

EXPRESSION

QUATERLY E-JOURNAL OF ATELIER IN COOPERATION WITH UISPP-CISNEP

INTERNATIONAL SCIENTIFIC COMMISSION ON THE INTELLECTUAL AND SPIRITUAL EXPRESSIONS OF NON-LITERATE PEOPLES

N°30

DECEMBER 2020



CULTURAL IDENTITY

EDITORIAL NOTES

CULTURAL IDENTITY

Each individual, like each tribe, clan or nation, has a cultural identity. The definition of cultural identity may vary according to whether the definer comes from the entity being identified or outside. It depends to a large extent on the individual cultural identity of the definer. The Roman period in Europe, or the Ming dynasty period in China, or the age of European colonization of Latin America are defined by some as ages of great artistic and cultural creativity and by others as imperialistic and oppressive periods. Both definitions may be right, but what differs is the kind of socio-political and cultural background of the definer. The trends of one age or of one ethnic or national identity influence the judging of the cultural identities of both previous ages and the present time, and of both other cultures and their own culture.

Even school textbooks for teaching history to children provide socio-political orientations. With the intention of telling the same history, the textbooks of South Korea and North Korea use the same dates and the same events to tell what appear to be two different stories. The official books on the history of Russia and the history of the various periods of the Soviet Union and those that came thereafter, which appeared year after year, have taught students about different cultural identities, for the same periods, the same people, and the same events. When war is involved, textbooks tend to retain the version of the winner. Certainly, the history of Europe would be told differently if the disastrous Nazi regime had won the second world war.

The history of Australia told by Aborigines focuses on the creation age of Dreamtime, while that told by official school books focuses on European explorers and colonizers: again, different definitions from different definers. In various corners of the world today the same groups of peoples are defined as terrorists by some and patriots by others. History changes according to the identity of the identifier. The same may happen while looking at the cultural identity of past ages and cultures. Readers having different views on the cultural identity of the issues faced by **EXPRESSION** journal are welcome to express their views.

Among living groups, patterns of human relations, technical abilities, economic resources, art creativity, beliefs, myths and more are elements of cultural identity and definition. When oral or written traditions are missing, like in ancient sites and cultures, art and material culture, traces of living structures and funerary grounds are the

main sources for delineating cultural identity.

The people of prehistoric or historic times probably did not define their cultural identity in the same way as it is now defined by archeologists. Could people of the second millennium BC in Central Europe have defined themselves as those of the Urnfield Culture (a name referring to the burial custom)? Or could the Middle-eastern people living in the caves of Mount Carmel 15,000 years ago define themselves as Natufians? It is doubtful whether the painters of the rock art of the Tassili, in the middle of the Sahara, some 8,000 years ago, would have liked their archeological name of Round headed (according to the shape of some of their anthropomorphic images), or those of a Neolithic phase in Northern Italy as belonging to the culture of the Square mouth (referring to the shape of their pottery). The definition of cultural identity is a matter that defines both the defined and the definer. However, the aim of cultural definitions is understanding each other in the fields of archeology and anthropology, as in history or socio-political relations. They do not always succeed in their goals. But with some effort we may eventually understand what the definer intended to define.

Nevertheless, the definition of cultural identities is an essential aspect of social, anthropological, archeological and historical research, and the patterns of these definitions characterize different methodological research orientations. They are not objective, as we look at the past with the eyes of our own culture, and with the conditioning of our own indoctrination. What comprises the definition of the cultural identity of an ancient site, a geographical area, a style or pattern of art, a myth, a village or an ethnic group? Every archeological and tribal site, object or human group around the world has its own cultural identity which can be seen with different eyes by their protagonists and by their observers. But the habit of defining is part of human nature. Human beings have tried to define their identity for ages. Every hunter-gatherer clan and every other primary society defines by name every object, every kind of food, every other human group and even every child. Every newborn is given a different name.

A major human concern has emerged in several previous issues of **EXPRESSION**: the identity of life, a human worry since the earliest funerary rites which reveal the attempt to clarify the meaning of death and life, including the definition of the soul, believed to survive the death of the body. Even the identity of the afterworld, the world of the souls and of the spirits, is shaped according to the beliefs of the identifier: some see it as the world of eternal

erotic pleasures; others as relief from material needs, with sexless angels singing “Alleluia”; others again as a happy planet with plenty of food, where nobody will ever be hungry. The identity of the afterworld depends on the inclinations, desires and needs of their inventors. Interestingly, some religions, such as Judaism, ignore totally the afterworld, which is so vital to the faith of tribal religions and several other recent religions. If indeed such a world exists, what is its real identity? The question is intentionally rhetorical, as all we know of it is the product of human imagination. Identity, one way or another, relies on the real, or believed to be real, detected features, which in any case are open to the interpretation of the identifier. Scholars try to rely on solid evidence, or what is believed to be so, and such appears to be the intention of the articles in the following pages.

