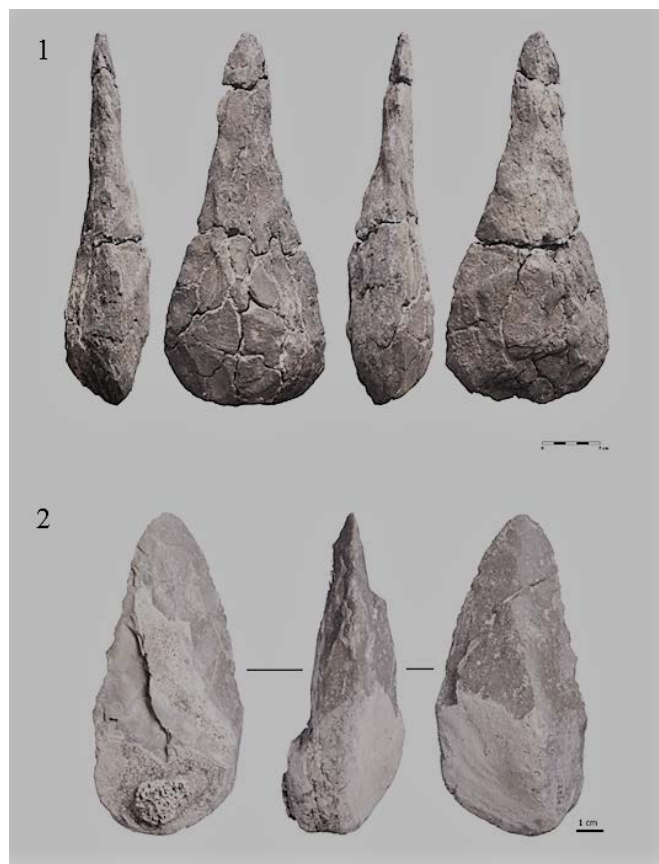


Fig. 3 - Handaxes variability: 1) Caune de l'Arago, 550 ka (from Barsky & de Lumley, 2010); 2) Guado San Nicola 368 ka (Muttillio et al., 2014).

"Prehistorical Swiss Army Knives" in relation to their morphology and to the possibilities of utilization.

The handaxe seems to be a mobile object (between the others: Bernet et al., 2008) with a long life of utilization (between the others:

<sup>13</sup>Moncel M-H, Arzarello M, Boëda É et al., 2016. Assemblages with bifacial tools in Eurasia (third part). Considerations on the bifacial phenomenon throughout Eurasia. *Comptes Rendus Palevol*, DOI: 10.1016/j.crpv.2015.11.007.

<sup>14</sup>Leroi-Gourhan, A., 1973. *Évolution et techniques. Milieu et techniques*. Albin Michel, Paris.

Boeda et al., 2004), several phases of re-sharpening and sometimes it is also utilized as raw material stock.

Very few pieces have been studied with a functional approach (this mainly related to problems of conservation), but the recognized activities are related to butchering, leather processing, wood scraping, exactly like it is for the other components of the lithic assemblages. The relationships between handaxes and function must be probably researched in the relationships that exists between cutting edge delineation/function and reduction degree/function (Claud, 2012).

Concerning the possible hafting of handaxes, the available data are even less or absents. The hafting is, instead, attested for the small flakes founded in the Acheulean levels of Gesher Benot Ya'akov site (Israel), dated around 800 thousand years ago.

By a general point of view, the greater part of Acheulean handaxes is made by an accurate shaping of the point/distal part and a less precise (in some cases totally absent) shaping of the proximal part. This evidence is not particularly consistent to the hypothesis of hafting and it's probable that most part of the handaxes were utilized directly kept in hand.

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# PLEISTOCENE MARITIME COLONIZATIONS

**Robert G. Bednarik (Australia)**

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Of the two possible forms of colonization, on foot or by watercraft-assisted locomotion, the latter provides archaeologically far more comprehensive information than the former. While colonization of cold regions by walking may imply the use of apparel, dwelling construction or fire, it tells us little about the technological competence of the people concerned. This is quite different with maritime colonization, which provides more sharply defined information about technological limits than any other form of archaeological metadata. Early seafaring exploits, as we know from the ethnographic literature, involved very high mortality rates (Bednarik 2003). Just as the content of modern garbage does not inform one about modern man's ability to travel to the moon, Ice Age garbage (which is what Pleistocene archaeology usually studies) is not a reliable measure of the maximal technological capacity of any people. In the Pleistocene, seafaring was a dangerous pursuit that would have only been undertaken at the technological cutting edge of the times. Therefore information about the cutting-edge technology of early prehistory is most reliably provided by the logistical obstacles overcome by archaeologically demonstrated earliest events of maritime colonization.

To provide a sound measure of these obstacles is theoretically simple, but in practical terms it requires a great deal of experimentation. Having established at what time, approximately, the first hominin colonization of a hitherto unoccupied landmass occurred, and

what difficulties it would have involved, one only has to design a project capable of determining what was needed to accomplish the crossing. For this one needs to know the resources available to the hominins in question, as tools and raw materials; and then establish the minimal conditions to succeed. Replicas need to be made of the Pleistocene stone tools used at the time, with which one then builds a series of simple watercrafts and sails them across the sea barrier, each time increasing their economy and minimalism to establish at what level the crossing would fail. Then one has obtained a reliable measure of the maximal technological capability of some humans at the time in question.

In order to test various hypotheses concerning the first maritime colonizations in the world I began in 1996 what became the largest replicative archaeology experiment ever undertaken. So far my project, called *The First Mariners*, has involved the collaboration of over 1,000 people, such as scientists from many fields, archaeologists, traditional boat builders, film makers and their crews, artisans of various fields, construction crews and of course rafting crews. Numerous documentary films have been made about this project, including four by BBC and National Geographic, and books have been published (Bednarik and Kuckenburger 1999; Bednarik 2014, 2015), as well as more than 30 scholarly papers. At the time I commenced the project, almost nothing was known about sea-going rafts in the academic literature. Today, having gathered a great amount of knowledge about this, we are able to build the simplest platform imaginable entirely with stone tools (Figure 1) and then sail it across sea barriers with confidence. So far, eight rafts have been built in this way and sea-trialled in Morocco and Indonesia, the largest weighing about 20 tonnes. Some have failed, some have succeeded, but all





Figure 1: The use of stone tools in the construction of a Lower Palaeolithic raft in Lombok, Indonesia.

have contributed to our understanding of how the first sea journeys may have been undertaken. The longest of these journeys took two weeks. Countless experiments have been made with associated technologies, concerning the need to carry fresh water and food on board the rafts, the need to secure food while at sea, the acquisition of raft materials and the required bindings. Some 2,000 stone tools needed for these tasks had to be fashioned, and many of those used in the experiments have been studied by micro-wear analysis. Thus the entire project was based on scientific procedures of testing ideas and applying the principles of falsification to all propositions. We were in a sense not trying to establish how to reach one shore from another, but at what point such an endeavour would fail. In this sense the project has pioneered a new approach to an important archaeological issue. There exists general agreement that seafaring expeditions could only be organized if the hominins in question possessed an adequately effective and probably recursive language, the

refoe Pleistocene seafaring has far-reaching implications for determining the cognitive status of the hominins concerned. Another important consideration is that an ability to cross the sea was not sufficient to secure an archaeologically visible colonization event. What was needed was that a genetically viable party had to succeed in doing so. There is no consensus on the minimum number of people required for this, but it can safely be assumed to be at least in the dozens. Most importantly it had to include a minimum number of females of child-bearing age, or else the colonizers would have been doomed to the genetic decline various known endemic island populations have experienced (Figure 2). Another key factor to consider is that all sea straits feature strong transverse currents that change direction unpredictably. Therefore it is impossible to cross them without propelling power. Simple drifting would deliver the hapless passengers to the open sea, where they could drift for months or years and would almost certainly perish.

In fact our experiments at several straits demonstrated that resisting the currents of straits is the most delicate and most demanding aspect of such attempts. Some armchair archaeologists have suggested that perhaps people did not intend to cross, but were swept out to sea by events such as tsunamis, and were carried across on drifts of vegetation matter. This shows that such commentators were ignorant of the conditions, and it again demonstrates the need to conduct such experiments. It also suggests a lack of logic: if humans can cross on vegetation mats, then other large mammals can too, and yet we know that in the case of Wallacea, humans were the only animals larger than rats that ever crossed. The only exceptions are elephants which are powerful swimmers and which can swim distances of more than 48 km at sea because

they possess trunks to act as snorkels (Johnson 1980). They in fact almost reached Australia. The earliest archaeologically demonstrated sea crossings by hominins occurred in what today is Indonesia, where *Homo erectus* colonized the Wallacean island of Flores around 1 Ma years ago (Verhoeven 1958; Sondaar et al. 1994; Bednarik 1997, 1999a; Bednarik and Kuckenburger 1999; Morwood et al. 1999; Brumm et al. 2010). Subsequently he also reached Timor (Bednarik and Kuckenburger 1999) and Roti (Bednarik 1999a), and we can safely assume that he arrived at Lombok and Sumbawa en route to Flores. Seafaring in the Pleistocene has been demonstrated by several types of finds from about 20 islands that have never been connected to a mainland (most of them not even to another island), or at least not during the existence of humans; and from the continent of



Figure 2: Reconstruction of a Lower Palaeolithic raft, bearing four women and four men and approaching the shores of Flores.



Figure 3: The Nale Tasih 2, a 4-tonne Middle Palaeolithic raft riding 5-m high waves on its epic journey from Kupang to Darwin. The waves submerged most of the raft occasionally.

Australia (Bednarik 2003) (Figure 3). They consist of skeletal remains of approximately 200 humans, mostly from Australia but including those of nine individuals from four islands (Santa Rosa, Okinawa, Crete and Sardinia); and of human occupation evidence in the form of stone tools, food remains, ornaments, rock art and occupation sites. The two main regions of Pleistocene maritime navigation evidence are the Mediterranean, where at least five deep-water islands were occupied during the Ice Age, and the general region of eastern Asia (Japan to Australia). The only other island with known Pleistocene occupation is Santa Rosa, one of the Californian Channel Islands.

The possibility that hominins crossed the Straits of Gibraltar has also been considered, although not proven (Bednarik 1999b, 2001).

One of the most instructive findings of my First Mariners project has been the establishment of how hominin confidence and competence increased steadily over time (Figure 4). From about 1 Ma years ago, when we can assume that people on the southeasternmost shores of mainland Asia had mastered offshore fishing, to about 60,000 years ago, when they finally ventured to reach a continent that remained invisible to them until they had travelled more than nine-tenths of the distance, the ability to master the sea grew exponentially

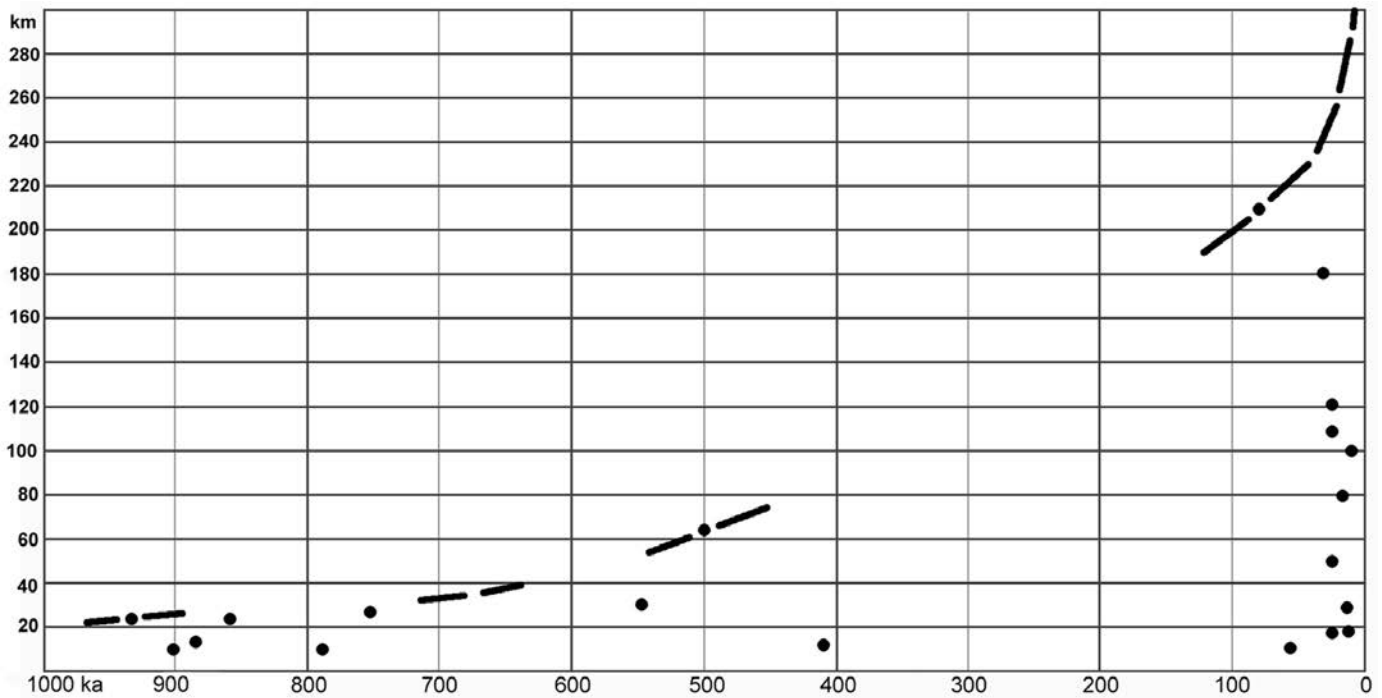


Figure 4: Estimated time of first maritime colonizations (in ka, millennia) plotted against presumed shore distances in km (not travel distances) at time of travel, showing how maximal distances travelled increased gradually through time. The broken line thus indicates approximate maximal navigation capability of hominins through time.

(all colonizations before first landfall in Australia were of islands whose shores were visible from the shore of departure). By 30,000 years ago, tiny targets such as Buka Island, 180 km from New Ireland, were reached by Middle Palaeolithic seafarers. This implies that sailing the open sea had become almost a routine by then, and we can safely assume that this ancient tradition underpinned the incredible exploits of Pacific sailors during the Holocene, crisscrossing the largest ocean at will. To understand the foundations of maritime colonization it is essential to be familiar with the seafaring capabilities of *Homo erectus* and subsequent sub-species of hominins. It is also essential to appreciating other competencies of the ancients, such as their abilities of symbolic expression since the Early Pleistocene, their expression of self-awareness through the

wearing of beads at least since the Acheulian technocomplex and similar evidence. For the past couple of centuries, archaeology has sought to reject or suppress evidence of sophistication or cognitive modernity of the ancients, culminating in the African Eve hoax begun by Professor Protsch (Bednarik 2008) and still being defended by what Thompson (2014) has defined as “the high priesthood of archaeology”. The maritime exploits of *Homo erectus* in Wallacea have been known and reported since the 1960s, yet over half a century later I still have to explain them to archaeologists who have never heard such outlandish notions. This is a fair assessment of the discipline’s level of misinformation, unmatched in all of science. In navigating the seas we stand on the shoulders of giants, and most specifically on those of the First Mariners.

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# THE FIRST INHABITANTS OF MALTA

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## Earliest documented evidence

The question that comes immediately to mind when dealing with the earliest colonization in the Maltese islands is when did humans first set foot on the lands that now form these islands. The first thing to consider for answering that question is their physical geography, which made it possible for this to take place.

The Maltese archipelago lies about 90 km to the south of the southeastern tip of Sicily and consists mainly of four small islands; of these only the two larger ones, Malta (27 km long) and Gozo (14.5 km long), between them had a sufficient surface area (just over 300 sq km) to sustain a subsistence economy based on agriculture. The fact is, however, that they were not always islands. There were long periods of time in the Pleistocene, during the glacial eras, when the global sea levels fell by as much as 150 m and exposed a narrow stretch of land that extended southward into the very centre of the Mediterranean and joined those islands to Sicily and the European continent. Such a land connection would have made it possible for humans to reach these high points on their feet, as it did for the Pleistocene fauna that have left their abundant bone remains in various caves and crevices, such as Ghar Dalam and Magħlaq (Anati 1988: 11-13; Fedele 1988: 59-71) (Fig. 1: Map from Anati 1988: fig. 1).

No proper archaeological association has ever been established for human remains with these deposits, although claims of such a presence that had been made at the beginning of the 20th century were revived in the 1990s (Mifsud and Mifsud 1997). These claims were mainly based

on the discovery of some human molars with taurodontic characteristics. At the beginning of the 20th century this teeth morphology was associated with Neanderthals, but similar teeth were later found in more recent humans and modern ones (Mangion 1962). Furthermore, scientific analyses conducted at the laboratories of the British Museum, Natural History section, confirmed their later date (Oakley 1971).

It has been long established that the earliest humans to reach the Maltese islands were Neolithic farmers who left from Sicily and settled on them towards the end of the 6th millennium (radiocarbon dates in Trump 1966: 48-49; calibrated by dendrochronology in Renfrew 1972), a rather late date compared with other Mediterranean islands like Cyprus, Sicily and Sardinia. There is no doubt that the main feature that made this shift of population possible was the

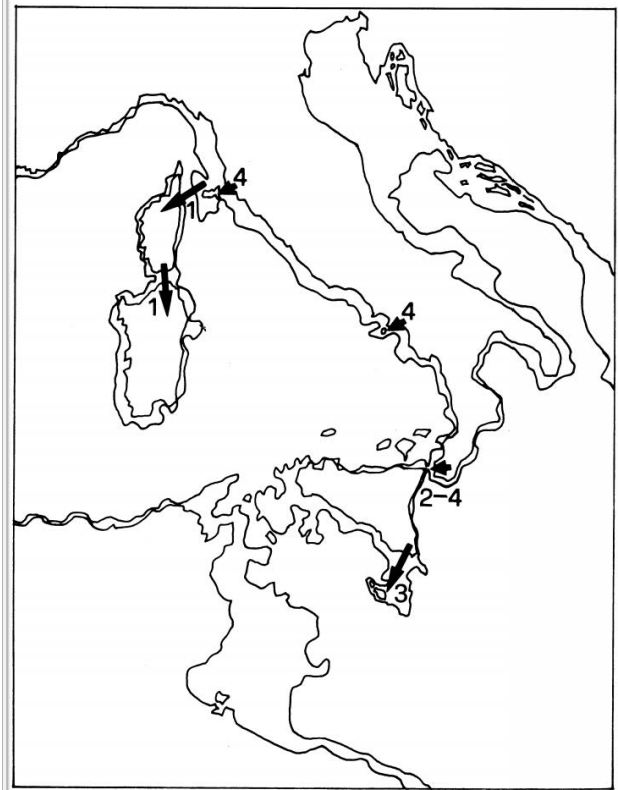


Fig. 1: Map Map showing possible ways of human colonization. (From Anati, 1988).

short distance that separated the two islands and their intervisibility.

Under the right climatic conditions, when the visibility is reasonably good, the Maltese islands are clearly visible on the southern horizon from several points of high ground in southern Sicily. Similarly, Sicily is visible from certain heights in Malta and Gozo. This means that no sophisticated navigational expertise or instruments were required to manage the 90-km crossing between the two islands. The situation with respect to the extensive coastline of Africa to the south and west of Malta is very different since the distance from the nearest landfall there is around 300 km. While it is practically inevitable for a determined navigator, leaving the Maltese islands in a southerly direction on even the most rudimentary sea-craft, to hit some point on that coast, the opposite is much less probable. The probabilities of a craft departing from any point in North Africa in a northerly direction to hit the Maltese archipelago are extremely low, because the distances are great and there is no intervisibility. This geographical reality explains why throughout prehistory and until celestial observations made open-sea navigation possible, all contacts with the outside world, both physical and cultural, were with the north, mainly with, or via, Sicily.

That said, however, it should be made clear that longer distances were not insuperable for Neolithic farmers in the central Mediterranean, since even the Pelagic island of Lampedusa, distant some 167 km from Malta and slightly less from the nearest African landfall in Tunisia, but without any visibility between them, has produced early Neolithic pottery of Stentinello typology with some similarities to that of Malta (Radi 1972). (Fig. 2: Sample of Neolithic pottery from Lampedusa).

The second most important considerations

about the physical formation of the islands are their geology and geomorphology and natural resources, because these are likely to influence people's choice whether they are worth settling on, or not (Fig. 3: Geological map of Malta and Gozo). Malta's geology lacks minerals except for two types of stone which provide excellent building material: coralline limestone, harder to work but more resistant to weathering; and globigerina limestone, softer to cut and carve but more subject to erosion. In this regard, however, it should be said that the earliest Neolithic colonizers were not very concerned with stone for building; they built their houses of mudbrick, more precisely wattle-and-daub (or adobe). For this what they needed was clay which was readily available in another geological deposit (blue clay) prevalent on the northwestern side of the island. This was used profusely for pottery manufacture and the occasional terracotta figurine. This geological layer played another fundamental role, namely, creating water springs by arresting the downward percolation of rainwater through the coralline layer on top of it, therefore providing an essential element for human survival and agricultural activity.



Fig. 2: Sample of Neolithic pottery from Lampedusa showing affinities to Stentinello decorative patterns.

What the islands lacked was stone hard enough to produce efficient cutting and boring instruments, like flint and obsidian, although pockets of inferior chert were not absent. But this did not seem to deter the first inhabitants because they relied on easily accessible rich supplies of them in Sicily itself (Hyblaeen flint) and the neighbouring small islands (Lipari and Pantelleria obsidian).

### Origins

As hinted above, the first Neolithic settlers on Malta were of Sicilian origin. This was determined by the close similarity of the prevalent impressed pottery of the Għar Dalam phase

(5200–4600 BC) to that of the contemporary Stentinello culture in Sicily (Fig. 4: pottery sherds from Malta). Given the limited navigational resources, it is logical to assume that these new settlers left Sicily from the closest landfalls, such as Punta Secca near Licata. Nevertheless, claims have been made that Stentinello style pottery closer to the Għar Dalam was identified from the site of Monte Kronio near Sciacca, a considerable distance further to the west (Maggi 1976–77).

It is very probable that this movement of people was preceded by seasonal or exploratory visits to the unknown land visible on the southern horizon. It is quite possible that the cave sites

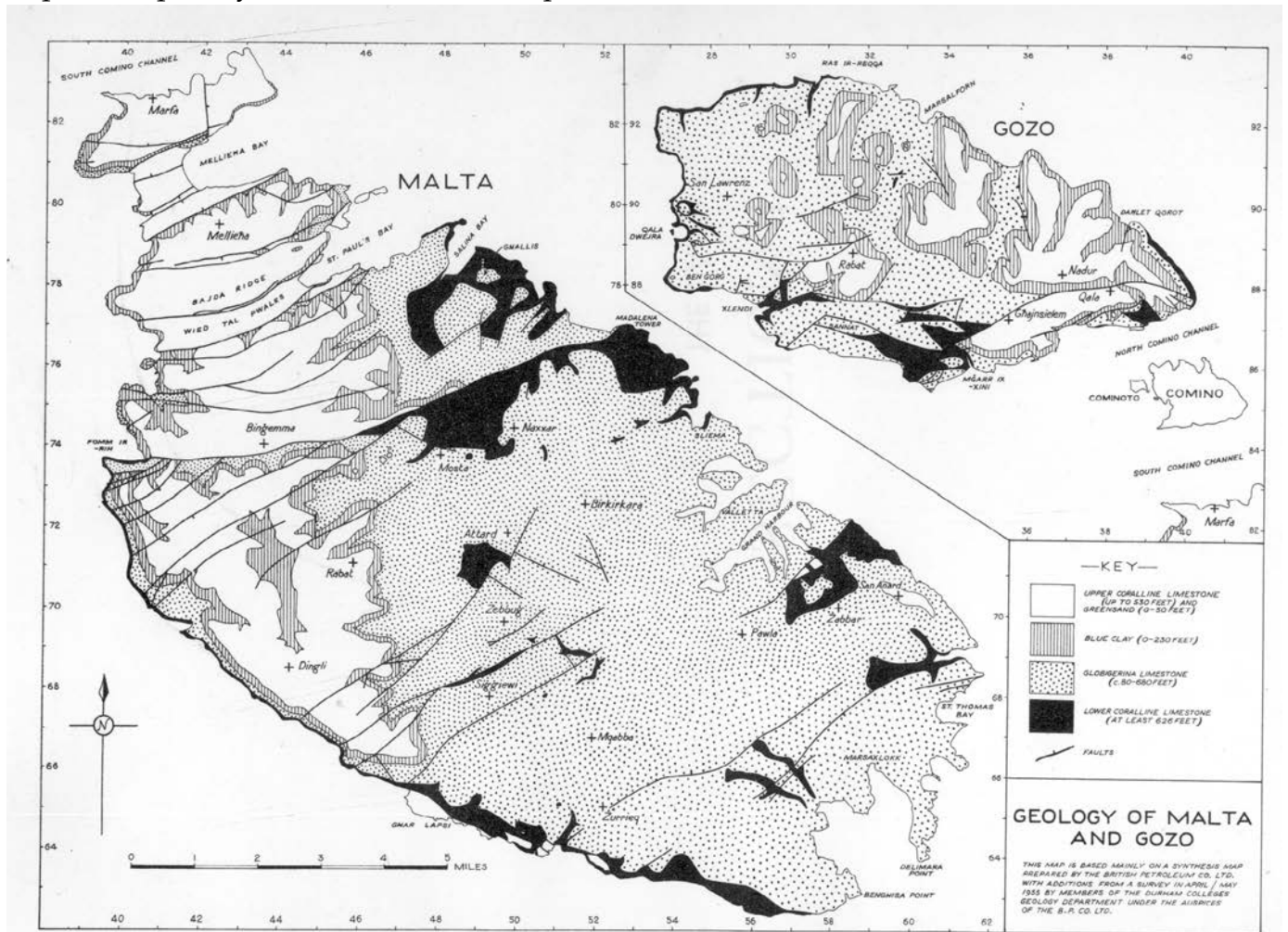


Fig. 3: Geological map of Malta and Gozo.



containing the Stentinello pottery, such as those of Ghar Dalam and Il-Mixta, were simply temporary shelters for such short visits, requiring no initial investment in building (Fedele 1988: 71–73).

From whichever point on the Sicilian coastline they departed, these exploratory visitors appear to have liked what they saw, as viable settlements and their precolonial visits were followed up by substantial migratory groups, probably involving nuclear families, establishing themselves in villages such as that of Skorba (Fedele 1988: 78–82). They must have transported from Sicily to their new home the raw materials, like domesticated seeds and domesticated quadrupeds, for sustaining a new

lease of life in a new land, based on an agricultural economy. Once on Gozo and Malta, they invested in building new homes consisting of modest huts with adobe elevation supported by a sockle of one or two courses of unworked small stone boulders (Trump 1966: 10, 24). The location of these villages would have been determined by the presence of stretches of fertile ground and perennial water resources, such as Skorba in Malta and Tač-Ċawla in Gozo (Bonanno 2009).

All the transfers across this day's journey to the archipelago would have required some sort of seacraft and until a specimen of such a seacraft is discovered there is no way of telling whether they were rafts or dugouts.



Fig. 4: Pottery sherds from Malta, of the Ghar Dalam phase, showing similarities to the Stentinello decorative patterns.

They certainly needed to be sturdy and reliable, capacious enough to accommodate more than one person to do the rowing and to contain the first specimens of domestic animals and plants which could not have been present on this, till then, virgin country. This implies that these people were also consummate seafarers and were, therefore, quite capable of exploiting the nutritious fish resources of the surrounding seas, even though this has not yet left an imprint in the archaeological record of this initial phase of human life in Malta.