This issue of **EXPRESSION** presents a variety of cases of definition of cultural identity. The papers selected range in different directions. Amélie Balazut considers the French Paleolithic painted caves, looking at the problem of human identity in Paleolithic times, seeing the totemic animal counterpart of man as a source of identity. Stavros Kiotsekoglou analyzes the meaning of the similarity of two archeological sites, one in Greece and the other in Italy, stressing common elements of identity. Jitka Soukopova faces the confrontation between two different cultural identities, hunter-gatherers and pastoralists, of a few thousand years ago in the oases of the North African deserts. Emmanuel Anati deals with the earliest known urban settlement, searching for the identity of its founders and for the process that led to its birth and development. And Giuseppe Orefici explores the identity of the makers of the extraordinary geoglyphs at Nasca, in Peru, and their religious performances. Five articles face the problems of identity of different ages, and different nature in four different continents, Africa, America, Asia and Europe. The topic will be further considered in forthcoming issues.

Defining elements of cultural identity is an endeavor that may result in a healthy confrontation on what are the main factors of cultural identities. Conceptual anthropology, archeology, history, semiotics, psychology, political sciences, philosophy and sociology are some of the disciplines concerned with the definition of cultural identity. The assemblage of different views and different aspects of identity is a positive means of cooperation and communication, opening minds to alternative thinking. Colleagues and friends are cordially invited to propose papers: presenting a site, a subject, an event, a human group, or a cultural trend, stressing peculiarities defining identity. Those having both ideas and the willingness of sharing them are welcome.

A NOTE FOR THE AUTHORS

EXPRESSION quarterly journal is a periodical on conceptual anthropology addressed to readers in over 80 countries. Your paper is intended to produce culture: tell your story to a world of culture, and make it readable and enjoyable also to people who are not specialized in your research field. In contrast to the trends of other scientific journals, here articles are expected to be pleasant to read. The goal of **EXPRESSION** is to promote dialogue, knowledge, and ideas concerning the intellectual and spiritual expressions of non-literate societies. It is an open forum in conceptual anthropology. Colleagues having something pertinent to say will find space in this e-magazine, which is reaching people of culture and academic institutions the world over.

Papers should have precise goals, be concise and easily readable, conceived for this kind of multi-disciplinary, international audience in various fields of the humanities. They should stimulate curiosity and dialogue. They should provide original information which is not available elsewhere on the internet. When pertinent, good illustration is important for communication with the readers: images and text should complete each other. Authors should talk openly to the readers, not just to themselves. Avoid long descriptions, catalogs, and rhetorical arguments. Avoid unnecessary references and refrain from excessive citations. Avoid saying in ten words what can be said in two words. Consider that short articles are more read and appreciated than long articles. Letters on current topics and short notes are welcome and may be included in the Discussion Forum section.

Publication in **EXPRESSION** quarterly journal does not imply that the publisher and/or the editors agree with the ideas expressed. Authors are responsible for their ideas and for the information and illustrations they present. Papers are submitted to reviewers, but controversial ideas, if they make sense, are not censored. New ideas and concepts are welcome; they may awaken debate and criticism. Time will be their judge. **EXPRESSION** is a free journal, not submitted to formal traditional regulations. It offers space to controversial issues, healthy debates, and imaginative and creative papers, if they are conceptually reliable and respect the integrity and dignity of authors, colleagues, and readers.



Front page image

“Lion Man”, Hohlenstein-Stadel Cave, Baden Wuerttemberg, Germany. Figurine carved from mammoth tusk (height: 31 cm, width: 7.3 cm). Photograph by Yvonne Mühleis. © Landesamt für Denkmalpflege im RP Stuttgart/Museum Ulm.

DISCUSSION FORUM

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

ORIGINS, PATTERNS, AND EVOLUTION OF RITUALS AND RELIGIOUS BELIEFS

How and when did religions originate? The study of prehistoric art is revolutionizing our knowledge of prehistoric religions. The rock art sites have been places of worship and tribal identity for millennia, serving as archives of myths, beliefs and rites, all of which evolved, diversified and acquired regional and ethnic features. Contributions to new aspects of prehistoric religion are revolutionizing the history of religion. But much more can be revealed by art, especially from many sites of rock art. Images and symbols are there to be decoded. Visual art, however, is not the earliest evidence of the presence of religion. Archeological discoveries of burial customs and burial goods accompanying the dead in their journey to the other world and prehistoric shrines reveal concepts and beliefs going back even before the earliest known patterns of figurative art. When and how were the first religious concepts and rituals conceived? And how did religions acquire their present shape? Following the debates arising from recent publications, the origins and evolution of religion are developing a growing interest among scholars and the large public alike. Many rituals and beliefs in surviving primary societies constitute an immense patrimony of knowledge and spiritual life: this aspect also is worthy of being better known.