### Driving force for colonization

One of the major difficulties that we face in explaining these movements of people is the

motivation that stimulated them to abandon an established way of a life in a familiar environment in favour of facing the unknown. There is nothing to suggest that aggressive and parasitic pursuits, like piracy, were the order of the day. Although Sicily, the point of departure for this particular case, might appear large and fertile enough to exclude land hunger and demographic issues, the growing density of settlement sites of the Stentinello culture recorded on the coastal plain around that time might have led to social tensions that stimulated a search for new pastures (Leighton 1999). Apart from the above, one should not underestimate the inherent urge that characterizes most humans to explore and settle in new spaces which

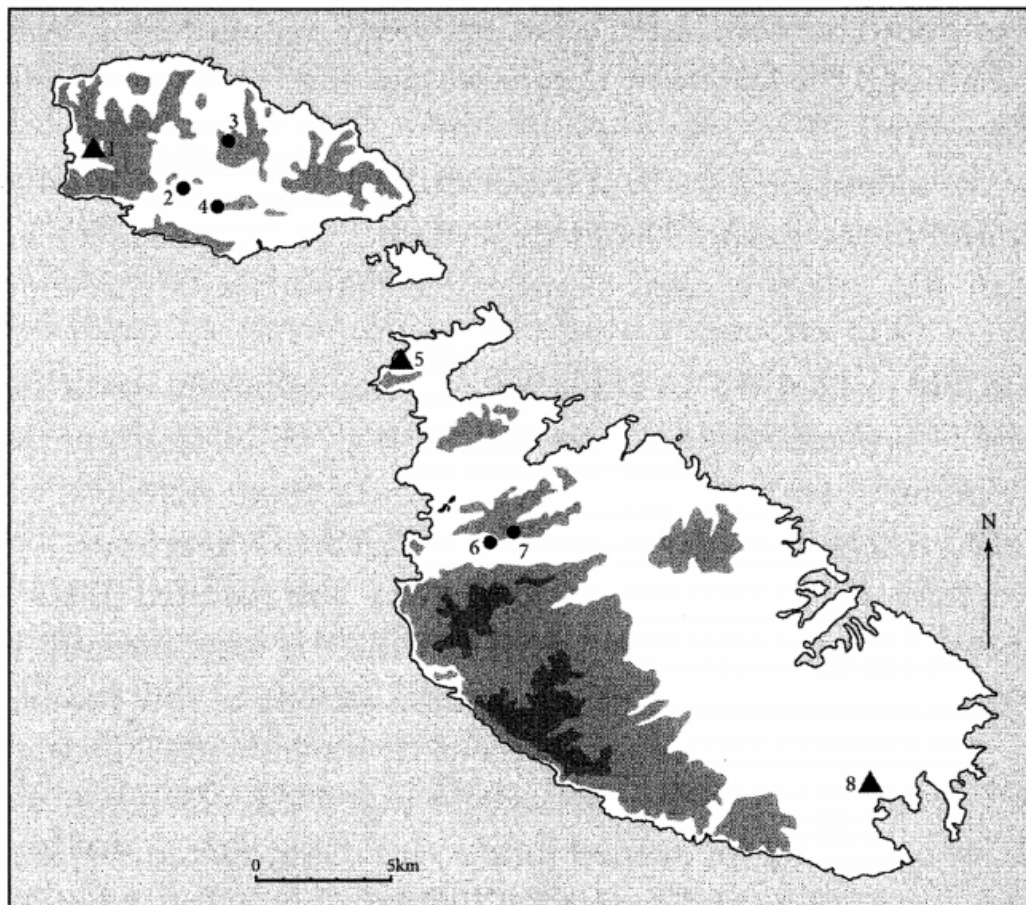


Fig. 5: Sites of the Ghar Dalam phase (From Skeates, 2010).

brought about the spread of the human species to cover the whole globe, irrespective of major obstacles, like stretches of dangerous seas, and adverse climatic conditions. In this case the new destination consisted of a group of islands that, in spite of their small size and lack of some rudimentary raw materials, presented a very familiar climate, seasonal cycles and general ambience, and provided enough amenities to make a new home possible. We may also assume that the initial crossing was followed by frequent ones to procure and ferry over the required obsidian and flint and new stocks of seeds and animals to refresh the limited stocks.

### Settlement and material culture

The two most important sites at which the Ghar Dalam phase is represented, Ghar Dalam

and Skorba, reveal that groups of these earliest inhabitants lived either in natural caves, which were quite abundant in the predominantly limestone landscape of the islands, or in open-air villages (Fig. 5: Map of Malta from Skeates fig. 3). At Skorba, a wall 11 m long and 1.5 m thick might have served a defensive purpose, but its real purpose is difficult to make out. The only hut datable to this period is elliptical in shape and of moderate size, about 4 m by 6 m in diameter (Trump 1966: 10) (Fig. 6: Plan of Ghar Dalam hut close to the Red Skorba Shrine).

This village outlived the Ghar Dalam phase and continued to be occupied up to the end of the prehistoric period, the major change taking place in the Ġgantija phase when two megalithic temples were built over the remains of earlier huts. During the following two phases of the

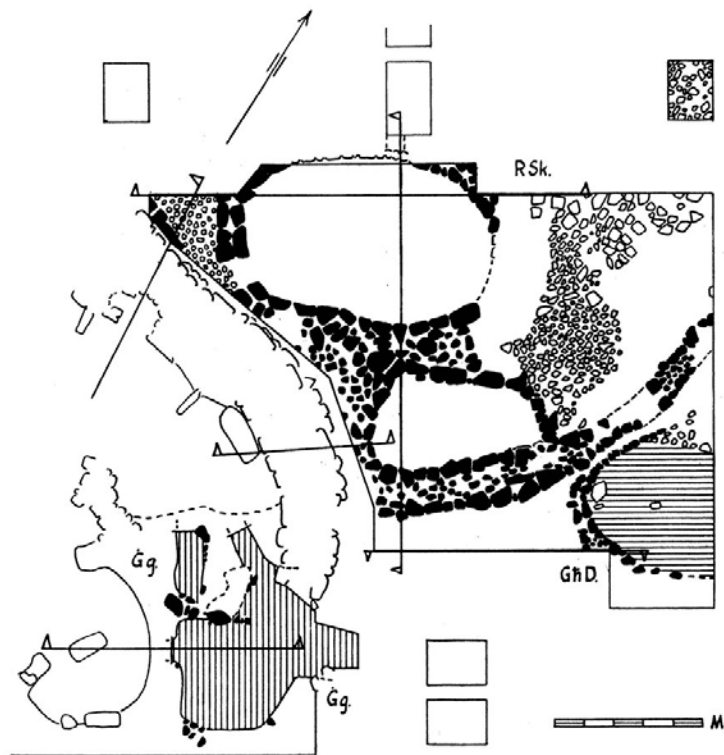


Fig. 6: Plan of Ghar Dalam hut close to the Red Skorba Shrine.

Neolithic, the Grey Skorba and the Red Skorba phases, the community inhabiting this settlement changed the pottery style twice, each time introducing a set of new shapes that were clearly inspired from the parent cultures flourishing in southern Italy and on Lipari, the main island of another group of islands north of Sicily. The latter communities exploited another source of 'black gold' present on Lipari, namely obsidian, a volcanic glass from which excellent sharp and pointed tools could be produced. This mineral was widely exported to other prehistoric communities, often together with the pottery styles in fashion in Lipari at the time.

The pottery of the Grey Skorba phase (4600–4400 BC) is grey in colour – hence the name of the phase – and rather dull, without surface decoration. Some of the lugs, however, seem to recall vaguely those of the Serra d'Alto culture prevalent in southern Italy, Lipari and Sicily at that time. This is succeeded by a range of shapes that are quite similar, and evidently derived from them, but carrying a distinctive coral-red coloured coating, hence the name Red Skorba (4400–4100 BC). This, in turn, is obviously inspired by the pottery style of the Diana culture, named after a *contrada* on Lipari island, which also spread both northwards to southern Italy and southwards to Sicily and Malta. That these earliest inhabitants practised a mixed agricultural economy, involving crop sowing and harvesting and animal husbandry, has been reliably established (Trump 1966: 53; Skeates 2010: 84–88, 126–28). Whether in the process of reclaiming land for this purpose they were responsible for the start of a gradual process of environmental degradation and land impoverishment, leading to a possible disaster at the end of the later Neolithic period, has been an accepted presupposition in most of the relevant literature (Haslam 1969;

Bonanno et al. 1990). Recent scientific research, however, based on mollusc and pollen remains from cores in various alluvial deposits in both Malta and Gozo (Fenech 2007; Carroll et al. 2011), has shown that the process of denudation of woodland had already started before these humans set foot on Malta and that climatic agents rather than people contributed to soil erosion and treeless landscapes.

### **Religious rituals**

One aspect of the spiritual life and beliefs of these Neolithic farmers about which the archaeological record is completely silent is funerary ritual. As no burial sites have been encountered relating to this period we can say very little, if anything, on the way they disposed of their dead, whether any social distinction was made between one burial and another, or what could possibly be their beliefs in an afterlife as suggested by the accompanying material objects. On the other hand, we seem to be better informed on some religious practices connected with the inhabitants of the Skorba village in the last phase of this period, a good half millennium after their first ancestors reached Malta; so it is unlikely that this spiritual manifestation recalls the ones that must have formed part of the latter's original cultural baggage. The absence of close similarities in spiritual expression in neighbouring lands also suggests an autochthonous origin for the beliefs that they represent. The evidence comes from two small huts which appeared to be connected by a common courtyard with a cobbled floor (Trump 1966: 11–14) (Fig. 6: plan of Red Skorba Shrine). The floor of the huts themselves was very irregular, being the bedrock surface itself. Resting on it, the excavators found a number of cow tarsal bones that had clearly been artificially flattened at the thicker end. A symbolic purpose is almost certain, but difficult to identify. In view of the associated

objects, a phallic symbolism has been suggested (Trump 1966: 34) (Fig. 7: Photo of cow tarsal bones). Another item whose purpose is difficult to explain is the group of goat skulls with their foreparts broken away. They too were found lying on the hut floor. Much more helpful are, on the other hand, a series of fragmentary figurines in terracotta (apart from a larger one, in stone), representing a highly stylized, standing female figure (Trump 1966: 33-34) (Fig. 8: Photo of Red Skorba figurine). Given their pronounced female sexual attributes, one finds little difficulty in accepting the view that they were connected with some fertility cult centred on an important female divinity, possibly a mother goddess, representing mother earth and promoting the fertility of the land and the fecundity of the human community.



Fig. 7: Photo of cow tarsal bones.



Fig. 8: Photo of Red Skorba figurine.

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## NEIGHBOURING LANDS... NEIGHBOURING CULTURES? THE NORTH AFRICAN (AMAZIGH) ROOTS OF THE CANARY ISLANDS

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The Amazigh people 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.

### **The Canarian Amazigh culture**

The indigenous Canarians lived mainly in natural caves (and to a lesser extent in man-made caves cut into rocks), usually near the coast, 300–500 m above sea level. These caves were sometimes isolated but more commonly formed settlements, with burial caves nearby. Gran Canaria is the only island where settlements with stone houses forming important urban concentrations can be found, although isolated houses have also been documented. In terms of subsistence, animal husbandry was the main means of support for the indigenous societies in the different islands, with the exception of Gran Canaria where agriculture was more developed, including both dry and irrigated farming. The herds basically consisted of goats and sheep and, to a lesser extent, pigs, all of them imported from West North Africa and adequately adapted to the climate and environment. Gathering plants and fishing also provided significant food resources.

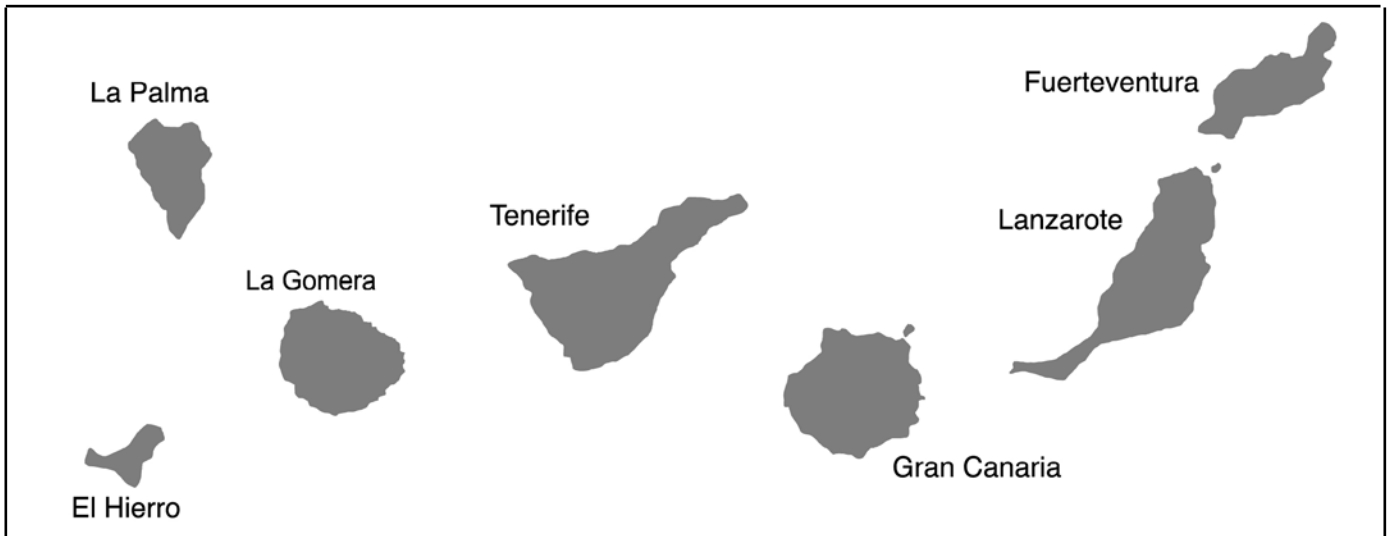
Ceramics are the artefacts most commonly found in archaeological excavations and also the most widely studied. This is due to the research possibilities they offer, using a cultural historical approach (which still prevails among Canarian archaeologists), for establishing timelines, food consumption patterns, stylistic trends, etc. In the Canary Islands they are typically varied, with each island presenting both formal and decorative differences. The only common feature is that they were coil-built instead of using a wheel. Ceramic items were often incised or burnished, in particular in Gran Canaria, where painted decorations in shades of red, black and white were also common. The La Palma ceramics provide the best stratigraphic sequence, in four phases, although the Gran Canaria ceramics are undoubtedly the most complex, due to the variety of shapes, handles and decorative features. Gran Canaria ceramics also exhibit the clearest affinities with North African Amazigh ceramics. The Tenerife vessel forms enable parallels to be drawn with those documented in Mauritania and in the central and southern Sahara regions (Farrujia, 2014).

The raw materials used in the lithic industry were obsidian and basalt, and the most common tools were burins, borers, racloirs and scrapers. Typical polished stone items were ground stones, used to grind cereals. In terms of the bone industry, which was based mainly on ovicaprine bones, grainers and awls for use in leatherwork were common, as well as fish hooks. Antlers were also used to make tools for ploughing or were set in wood to be used as projectiles (spears). There was also an important wood industry, primarily represented by shepherd's crooks, combs, shields, containers and doors for man-made caves and houses.

The majority of the plant fibres used by the indigenous Canarians for clothing and basket-making came from the round-head bulrush



Fig. 1-2 - Location of Canary Islands and map of the islands.



(*Holoschoenus vulgaris*), which was used to make mats, baskets, bags and shrouds, as well as garments, which were also manufactured from goatskin.

In terms of social and political organization, there was a system of matrilineal descent in most of the islands, in which inheritance was passed on via the female line. Social status and wealth were hereditary and determined the individual's position in the social pyramid, which consisted of the king (known as the *guanarteme* in Gran Canaria and *mencey* in Tenerife), the relatives of the king, the lower 'nobility', villeins, plebeians and, finally, executioners, butchers, embalmers and prisoners.

With regard to faith, the indigenous Canarians, like the North African Imazighen groups, worshipped two celestial divinities, the sun and the moon, and sacred natural places such as particular mountains, rocks and caves. Their religion revolved around the need for rainwater, on which the pasture land and crops, and therefore the food for the indigenous people and their livestock, depended. Religious offices were usually held by men, although in Gran Canaria and Fuerteventura these duties were performed by women. Some indigenous



sites have been associated with this cult, such as the cave paintings in Gran Canaria whose interiors display painted geometric motifs, the cup-and-groove sites, consisting of small spherical depressions carved into the rock and linked by man-made channels which are related to the spilling of libations, and the sacrificial altars, built in stone and varying in shape although mainly circular, used to burn animals sacrificed as offerings to the gods (Mederos and Escribano, 2002).

The world of death was also related to cultural practices. In the Canary Islands, burial sites are one of the most common finds, although they have been plundered continuously since the 18th century. The indigenous Canarians believed that life continued in another form after death and therefore supplied the corpse with provisions (ceramics, food, awls, beads, rush bags, etc). They laid the bodies to rest by placing them on beds of stone, vegetation, animal skins, etc, to avoid physical contact with the earth. The most common method of laying out corpses was to place them supine inside natural caves or shelters. In Gran Canaria they were also placed in excavated caves or tombs (Arco et al., 1992). Indigenous funeral rituals also included mummification, which was reserved for members of the 'nobility' (as a prestige practice) and has been documented primarily in Tenerife and Gran Canaria.

### **The rupestrian connections**

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% of the descendants of the

indigenous populations are found in the Maghreb.

Several rupestrian sites of the Canary Islands, especially in Tenerife and Gran Canaria, also bear a clear resemblance to the Saharan frame of reference, since the horses and anthropomorphs or schematic warriors engraved in these islands reproduce African characteristics.

### **Some clues about the early colonization of the Canary Islands**

Regarding the early colonization of the islands, 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

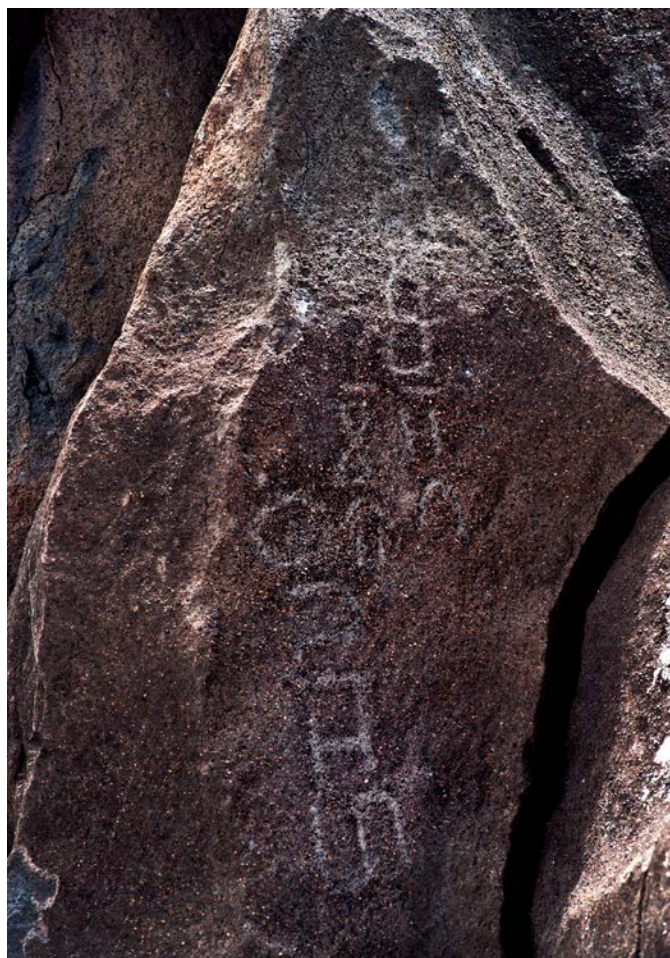


Fig. 3- Lybic-Berber inscription from La Caleta (El Hierro). Foto: Tarek Ode.



Fig. 4- Horsemen from the rock art site of Balos (Gran Canaria). Foto: Tarek Ode.

varies widely from island to island. Nevertheless, an examination of the Lybico-Berber inscriptions and radiocarbon dates available from some sites on the islands indicate that the Canary Islands can be divided into two geographically overlapping areas of Amazigh influence at different times:

a) An archaic Amazigh culture in the 6th century BC, including El Hierro, Tenerife, Gran Canaria, La Palma and La Gomera.

b) A Romanized Amazigh culture dating from the time of Augustus and Juba II, including Lanzarote, Fuerteventura, Gran Canaria, El Hierro and Tenerife (Farrujia et al., 2010).

On the basis of current research, it is possible to refer to the existence of relations between some islands during the indigenous period (Tenerife-La Gomera, or Lanzarote-Fuerteventura-Gran Canaria), since certain aspects of the material culture would appear to indicate this. However, some cultural features in certain islands are not found in others. Although they share the same base, the indigenous island cultures developed in isolation, with very little contact with the exterior. Given this, the poor quality of the ceramics, except in the case of Gran Canaria, leads to the conclusion that later inter-island and even cross-cultural exchanges were rare, indicating cultural isolation until the time when the islands were conquered by the Europeans in the 14th century.

### The miscegenation process

The entire indigenous culture, which had existed in the Canary Islands since the beginning of the first millennium BC began to disappear irreversibly following the conquest and colonization of the archipelago that began in the Late Middle Ages.

It should be noted that the indigenous Canarian culture can only be explained by a continental-African ethnogenesis which is inseparable

from the culture of certain ethnic Amazigh groups which lived approximately 2,000 years ago. The culture developed in the Canarian Archipelago by Imazighen societies was clearly influenced by insular isolation and adaptation to the island environment under conditions which meant that they were virtually cut off from contact with the African continent and other ethnic Amazigh groups. This has made the indigenous archaeology of the Canary Islands an extraordinary, marginal and almost unclassifiable historical example of Amazigh or (North) African culture. In other words, the

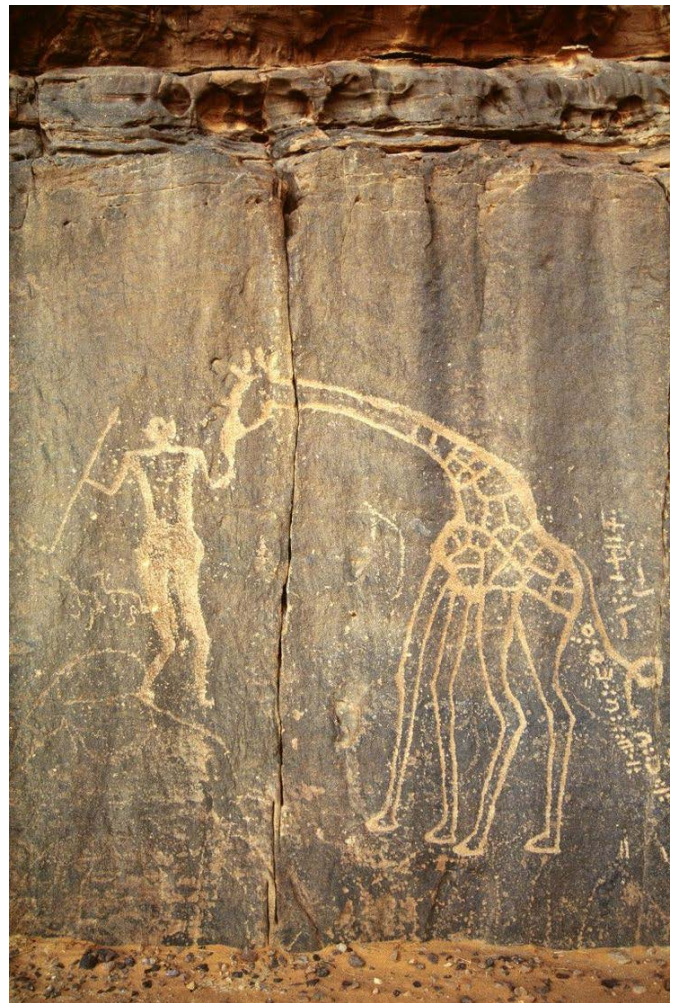


Fig. 5- Engraved giraffe, human figure and Libyan-Berber Script, Tadrart, Algeria.

indigenous Canarian universe was unarguably Amazigh, although from the point of view of 'positive culture' it is a unique case and an extraordinary product of involution (due to isolation) and adaptation to an island environment. The archaeological evidence (ceramics, rock inscriptions, etc) and anthropological-genetical type (DNA) evidence are indisputable. However, there are many gaps in our understanding of the circumstances in which

the first settlers arrived in the Canary Islands. We still do not know how or why the North African Amazigh landed in the Canary Islands in the middle of the first millennium BC, although the early colonization of the islands has recently been related to Phoenician-Punic influence in the Atlantic: the islands could have been colonized by Phoenician traders who brought over North Africans.



Fig. 5- Houses in an indigenous settlement in Barranco de los Gatos (Mogán, Gran Canaria). Detail. Photograph: Tarek Ode.



Fig. 6- Indigenous pot from Gran Canaria. Photograph: El Museo Canario

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## COLONIAL ARTISTS RE-STYLE THE SAME CHARACTERS

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Independent structural anthropologist*

Colonizers usually transfer their cultural styling to subjects, as demonstrated in names and the styling of myths, rituals, fashion, art, architecture and language. However all colonized people already had similar cultural media, with structurally identical content. The study of diffusion is thus problematic: which elements are original, imposed, borrowed, transformed, or locally 'invented' and developed? Which meanings are novel, unique, or structural (such as grammar and geometry)? Which illustrate other media (myth, ritual, healing), or are unique to visual art? Which arise from technique, stylization, individual 'signatures', or social conventions? Style and its development are easy to demonstrate, but the other questions of meaning, contexts and acculturation in art and architecture are abstract and arguable. Structural analysis of art and building sites now enables the isolation of cultural archetypes, or recurrent stock characters, by categorically visible attributes, their fixed sequence and the exact spacing of their eyes. This abstract structure is directly measurable, and comparable, indicating compulsive, universal, subconscious expression of archetype by artists and architects, including colonizers and colonized. Art, myth and architecture are enabled by a universally innate structure of syntax and systems, like language is (Jacobsen 1941; Chomsky 1986). Every medium leaves a more or less arbitrary layer up to social convention. In language, this layer is in the allocation of short strings of sounds, to short quanta of meaning. Yet a recent study (Blasi 2016) found some innate structure

even in this optional layer, similar to abstract 'signs' in art (see Expression 13). We could instantly distinguish elements of art, ritual, clothes, buildings, music and language from many different regions, eras and economic classes; by styling, such as textures, material, technique, or pronunciation. But we are blind and deaf to the innate, over-determined archetypal structure in media. One of the many indications of determination in language is Zipf's Law (1935). The average use frequencies of words follow a ranking of magnitude that halves in each rank. A similar ranking applies to the population of cities (Auerbach 1913). As Marshall McLuhan (1964) had found, media have a natural life and some content of their own. This paper demonstrates that part of the message in all media is structure itself.

### **We use identity, reject ambiguity**

The apparently arbitrary and socially determined elements of media are restricted by disambiguation. There is a 'periodic table' in perception and behaviour, similar to elements and species (Boeyens 2014). We are compelled to reject ambiguities in language, signs, myth, ritual, art and architecture. Children have an innate impulse to reject ambiguous sounds. We want characters and pictures as different as possible, which ironically allows various kinds of analogies (symbol, icon, mime, etc). We also seek differentiation in group identity, the 'us and them' impulse, peer pressure and tribal bonding, in support of tribal splitting and colonization. However our tribal tools are restricted to styling the arbitrary elements in media. We instinctively know that archetype is not affected by social or individual signatures. We use brands to position our politics for appropriating resources, bound to place and time, against real or imagined competition. Land claims sagas in North America

and South Africa have at times stretched the concept of culture thin. Science feels compelled to study cultures by way of styling, and to confirm supposed development and improvement to the point of confusing culture, civilization, population, economy, maturity and evolution. This paradigm reduces culture to diffusion (De Santillana 1969), or a game of 'broken telephones'. We seldom study the core content of culture. Even cognitive archaeology concentrates on the sparse illustrative functions of art, as if it supported myth, ritual and oto-visual emissions (Lewis-Williams 2012; framed idiosyncrasy). Structural analysis now enables a direct study of art and architecture, in the context of nature and perception, with promising direct applications in myth and ritual (such as sequences of archetypal sets in Babylonian temple building texts). We need not rely on local ethnography to study art. We also have to look beyond styling to study the roles of art and architecture in therapy, and the integration of our levels of consciousness (Jung, cited in 2006). Culture is not an idle game. Artistic maturity and cultural maturity cannot be faked. They attract admiration and imitation, enabling acculturation or even colonization.

### Stoneprint in a 'new' Basque panel

Ecology was fragile in the Younger Dryas, or Ice Age thaw. The few survivors probably descended from mountains to colonize the plains, while annual toxic melt flooding gradually decreased (Collins 2014). Despite lack of notable buildings and iron, they had a large cultural repertoire (Henshilwood 2013). Populations, technologies and styles mature, but culture (in the singular) does not evolve. The full structural repertoire and stylistic variety in Ice Age art indicates visual prodigies, or geniuses. Typology in the newly discovered Armintxe cave at Berriatua near Lekeitio in Spain (Fig. 1) is (with

relevant attributes and their average frequencies):

- 1 Taurus; bovid (19%), incomplete, off the grid, not accounted
  - 2 Taurus; **bovid** (19%), **twisted** (48%) in birth
  - 3 Aries; equid, **long-necked** (42%)
  - 4 Pisces; P-person or bed or bag? Reclining
  - 4p Galactic South Pole [Gs]; lion **tail tuft** (50% limb joint)
  - 5 Aquarius<sup>20</sup>; **equid** (frequent), **inverted** (30% horizontal)
  - 5 Aquarius<sup>21</sup>; bovid **moulting** (44% varicoloured), **inverted** (30% horizontal), **large** (24%)
  - 6 Capricornus; Bovid, near the centre (48% ingress / egress), with tailcoat head (see inset. More often equal double-headed. Adjacent 5 sometimes has a tailcoat head)
  - 7 Sagittarius; animal head **incomplete** (unfolding), perhaps juvenile
  - 9 Scorpius; goat, **straining forward** (34% bent forward)
  - 10 Libra; goat, under a staff? (34%. See an animal holding a staff, Expression 9, P.23)
  - 11 Virgo; equid, **womb** (87%); and another equid, **pregnant** (87%)
  - 11p Galactic Pole [G]; goat **tail brush** (68% limb joint)
  - 12 Leo; equid moulting (both more typical of 5 opposite)
  - 13 Leo; **heart** (85%) of a **feline** (14%)
  - 14 Cancer; feline (more often a small canine / feline)
  - 15 Gemini; equid, long **manes** (33% rope).
- The axial centre or ecliptic pole is unmarked (51%). The celestial pole [C] is on a **rump** (50% limb joint). The celestial south pole [Cs] is on a feline **jaw** (37% limb joint). These markers and the **horizontal** plane of some characters place the abstract solstices in Virgo-Pisces, thus spring and the cultural time-frame in Age Gemini, about 7000 BC. However, structural dating and precessional history are both insecure.

Here are several alternative polar markers, as on the jaw of the bovid-feline (a remarkably rare griffin) indicating Age Taurus (supported by type 2 Taurus as a **spring birth**), after about 5000 BC. Works usually expresses the prior age of perceived formation of the artist's culture. The **general theme** here could be type 12/13 Leo, of felines, inversion, interiors (such as caves), water works and transformation; and type 11 Virgo, of gestation and birth. Themes are conscious, but the five layers of structural expression are subconscious to artists, architects, builders and members of any culture. The stoneprint analysis score on the Lekeitio

panel tracing is 14/25 attributes, 14/16 axial points, 4/5 polar markers, 2/4 thematic features; total 34/50, minus 3 extra characters off the grid; total 31/50, or **62%**, just above the currently known average. The sigma curve of known scores is 0.4, from 40% to 80%. Discovery of more archetypal attributes, probably of lower average frequencies, may well maintain the average analyses at 60%, but narrow the sigma or bell curve to 0.3, similar to species variety (Thackeray 2013). The new rock art panel confirms earlier claims (2014) that structural analysis is predictive. Regarding queries I received on supposed zodiac art, or diffusion



Fig. 1. Newly discovered Younger Dryas cave art near Lekeitio, Spain (after C. Gonzalez. Archetypal labels and axial grid by E. Furter). Thick fluting lines are erased for clarity. Basque ancestors had to avoid or displace cave lions. The lion at the bottom expresses archetype 13 Leo by the position of its heart (a standard structural feature), and expresses type 14 Cancer by its eye. The lion near the centre expresses two of the five polar features by its tail tip and jaw (circled, and in the inset). See the structural analysis in the text.



and other correspondence theories, Occam's razor applies. Resemblances between artefacts imply archetype, not degraded convention, craft or science. Every bull is not type Taurus, and vice versa. Only a character or building member between a type 15 and a type 3; with its eye on an axial grid of 12 or more types; opposite a type 8/9 Scorpius; is type 1/2 Taurus.

Known typological species are:

- 1/2 Taurus; bovid 19%, bird, swift
- 3 Aries; dragon, griffin, ovid
- 4 Pisces Pegasus; equid, birds
- 5 Aquarius Pegasus; equid (eg zebra)
- 6 Capricornus; goat (rare), Pan
- 7 Sagittarius; small, juvenile
- 8/9 Scorpius; wolf, long-tailed
- 12/13 Leo; feline 14%, raptor, porcine?
- 14 Cancer Lynx; small feline, bird
- 15 Gemini Canis; canine, antbear.

Mixed species complicate the data, but postures, items (staff, bag, rope), trees, textures, functions, gender, orientations, eyes and limb joints resolve the data. Humans express all types, usually by their social functions, such as 1/2 rainmaker or monster slayer; 4 twins or king; 5 priest; 6 Pan; 8/9 healer; 10 teacher; 11 pregnant; 12/13 hero; 15 founder or coloniser. To readers who may find cultural structure illogical, I can only reply that it describes a natural and cultural artefact.

### Gobekli Tepe House C stoneprint

Kiva-shaped houses on a low hill near Sanliurfa and Haran in Turkey are a halfway house to civilization, but with the full cultural repertoire. This unique site may be a memorial to an ancestral market. The oldest known stories of colonization, tax and emigration feature Babylonian kings (Furter 2016, pp. 177-194). The second oldest feature Abraham, who left adjacent Ur (Sanliurfa) to

escape the tax of Haran. Wicked cities were rising from the still salty plains. In House C (Fig. 2), the archetypes are (with cardinal directions, engravings, and relevant typology):

1 Taurus; outer SE pillar. **Five birds** (cluster) in a **net** (adjacent 15g Gate is sometimes a grid), **spring** chicks (in Age Gemini-Taurus); over a boar and fox (polar types, expressing the House C general theme)

2 Taurus; WSW pillar

3c Cista; central west pillar person, off the grid as the cistas often are. Its 'face' is due west of the invisible axial centre. Inner side: fox jumping (polar)

3 Aries; outer west pillar (off the photo); and inner west pillar. Edge; **fox descending** (decan Cepheus?) in high relief, canine **teeth** (decan Triangulum); over a graffito **boar or rodent** (decan Cetus tail?)

4 Pisces; outer NW pillar

*4p Galactic South Pole on floor rubble; and small outer NNW pillar*

5 Aquarius20; NNW pillar

5 Aquarius21; north pillar. This axis extends to the rectangular lion house. Edge; boar, **chest marks** (heart?, like its opposite 13). West side; boar

6 Capricornus; NNE pillar. Rounded top

7 Sagittarius; NE pillar. Found fallen, but the invisible axis from 15 restores its position; and central east pillar person, with **loincloth** (25% bag) over **belt** (rope). Inner side; fox jumping (polar)

8 Scorpius; ENE pillar. Found loose, but the invisible axis from 1 restores its position

9 Scorpius; east pillar, large. Edge; **fat fox (decan Lupus)**

10c Cista Lid; outer narrow passage to the 11 'womb'. Due east from the invisible axial centre

10 Libra; ESE pillar. Edge; throat marks **and weave** (Adjacent 10c cista lid is often textured. South side; a man? (decan Bootes)

11 Virgo; SE **niche** (womb 87%; and outer **niche** (womb 87%))



12 Leo; SSE pillar. Edge; 'chest' furrow

13 Leo; south **bench** (85% heart, often a platform), at the entrance, near the gate **beasts**, like later lion gates. This axis is opposite the rectangular **lion house**

14 Cancer; SSW pillar

15 Gemini; outer SSW pillar (off the photo). The faces of 15, 2, 3 and 4 align. Flattening of part of the irregular outline is typical of complex stoneprints. Edge; fox (canine) or **lynx?** Spring marker in Age Gemini.

The two celestial poles are on precessional tracks, two spiral sections of floor joists formed by used grinding stones (Banning 2011). They act as limb joints (resembling pods), as usual at polar features. These uniquely long polar track markers support the stoneprint analysis of the entire site, which implies the axial centre on House C. It may have been the first circle, rebuilt several times (Schmidt 2012). Retention of the large outer 15 Gemini, 4 Pisces and 11 Virgo pillars, while others were moved inward, indicates an initial Age Gemini framework. The houses were cleaned before rubble infilling (Banning 2011). Some portable figurines, slabs and food or beer grinders were probably placed in a ritual context. The floor is literally a time capsule, marking solstice precession. The north pole or summer row (east or right) seems to stop at Leo-Cancer (thus Age Taurus-Aries, about 1500 BC), prophetic to the builders of about 9000 BC (by archaeological dating). The summer row starts much earlier, by subconscious retrospect, not observation or mapping. The celestial south pole markers (west, or left) track midwinter only up to Age Leo-Cancer, long before the work (if the grinders are undisturbed). The spirals indicate decreasing obliquity. We have no obliquity data prior to some arguable Egyptian solstice markers (Rohl 2007). Subconscious markers are only

approximate, here about 30 degrees in Age Gemini.

The equation of time (delta-T) in the Younger Dryas remains unknown, due to rapid polar righting, a possibly larger orbital diameter and possibly larger orbital eccentricity. The pole had precessed between the two Ursas (bears, bull forelegs, ploughs, wagons, boars, birds, horses or griffins; particularly their limb joints). The Ursas may be consciously pictured on several pillars as a snarling boar and jumping fox. However, they are not in consistent context with any other astronomical features. Boar and fox may have meant half moon and new moon. Intent and purposes of artists and builders are largely incidental packaging for the five layers of structural expression. Like the periodic table of elements and DNA, stoneprint was suspected, but unknown until its quanta and quirks were gradually revealed, and initially opposed by scientists as too esoteric.

The **general theme** in House C could be type 12/13 Leo, typical of interiors, heart, summer sun and the celestial pole, which hung over Leo and Ursa for millennia. The celestial equator at the time dipped lowest below Leo, in the long Hydra body (it is now lowest in Orion). House C is nicknamed boar house. Six of the first seven wild pig images (including three pig figurines), were found here. Type 12/13 Leo also expresses dismemberment or grinding, the alchemical stage of digestion (Pernety 1758) in the process of transformation. Boars, grain, brewing, beer, feasting and thus calendar are synonymous. These ancestors colonized a mud plain that gradually became fertile, populated and contested. The structural analysis score in House C is 7/25 attributes, 16/16 axes, 4/5 polar markers, 3/4 thematic features; total 32/50, minus 2 extra features off the grid; total 30/50, or 60%, on the average.

## Gobekli Tepe village stoneprint

Dominant typological themes in the excavated houses reveal a third level of structural scale in the hill complex (Fig. 3). The village is about ten times larger than the houses, which are about ten times larger than the relief art panels on two of the known pillars. Identifications and the axial grid may change as excavation proceeds.

The tentative sequence is:

- 1 Taurus; west rectangle
- 2 Taurus; house B
- 3 Aries; house A (**snakes over ovid**)
- 4 Pisces; undetected?
- 5 Aquarius; undetected?

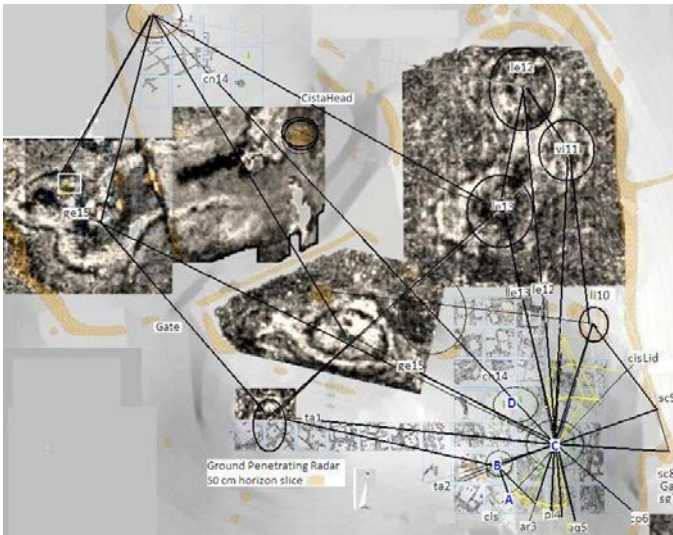


Fig.3. Gobekli Tepe village excavation and radar scan maps (after DAI. Overlay, archetypal labels, and potential axial grid after Furter 2016; Stoneprint P.154). House C (see above) may be at the axial centre. Dominant carving themes support tentative identifications: types 1 Taurus as the West rectangle; 2 Taurus as House B; 3 Aries as House A; 11 Virgo as a circle in an oval; 12 Leo as a large circle, and the eastern lion pillar in a rectangular house; 13 Leo as a large circle, and the western lion pillar; 14 Cancer as House D and a distant feature; 15 Gemini as a large house near the summit, and a double house. The Leo types on the site lie north, while among the pillars in the houses they lie south. High asymmetry raises the possibility of a double stoneprint instead.

- 6 Capricornus; south-east feature
- 7 Sagittarius; undetected?
- 7g *Galactic Centre; a wall cairn?*
- 8, 9 Scorpius; perimeter wall?
- 10 Libra; unexcavated?
- 11 Virgo; large **oval**?
- 12 Leo; **lion** pillar east
- 13 Leo; **lion** pillar west
- 14 Cancer; house D; and far-out** feature
- 15 Gemini; summit house (spring?); and **double** house

The axial centre or ecliptic pole may be on house C. However, this pole is usually unmarked, or on a feature different from the periphery of types. Complex artworks or sites without the full archetypal structure are rare, about 1%. Eventual reconstruction will tell.

## Typology in five artworks

Characters along the edge of complex artworks or buildings express the standard typological set, in sequence, with their eyes on an irregular axial grid, opposite their usual counterparts. Fig. 4 in columns 1/2, 3, 4, 5/5, 6, 7, 8/9, 10, 11, 12/13, 14, 15 demonstrates 12 of the 16 types, from some artworks that reduce the four doubled types into single expressions. Label 5 repeats, to maintain sequential correspondence between art, architecture, divination, numerology and atomic sets, all in base-8 or base-16 (not the consciously familiar decimal base-9). Typological attributes appear at fixed average frequencies. For example, 1/2 is twisted 48% and/or bovid 19%; 3 has a long or bent neck 42%; 5 is varicoloured 44%; 6 has ingress/egress to the centre 48%; 10 has V/W-posture 53%, staff 34%; 11 is a womb 87%; 12/13 is a heart 85%, feline 14%; 15 has a rope 33%, bag 21% (see a longer list in Expression 9, P.24; ed. 10, P.17-18; ed.13, P.42; or Furter 2016, Stoneprint P.3). About 36 visible typological attributes are known, and more may be identified.

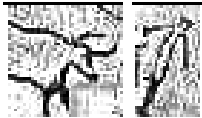

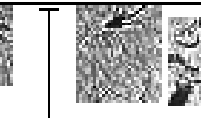
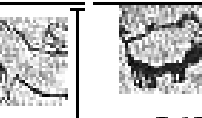











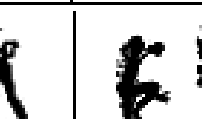




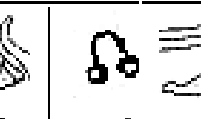









 1/2 3 Bovid. Twist	 4 5/5 Squat. Colour	 6 7 Ingress. Young	 8/9 10 Strong. Horns	 11 12/13 Womb. Heart	 14 15 ? .Ropes
 1/2 3 Twist. Rain	 4 5/5 Squat. Act Horiz	 6 7 Tail. Rope	 8/9 10 Strong. Arm Staff	 11 12/13 Womb. Hrt Felin	 14 15 Tree. Ropes
 1/2 3 Bov Twst Neck	 4 5/5 Squat. Horiz Colr	 6 7 Ingress. Ropes	 8/9 10 Bent. Arm Staff	 11 12/13 Womb. Hrt Feln	 14 15 Egress. Rope
 1/2 3 Twist Neck	 4 5/5 Squat Colour	 6 7 U-shape. Rope	 8/9 10 Bent Arms Up	 11 12/13 Wmb. Hrt Equid	 14 15 Tree. Rope Smite
 1/2 3 Twist Neck	 4 5/5 King. Act Colour	 6 7 Reptl. Bag Unfold	 8/9 10 Bent? .Arm Staff	 11 12/13 Womb? Heart	 14 15 Canin. Rope Cani

Fig. 4. See analysis of the twelve columns in the text.

Row A: Ice Age, Peche Merle cave, France. This outline style was used by a few artists in a wide area. Typology is subconscious and archetypal.

Row B: Early civilisation era, Babylonian seal. Aspects of this carving and imprint style were formalised in relief by colonists in Egypt (see the Hierakonpolis Nekhen Tomb 100 colonisation panel in Mindprint, P.220-221. See the later Seti I ceiling in Expression 13, P.46).

Row C: Stone Age San, Linton panel, Maclear, South Africa. This spiritual group includes healing and initiation, part of a much larger rock canvas. The style was slowly eradicated by waves of colonisation.

Row D: Christian era, Sweden. Siegfried kills dragons (see a photo in Expression 13, P.12). Norse styling colonised Scotland (see beasts and symbols in Expression 13, P.52).

Row E: Hindu era, India. A Vishnu churn in the Mahabharata. This style colonised Cambodia.

This paper is part of my response to Anati's (2004) call to study complete assemblages in global rock art, partly to 'identify the grammar, syntax, or structure of composition... and common environmental, historic, and cosmic components'. Anati had noted a combination of innate compulsion; and communicative development linked to economic complexity; and that 'single figures, like single words, do not allow interpretation of cognitive process'. This approach is supported.

### **Colonisers impose style, not culture**

The five-layered structure of culture and perception is beyond the conscious ability of any artist or builder to invent or apply, yet many speak it fluently. People would notice if visual grammar were absent. As in language, we do not learn grammar, syntax, disambiguation, where to apply styling, which features to leave intact, or how to use it to individual and social advantage. Most of culture is innate, and predates economic maturity. Structural art analysis now enables conscious access to culture and to a large part of the landscape of subconscious behaviour that we used to study only by analogy. Archetypal expression enables culture, it is not a symbol. To borrow a phrase from Nike shoes, we 'just do it'. Culture outlives cultures, with its core content and styling options intact, immune against tampering. Our media demonstrate and resolve contradictions between our levels of consciousness. Structural analysis assists the integration of part of our subconscious behaviour into our conscious minds.

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## THE CHAUVET MASKS

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On a theme suitable for filling several thick volumes, a few words here remind one of the fierceness of the mask in human affairs. A frozen figure, transposed from our world to the mythical, it operates throughout the world, by its reality or allusion, when it is a question of magical intercession, during ceremonies or rituals. Those expressed in Aurignacian mythology are particularly explicit and constant, like the lion-man from Höhlensteinstadel or the horned man from Fumane (fig. 1). The most casual observation of the rich iconography at Chauvet gives rise to different masked combinations dominated by felids, always superimposed on more realistic images, as if they had mastered or guided them (fig. 2). This association with the feline even exists in the celebrated woman-bison, as soon as we turn around its rocky pendant (fig. 3).

At Chauvet, the structure of the art has an amazing and explicit coherence, in addition to its

delicious plastic harmony. At the back of the principal alcove is enthroned a complete contour of a horse, towards which converge animal entities designated only by their busts. Another alcove contains a basin from which water flows, following a pattern we can no longer evoke in the matrix record, splitting the cave itself. Both situations have evident structural resonance. This is discussed in more detail in another contribution (fig. 4).

A completely different form of disguise was created by the animal costumes worn by two personages in the style of Chinese carnivals and like the unicorn at Lascaux. There, human beings were hidden behind costumes of mammoth and feline (fig. 5). For both, their relative position makes themes articulating the plastic phrase, as if these supernatural beings themselves gave meaning to the mythical group by their symbolic influence.

The play between the rocky veils was especially exploited: the arrangements between the images spring out as if they had always been contained in the stone, in such a way that the distinction is not clear between natural forms and added forms.



Fig. 1- Feline masks are common in the Aurignacian: Höhlensteinstael (drawing Christian Otte) and Chauvet, end chamber (drawing M. Etienne).



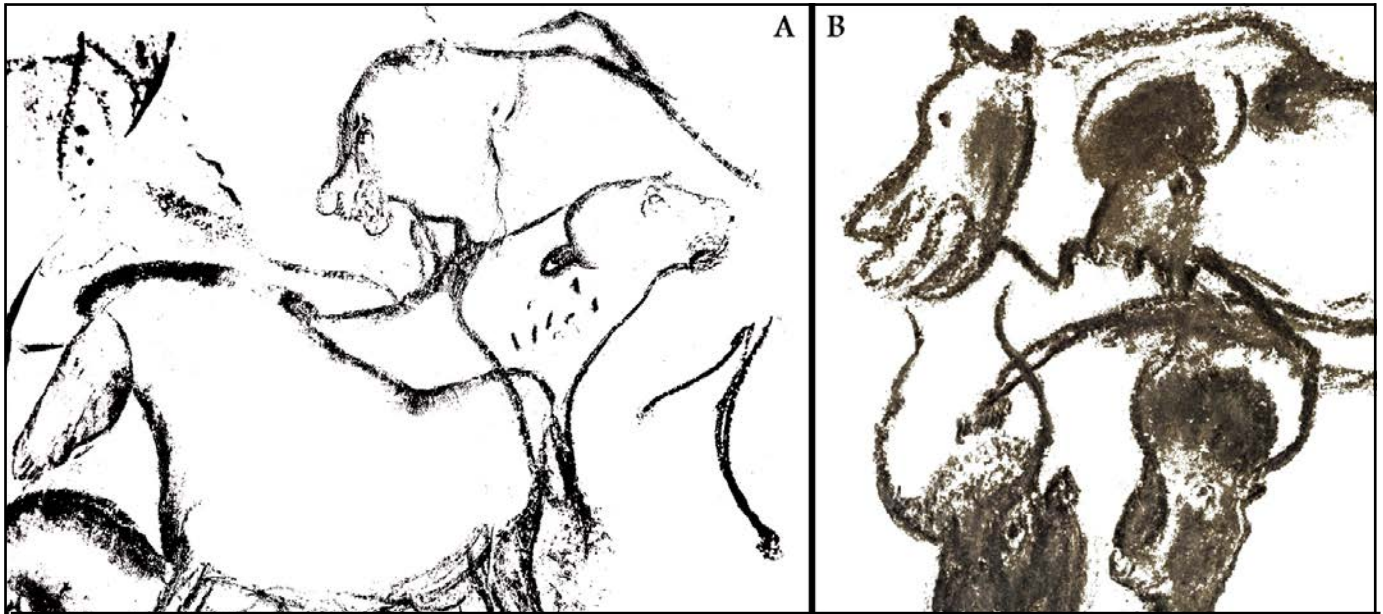


Fig. 2- Anthropomorphic figures but also with feline masks are found superimposed on many other realistic animal contours, end chamber and horse chamber (drawings M. Etienne.).

Fig. 3- The rocky pendant with the woman-bison is complemented with another cat theme, unfurling behind the column (drawing M. Etienne).

Recurrent layouts (syntagmatic), such as the relationship between horses and cats, can be distinguished. The rocky pendants are so frequently marked with an animal contour that they activate the movements of perspective, structured by the natural form of the ceiling. The entire space is animated by superimposed scenes whose meaning is influenced by the natural disposition of these rocky veils, distributed in successive sequences (fig. 6).

Transposed from a lived world to a dreamed world, all recognizable images (iconic) change in status, and now belong to a frozen way of life, perpetual and thus sacred. In this way the scenes produced by their association create a universe charged with a new force, because their duration defies the force of time. Magic, ecstasy and the reciting of myths are based on this gap between the plastic work and the ephemeral models. Irrespective of this strength accorded to Palaeolithic images, it is certain that the iconic relationships could only be equally maintained between those of animals and those of their human creators.





Fig. 4- The two alcoves of the end chamber concentrate realistic figures also associated with masks; their arrangement is remarkable. (photo Jean Clottes).

Fig. 5- The successively arranged rocky veils give a rhythm to the animal contours they contain, suggesting the rhythm and play with distances. (photo Jean Clottes).





Fig. 6 -The animal costumes were worn simultaneously by two individuals during ceremonies, analogous to Chinese carnivals (Chauvet and Lascaux). (Photo by Anjoulat, drawing by Clottes).





Fig. 6- Inuit chamane wearing animals symbols for ceremonies, his condition is now between natural and human worlds, he is able to challenge the natural forces, thanks to his mask, and he will drive them for social benefits.

Among the countless illustrations, the practices of enchantment relayed by the image like all history of iconoclastic battles amply evoke it. Figured human intervention could only be transmitted as codes, explicit in the eyes of their creators but become simply evocative today: the intercession of masked figures is required. They maintain this ambiguous relationship between intentional human action and the natural forces called upon. It is no longer enough to evoke the recurrence of such a mechanism during the Palaeolithic (Otte, 2003), but to give the variables proper to each tradition because

this touches on their metaphysical modalities. Chauvet and Höhlensteinstadel prove this: the first image expressed plastically favours the feline connotation of the human contour, as we often find in more recent mythologies (Eliade, 1976). The second anthropomorphic incarnation is that of bovids, as ample and complex, while many others follow under all the heavens. In all cases, the attributes accorded to each animal species in each historical context were also reintegrated with humanity in a single image. Forged by this duality, human thinking sought to conquer the hidden forces contained in all creation surrounding them and that seemed to determine them. None of the décor of modern pottery today escapes this, all human societies function with costumes and masks.

At this stage already, one can clearly see a movement from east to west, since the art in Swabische Jura (south Germany) is older than the Chauvet Cave. The migrations have been oriented upon a latitudinal axis across Western Europe. However, this movement is now extended to Eastern Europe by the recent discovery of Aurignacian cave art in Romania, using exactly the same shapes, themes and techniques at Coliboaia (Clottes et al. 2011). We know all these populations and cultures are spreading identically through Middle Europe (Otte, 2014), but their ultimate origins are to be found much further away, in Central Asia and the Zagros range (Otte and Kozłowski, 2007). So, this art with masked figures has crossed the whole of Eurasia in the middle latitudes, brought by new populations (modern man) and new technology, especially weaponry. All these factors combine a relationship between the people's minds and the natural world, reflected both in weapons and in arts: the two lead to the wish to control nature, as it had never been done before. Another way of overcoming natural forces was riding horses and/or reindeers; this made



the migrations much quicker, and procured an easy way for installations over a vast territory by the same people, minds and art. This can be expressed by the harmony given by the masks, being between these two worlds of half man, half animals. This ambiguity can still be clearly seen in modern stepped people where the ceremonial masks link nature, the wild and humans. It then appears as being a wish expressed by humanity to conquer and control nature, the landscape and aggressive beasts. Especially the shaman spirit and appearance seem to invoke the wild forces precisely by wearing a mask with human-like animal-like figures (fig. 7).

Fig. 7- Mask worn for the Ramayana ceremonies in India, the actor is dissimulated in a raven's face in order to be linked with the natural world while dancing.

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# FIRST AMERICANS: CHANGES OF PLACES, CHANGES OF THEORIES.

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## Abstract

Migration is always a current theme, although it is also very ancient. It has always occurred in humanity, even before the advent of our species. *Homo sapiens*, however, introduced a new episode into human history, since, for the first time, a species of hominin spread all over the planet. According to prevailing theories, America was the last continent to be occupied. Defenders of the 'Clovis first' theory suggest that America's earliest 'settlers' would have reached the mainland via the Bering Strait, 14,500 BP years ago, from Asia. The theory became for many years the dogma on the first settlements of the Americas. However, with the development of new research and the exploration of other archeological areas in South America, new hypotheses have emerged.

South America presents sites dating to the late Pleistocene, such as Monte Verde (Chile), Boqueirão da Pedra Furada (Brazil), Santa Elina (Brazil) and Lagoa Santa (Brazil). In Brazil, the dates are different, like the archaeological site Boqueirão da Pedra Furada, of 50,000 BP. In addition to archaeological sites with a different chronology, skeletal morphology indicates a population with negroid traits, which differs completely from those proposed by the Clovis model, which is mongoloid. This has led to

the re-elaboration of new hypotheses relating to the colonization of the American continent. However, the discussion is opened for debate, because all new data brings new problems. Keywords: America, migration, first settlers

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## The problem

The topic of how humans came to live in every kind of place around the world has been long discussed. From the coldest to the hottest, from the lower altitudes to the highest points on the planet, it is possible to find some mark indicating the human presence.

The process which led to the departure of mankind from the African continent began with other species of our lineage, and is indicated to have been around 2 million years ago (Hertler et al. 2013). In this sense, it has been supported to have existed a path to the Eurasia through the Caucasus region, a completely different ecosystem that required new cognitive abilities useful for the survival of *Homo erectus* (Antón 2003). Later, with the emergence of *Homo sapiens*, there would be yet another, more comprehensive, expansion able for involving all of world.

From all the occupied areas, it has been admitted the American continent as the most recent one. However, it is not yet known how such an occupation would have occurred as well as the date for such occupation. For that question archaeology and paleoanthropology have tried to create explanatory models with different viewpoints and arguments, although archaeological and biological remains are not sufficiently enough for providing irrefutable hypothesis. The biological diversity of the groups on the American continent served as the basis for the elaboration of two main models related to their occupation. One of the models proposes

that Amerindians represent a recent branch of East Asians that arrived in America only at the end of the Pleistocene, thus, composing a relatively homogeneous population (Fiedel 2000; Rasmussen et al. 2015). Defenders of the second of these models ask when the migration of the first non-mongoloid groups to the region would have occurred (Dillehay 1989, 1997; Neves & Hubbe 2005; Neves & Pucciarelli, 1989, 1991).

Although supported by distinct hypotheses, both models can be sustained. We have noticed, however, a substitution of the first model by the second, although discussions are still opened.

There is extensive and indisputable archaeological evidence of the presence of man in North America, since 13.400 BP. These sites are characterized by a style of stone tools known as *Clovis*, characterized mainly by finely crafted spear points used in the hunting of large animals. Such data served as a basis for the hypothesis of settlement of the American continent, which would have taken place around 14.000 BP, through the passage formed during the last glacial period, between North America and Russia, called Beringia.

This hypothesis becomes problematic due the evidence of archaeological material prior to the estimated period, especially when this material comes from the southern part of the continent. The South American sites are sparse, but there are important for revealing the fragility of *Clovis*'s hypothesis (Lahr, 2006: 147).

Probably the strongest evidence of a 'pre-*Clovis*' occupation of the American continent is the Monte Verde site in southern Chile, a human encampment with uncontaminated, dating from 14.100 to 13.500 BP to the present (Dillehay 1997).

Estimating the necessary time to reach the southern of South America, since Alaska,

some researchers believe that the first settlers of America must have arrived in the continent around 14.000 and 15.000 years ago. According to Dillehay & Meltzer (1991), this would be a rather conservative estimate, because it based on a fairly rapid migration in favor of a gradient of better environmental conditions, free from competition with other human groups (Lahr & de Souza 2006). Although there are few South American archaeological sites able to indicate a backward migration, these sites have bring out as much for its great potential for archaeological studies, as for the controversies caused by some results of researches.

The Serra da Capivara National Park, an archaeological and paleontological area located in northeastern Brazil, has gradually revealed, as well as presented, several questions about the origin of the American man in a totally controversial way if compared which the traditional hypotheses about the settlement of the continent was performed. The examples come from a structure of fire, dating to 48.000 BP (Guidon & Arnaud 1991), a painted wall fragments fallen on archeological grounds, dating to 27.000 BP (Delibrias & Guidon 1986), both found at the Pedra Furada' Site.

Some of the biological remains provide bases for supporting more complexities assumptions, as the entrance into the American continent by Africa, in ancient times. Although quite controversial, this idea is sounding based on the paleoparasitological data of 7.000 years. The hookworm - *Ancylostoma duodenalis*, of African origin, has been identified (Araújo & Ferreira 1997; Araújo et al. 2008). It should be emphasized, however, that it could not survive under low temperatures, below 25 oC. In this way, it should not have entered in the continent through migratory waves which had the Bering Strait as route.

In Brazil, not just the Serra da Capivara

National Park presents Pleistocene data related to archaeological remains. Santa Elina, in the Mato Grosso state, is an archaeological site where were discovered lithic artifacts associated to megafauna, dated to about 25.000 BP (Vialou 2005; Vialou & Vialou 2008).

The most conclusive bioanthropological researches concerning the first occupations for America are based on phenotypic characters used as markers able for estimate specific genetic groups. Such data should be used carefully, because when associated with other types of information, such as linguistics, for example, they can converge to unsustainable hypotheses.

The model of the three migrations is based on the correlation between linguistic, genetic (using classical markers) and dental morphology (sundonty and sonodont frequency) to suggest that the first colonization of America would have occurred by a homogeneous and late population, in favor of the Clovis occupation model (Greenberg et al. 1986). According to this model, the populations of America would have originated from three migrations. The first, around 12.000 BP, would have given rise to the populations that today speak languages of the Amerind macro-family, that is to say, some groups of North America and all the groups of Central and South America. The second migration, composed by the ancestors of the Na-Dene group, would have given rise to the tribes that inhabit the interior of Alaska and the North Pacific coast. The third and last migration would have introduced in the continent speakers groups of language known as Eskimo-Aleuta, that is, the Eskimos of the Arctic and Subarctic regions (Lahr 1996).

This model has subsequently received overwhelming criticism based on the biological and cultural data (Osseberg 1992, Ousley 1995, Szathmary 1993). In addition to these

criticisms, the Three Migrations Model has been refuted on the basis of fossil evidence. Both the cranial and dental morphology of existing paleoindian fossils, as well as fossils of later populations in Central and South America, suggest that populations of typical non-mongoloid traits have participated in the colonization of the continent (Neves & Pucciarelli, 1990; Neves et al., 1993). In Brazil, one can indicate the case of Lagoa Santa, at the Minas Gerais State, as the most important for this study, since it represents the largest series of early skeletal remains from the Americas, in which there is a database with more than 80 measurable skulls dated to between 10.000 and 7.000 BP (Neves and Hubbe, 2005).

Since its discovery, the archaeological findings of Lagoa Santa have been the subject of international publication, and this interest was mainly focused on the issue that most motivated human morphologists: craniology.

Lund was the first paleoantologist who in the middle of XIX century questioned whether the men he encountered in Lagoa Santa caves would represent an extinct group, such as the megaterian, or would be ancestors of the present indigenous groups (Hurt & Blasi 1969). The assumption based on more prominent supraciliary arches and elusive forehead led Lund to conclude that it was a 'primitive' type of skull morphology (Mendonça de Souza et al. 2006).

Certain of the value of craniology for the evolutionary human taxonomy, Lund and other experts analyzed the well-preserved findings of Sumidouro grotto, comparing them to other known human skulls. The questions brought at that time are discussed yet today: what are the biological relationships between the older prehistoric population of Lagoa Santa and other Native American groups? What data support their dye out? What's yours origin?

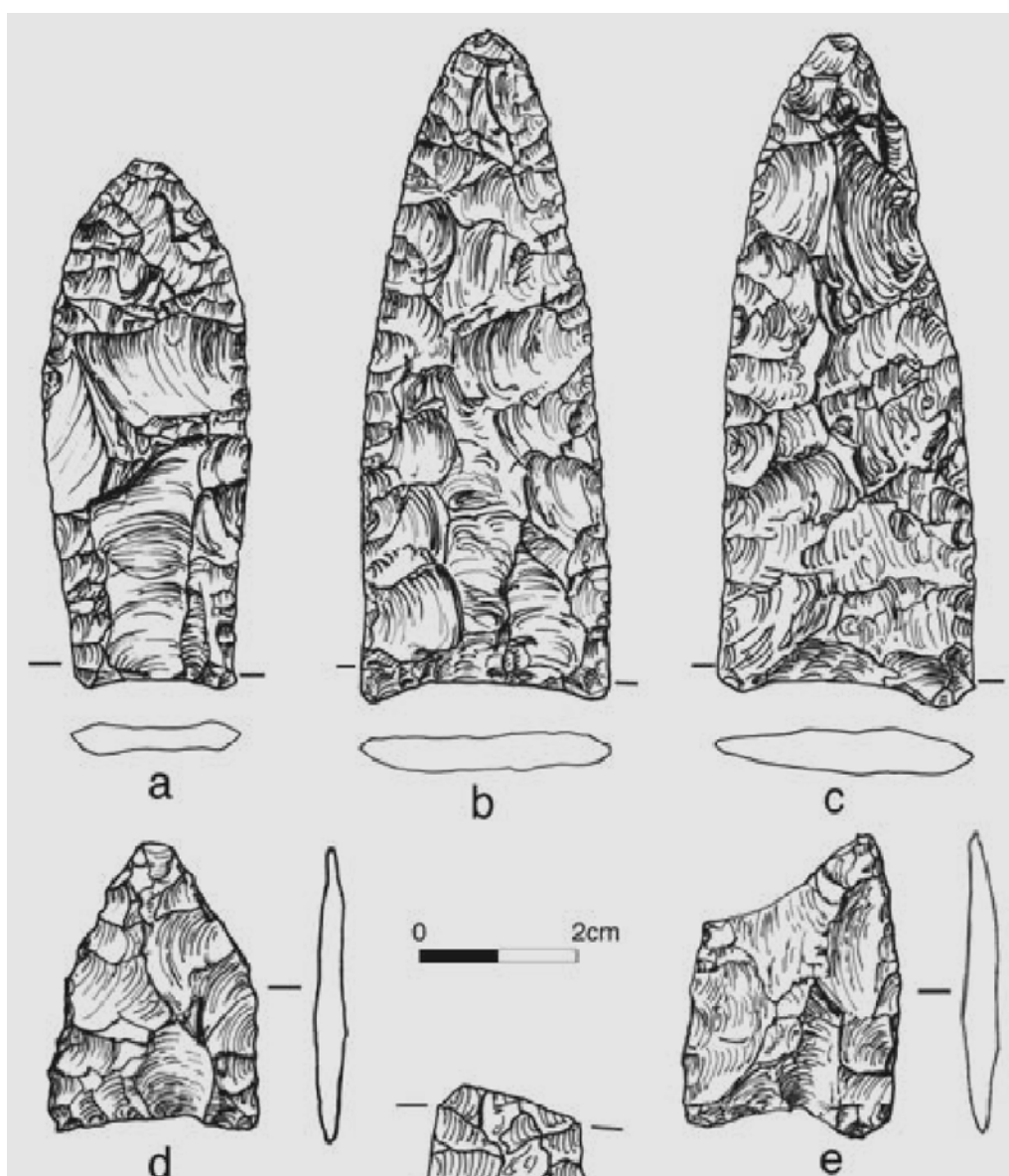
In view of the many questions raised, it is well



known that fossils of Lagoa Santa show a different morphological pattern from that of the North American paleoindian, because they are more graceful than those, but also by being characterized by non-mongoloid traits (Neves and Hubbe, 2005). Due to the statistical basis of multivariable analysis and to the existence of two specific morphological groups identified in the studies, Neves referred to it as 'Two Main Biological Components Model' (Neves et al. 1993; Neves et al. 2003, 2007; Neves & Hubbe 2005; Powell, 2005; Van Vark et al., 2003, Gonzalez 2008). The results indicated that Native American groups appear to be ordered in two major standards. The first, characterized by long and narrow neurocraniums, low and prognath faces, with also high orbits and nose, similar to an Australo-Melanesian population. The second pattern would be composed of individuals with short and broad neurocraniums, high and orthognaths faces, with also high orbits and nose (Neves & Hubbe, 2005). While the earlier immigrants - Paleoamerican - are characterized by the first morphology, the second group - Mongoloid - Also known as Amerindian, is related to the second morphology, which is

present in the recent native populations. From the archaeological point of view, one can say that the first morphology predominates in the Paleindian period (between 12 and 8 thousand years ago), while the second predominates from the Archaic period (more recent

Figure 1 - Early indented base projectile points. a: unifacial Clovis point, Delmarva Peninsula, Maryland; b: Page-Ladson point, Page-Ladson site, Florida; c: Page-Ladson point, Delmarva Peninsula, Maryland; d, e: Cactus Hill points, Cactus Hill, Virginia.



than 8 thousand years).

It should be noticed that the paleoamerican morphology related to the Lagoa Santa population is very similar to the one that characterized the first *Homo sapiens*, which, from Africa, had dispersed all over the planet 50,000 years before the ratification process occurred (Lahr, 1995, 1996). This is why it is sometimes called 'generalized morphology' or 'primitive morphology'. The second strain that entered the continent in more recent times would correspond to populations already racialized in northeastern Asia. In this case, cranial morphology is termed 'specialized' or 'derived morphology'. Luzia is a famous skull of an adult female, dated to about 11.900 BP, discovered in Lagoa Santa, in 1975, by Annette Laming-Emperaire. Luzia was reconstructed in order to elucidate more about the morphology of the first Brazilians. The results have shown that this and further skulls of such sample, dated from the same period, have a similar negroid morphological pattern (Figure 1).

Similar to what is observed in the peripheral regions of Japan (the Ainu), it was also postulated the presence of current remnants with pre-Mongoloid morphology in the extreme south of the American continent, represented by Fueguinos. Morphometric studies in Fuegian skeletons have shown that, like other present-day Amerindians, the inhabitants of Tierra del Fuego are also part of the Mongoloid complex, with generalized features such as long face and nose, broad cranial base and high zygoma. However, they also distance themselves from the typical mongoloid morphology, presenting larger size, pronounced nose, flat frontals, angular occipitals and pronounced robustness, which indicate disagreements with the model that contemplates a migration based on the Clovis model (Lahr, 1996; Lahr & Haydenblit, 1995).

Although there are many data indicating a specific morphological pattern correlated with that seen in Australo-Melanesians, new data, extracted from DNA of a skeleton found in the Washington state, USA, has brought intriguing, although safer, information. The results obtained from the genetic studies show that this material, dated to 9.200-8.340 BP, has affinities closer to modern Native Americans, even if its morphological features are more related to Polynesians or Ainu (Rasmussen 2015). This research is not just used to refute the idea built uniquely through morphological approaches, but also to confirm that there is not necessarily a predictive relationship between genetic and morphological divergence.

### **Discussion and final considerations**

The hypothesis of 'Clovis' occupation has been challenged since new chronology, spatial and technology data are concerned. The paleoenvironmental context confirms the existence of a huge glacier in the period between 21.000 and 12.000 BP, which covered the passage from Siberia to Beringa. In this great chain of mountains the temperatures would have been extremely low and with absence of vegetation.

Discussions that contemplate the existence of lithic traditions with initial dates of 13.900 - 13.400 BP (Nenana tradition), and 14.700 BP (Denali tradition) reiterate arguments for a relatively late colonization of America. However, the possibility of an entrance and dispersion by other ways, like ocean, or even through Beringia in more ancient period, must be contemplated too. It is important to notice, within this horizon, the case of the colonization of Australia, which occurred through the use of canoes or boats, 50.000 BP (Lahr, 2006).

In geographic terms, the absence of 'pre-Clovis' sites in North America remains unexplained, because it is not repeated in South America.

Necessarily, if the route of entrance comes from Alaska, then the first groups to colonize South America, would have occupied the North, initially.

For Lahr (2006), archeology cannot be examined in isolation, without taking into account the morphology of those who made the tools. Such morphology suggests, in turns, that there was not a single population that migrated to America at the end of the Pleistocene. According to this viewpoint, the human skeleton

sample of Brazil seems to indicate a completely specific pattern of the first inhabitants of the continent, different from that proper of mongoloids, what also suggest different possibilities for migration.

Finally, there are still some archaeological remains that, although providing less reliable information, are useful for reiterate hypothesis based on other data remains. It is the case of rock art represented in a complex of sites from northeastern Brazil - Seridó, located in the

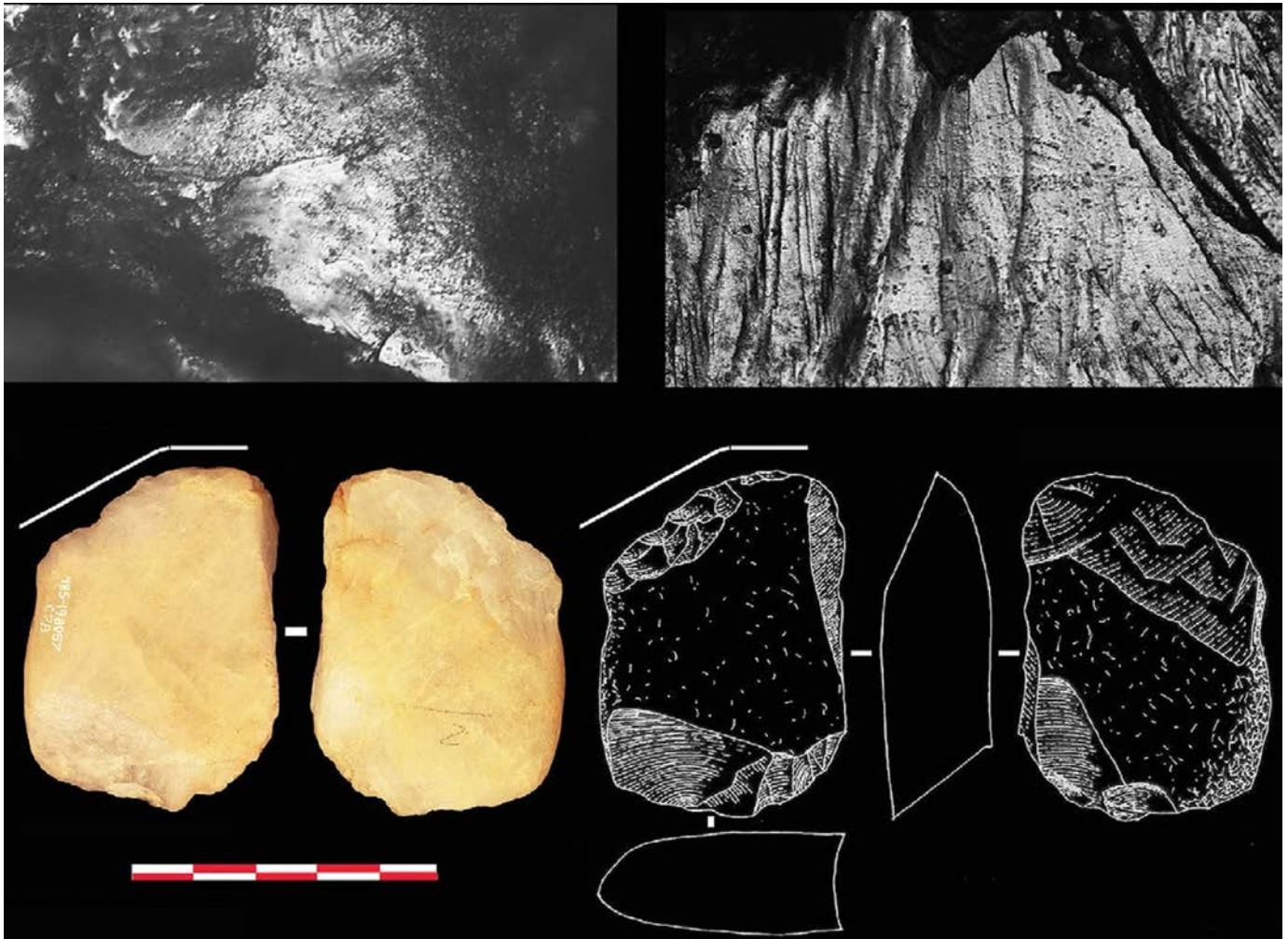


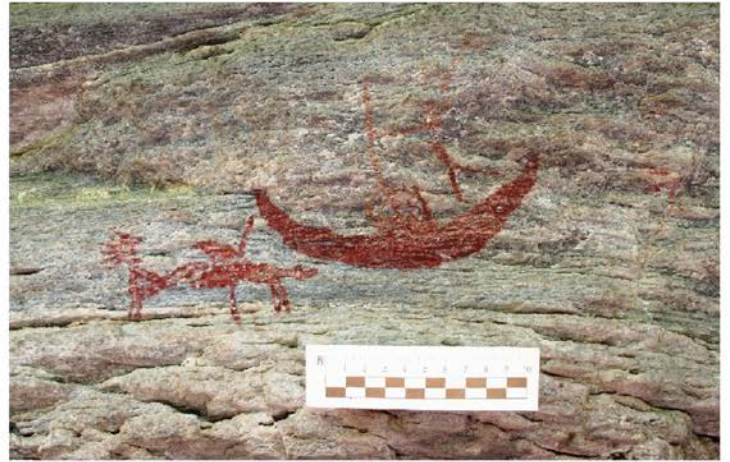
Figure 2 - Artifact on quartz pebble from archaeological site Vale da Pedra Furada (Piauí - Brazil), Stratigraphic level C7b, with chronology around 22.000 years BP. The traceological analysis shows the use of the artifact in butchery activities (Boeda et al. 2014).



Figure 3 - Reconstitution of the female skull called Luzia, recovered from Lapa Velha IV, the archaeological level of the Lagoa Santa's site, dated to older than 11.000 BP (Laming-Emperaire 1979, apud Neves et al. 2004).



a



b



c



d



e



f

Figure 4 - Possible raft representations, from the archaeological region of Seridó, States of Rio Grande do Norte and Paraíba, Brazil. Figures a, b, c and d - from Martin & Medeiros (2008); figures e and f - Martin (2007).

State of Rio Grande do Norte, we find the figures that could represent the mobility of people on the water (Figure 2).

Some of the rock art sites of Seridó have human remains dating to a little more than 9.000 BP., when the end of the glaciation occurred with consequences for the entire planet. In Brazil, the climate, generally colder and drier than the current one, gradually subsides to a warmer and humid climate. That is the context in which burial remains with ink traces on the surface were found.

It is obviously difficult to argue, based on simple observation, that these pictures are indeed the representation of boats, mainly when the observer is dissociated from the proper space and time coordinates of the authors of the drawings. However, if such a correlation is correct, it may have been produced to thousands of years ago, when the climate of the region was more conducive to the existence of perennial rivers, or even it was more related to remote contexts existing for beyond the sea.

Although there are many ideas and data able for supporting a more ancient period for the entry in the continent, it is necessary to emphasize how this question is opened for debate. The more data are revealed, the more problems emerge. This is the case of the Kennewick Man: it has showed a new data able for refuting the Brazilian hypothesis of Two Main Biological Components Model. We hope that the progress of researchers will bring more explanations and clarifications about this episode in order to improve our understanding about the occupation of the American continent.

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## NOTES AND NEWS

### 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 me-

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 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.

## 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 hand 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: - curriculum vitae; - copy of record of studies; - 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 motivations, 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" 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 university degree in the human sciences.

During their stay active presence the accepted candidates will have access to self-catering accommodation on campus at a student fee. Applications should include a letter expressing motivations, 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 you 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: you participate in the debates, express your ideas, and dialogue 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 humanistic and social sciences. It is advised but not compulsory, to be a member of UISPP.

# 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 the 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 in previous occasions, colleagues from various disciplines are invited to share experience, ideas and scientific approaches for a better understanding of the human creativity and behavior, for a broad-minded study and understanding of the past. You are invited to present title and short abstract (300 to 500 words) of proposed papers, before March 30, 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", for a step 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 the roots? Understanding the past is necessary to build a future. And not only: it is necessary to understand the present, our present. The knowledge of the roots is the elementary base of culture. Even in the tribal world young people are being initiated to 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, UISPP-CISENP)



A NEW IMPORTANT BOOK:

## “ART AND RELIGION”

What is the role of religion, magic and witchcraft in prehistoric and tribal art? The intellectual and spiritual motivations of art produced various theories since the first attempts to explain prehistoric art over a century ago. Recent research is revealing more complex conceptual connections. In this book, authors of different backgrounds and countries, from four continents, are presenting examples of specific aspects, providing first-hand data. The confrontation of different ideas and methods is contributing to reconsider some past simplifications and generalizations.

Anati, E. (ed.) 2016 *Art and Religion* Capo di Ponte, (Atelier), 114 pp. 73 ill. € 40

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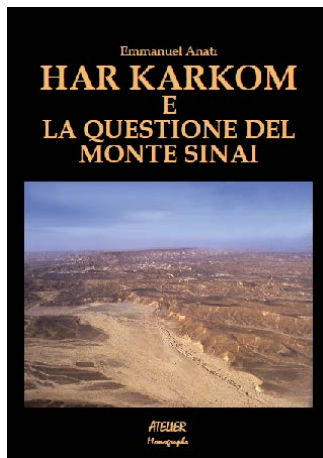
# ARCHEOLOGY AND THE BIBLE

Atelier is pleased to present

ARCHAEOLOGY IN THE DESERT EXODUS:

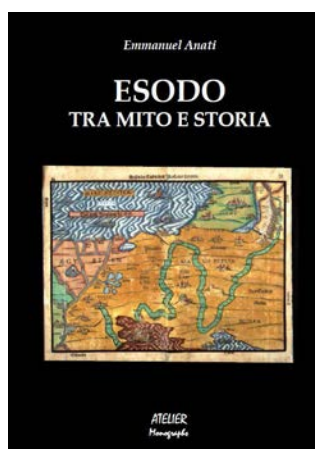
NEW DISCOVERIES RELATED TO BIBLICAL ARCHEOLOGY

From excavations and explorations in the deserts that separate the land of Canaan from Egypt, Emmanuel Anati, the scholar who for half a century is exploring these deserts, sums up new discoveries in two volumes. Two richly illustrated books bring new light on the events that inspired the Biblical narrative.



Anati, E., 2016: *Har Karkom e la questione del Monte Sinai* (*Har Karkom and the question of Mount Sinai*), Capodiponte (Atelier), pp 220; 138 ill., Italian edition, (€30,00)

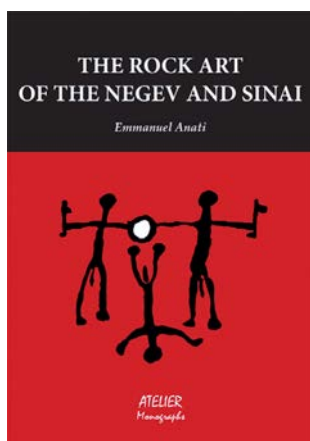
The findings of shrines and encampments of the Bronze Age at Har Karkom, a mountain located in one of the driest places and inhospitable parts of the Negev desert, in the north of the Sinai Peninsula, arouses a global debate on the hypothesis that this mountain can identify with the biblical Mount Sinai. 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.

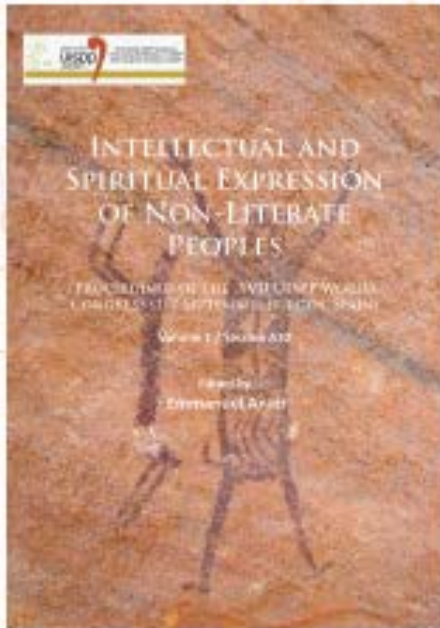
## ANOTHER BOOK ON THE SINAI DISCOVERIES



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.

## NEW FROM ARCHAEOPRESS



# INTELLECTUAL AND SPIRITUAL EXPRESSION OF NON-LITERATE PEOPLES

PROCEEDINGS OF THE XVII UISPP WORLD CONGRESS (1-7 SEPTEMBER, BURGOS, SPAIN): VOLUME 1 / SESSION A20

EDITED BY

EMMANUEL ANATI

xiv+386 pages; illustrated throughout in black and white.  
Available both in print and Open Access.

Paperback: ISBN 9781784912819. £55.00

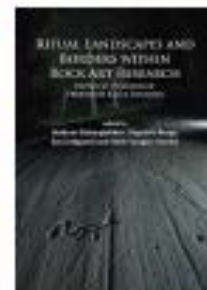
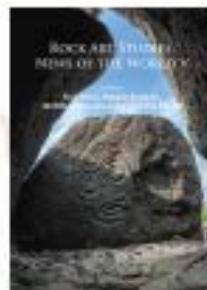
eBook: ISBN 9781784912826. Free to download from website.

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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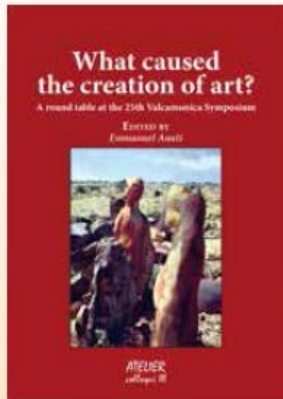




# ATELIER PUBLICATIONS IN CONCEPTUAL ANTHROPOLOGY

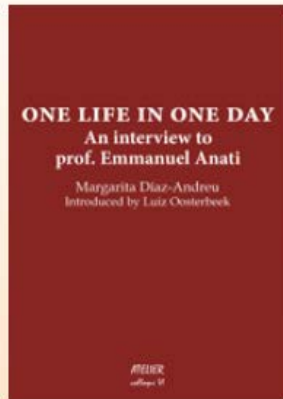
## ENGLISH EDITIONS

COLLOQUI



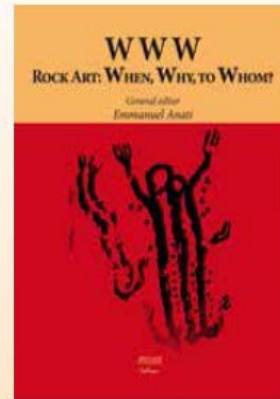
Anati, E. (ed.) 2013. *What Caused the Creation of Art? A Round Table at the 25th Valcamonica Symposium*, Capo di Ponte (Atelier), 44 pp. € 10.

'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.

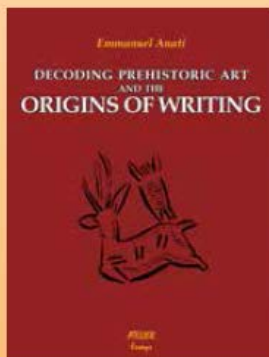


Anati, E. (ed.). 2015 *WWW. Rock Art: when, why, to whom?* Capo di Ponte, (Atelier), 218 pp. 184 pls. € 40

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?

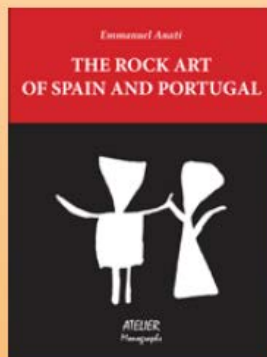
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ESSAYS OF ATELIER



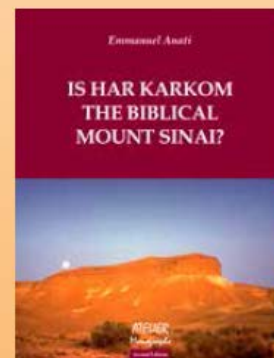
Anati, E. 2015. *Decoding Prehistoric Art and the Origins of Writing*, Capo di Ponte (Atelier), 152 pp. 83 pls. € 20.

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.

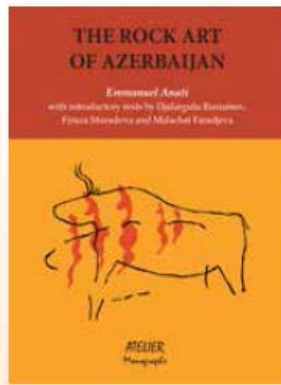
An analytical synthesis of the rock art in the Iberian peninsula from the conceptual anthropology approach. The major concentrations of rock art are considered as expressions of their different cultural and social patterns.



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

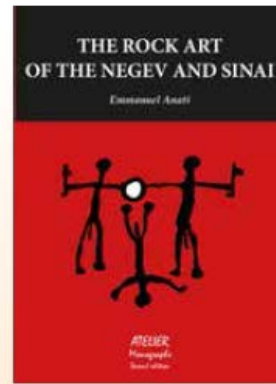
Remains of ancient sanctuaries and camp-sites tell the story of a hitherto unknown mountain in the heart of the desert of Exodus. Is Har Karkom the biblical Mount Sinai? To what point can we consider the biblical narratives as a source of historical documentation?

MONOGRAPHS



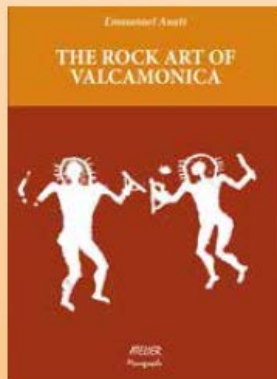
Anati, E. 2015. *The Rock art of Azerbaijan*, Capo di Ponte (Atelier), 156 pp. 190 pls. € 20

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.



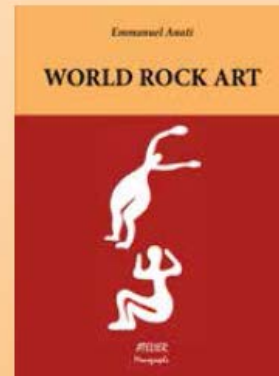
Anati, E. 2015. *The Rock Art of the Negev and Sinai*, second edition, Capo di Ponte (Atelier), 242 pp., 190 pls. € 25.

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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