EXPRESSION is planning a forthcoming issue on this topic: ORIGINS, PATTERNS, AND EVOLUTION OF RITUALS AND RELIGIOUS BELIEFS. Submission of papers is welcome. They can concern specific cases as well as general trends in both extinct cultures and surviving tribal communities.

DECODING PREHISTORIC ART

Why did prehistoric people produce visual art? It is unlikely that prehistoric art had the sole purpose of embellishing stone surfaces. What then is the meaning of prehistoric art? What did people intend to communicate? Until just the

other day there was no clear evidence that Paleolithic people used a graphic system of writing to memorize and communicate everything that modern writing does. Now some of their messages can be read and understood. Luckily, research is progressing fast. The general concept that prehistoric art (that is, what is currently defined as prehistoric art) meant to communicate something has been repeatedly formulated, but various attempts at defining exactly what did not provide conclusive results in over a century of research in prehistoric art. Some of the European Paleolithic art was considered to be related to hunting magic (Breuil); some assemblages of non-figurative markings have been defined as calendric recordings (Marshak). More than ten different hypotheses have been proposed as the purpose and meaning of Paleolithic art, some relying upon solid documentation, others upon theoretical assumptions. These valuable attempts by various authors in the course of over a century provided a general overview of the numerous possible ways of reading the messages contained in the immense emporium of prehistoric art, both Paleolithic and later. One thing became clear: not all prehistoric art was executed for the same purpose. This discourse has to be broadened and contributions on the meaning of specific sites, periods or types of prehistoric art can contribute to enriching our knowledge. Colleagues and friends are cordially invited to propose their papers for a forthcoming issue of EXPRESSION quarterly journal.

DIFFUSION AND LOCALIZATION OF CULTURAL PATTERNS

The archeological findings consist of what was found of what was preserved of past products of human creativity. Objects made of leaves or bark rarely survive for ages. A relevant object, marking a remarkable step in conceptual evolution, is the bow and arrow. Its function is based on the accumulation of the energy of the human arm, which is suddenly freed by pushing the arrow toward its target. It is a revolutionary tool using an intentionally accumulated energy. It is an early machine using human mechanical energy, marking a turning point in human material evolution and mental abilities. The presence of the bow and arrow in prehistoric times is very rarely attested by the finding of bows and arrows. Such objects are made of wood and organic materials usually have a shorter life than inorganic materials. What is currently found is the inorganic part, the arrowhead made of stone, bone or other durable material. Some lithic implements resembling arrowheads are occasionally found in early archeological levels as sporadic finds: they may be arrowheads or have other functions. Manufacts defined as arrowheads found as a substantial el-

ement of the lithic industry, in some quantity, are likely to have really been the heads of wooden arrows. Some archeologists tend to establish an early date for this invention, other tend to consider it as later. Possible implications may be far-reaching. A hypothesis proposes the invention of the bow and arrow as a North African, Aterian invention, likely to go back over 40,000 years. It considers that the invention crossed the Gibraltar Straits, introducing the bow to Europe some 20,000 years ago in the Solutrean culture of the Iberian Peninsula. Whatever the case, from one area of origin, the bow and arrow became a popular weapon; by 14,000 BC, it was in use in parts of Africa and Eurasia. By 5,000 BC the hunting bow was used almost all over Africa, Eurasia and America. It reached Australia only some 300 years ago, where it never became a common tool for hunting or for warfare.

The bow and arrow is an example of the diffusion of a cultural pattern. Like this example, most cultural patterns have followed a process of diffusion from a place of origin to expansion, from the methods of lighting fire to the use of nuclear energy. The decrease or cessation of cultural patterns is also a process of the restriction and elimination of cultural patterns. The shoeing of the horse's foot in iron was diffused worldwide only 100 years ago and now, both horses and their shoeing are no more as necessary as they used to be. The use of the metal cuirass for protecting the bodies of warriors had an early origin some 5,000 years ago, it was diffused worldwide 2,000 years ago, and it has now almost disappeared. It may be replaced by other means, such as body-shields by military and police personnel. Cultural patterns are related to function: they develop when they are useful and diminish when they are not. Following the trends of diffusion of objects, tools and ideas is a relevant element for evaluating patterns of culture. Colleagues and friends are cordially invited to propose their papers for a forthcoming issue of **EXPRESSION**.

THE ORIGINS OF URBAN SETTLEMENT: SOCIAL, POLITICAL AND ECONOMIC IMPLICATIONS

Atelier Research Center is planning an international seminar on the origins of urbanization, to be held in the Spring 2021. Participants are requested to present a written text to be distributed and discussed. The papers will be first published in **EXPRESSION** quarterly journal and then they will constitute a basic book on urban development, looked at with a multi-disciplinary approach. It will be a fundamental book on the history of urbanization, an important didactic, educational and consulting book. Urbanists, landscape architects and planners, archeologists, anthro-

pologists, sociologists, psychologists and experts in other disciplines are welcome to participate.

How did a town come to life and develop? Stories have been told ever since the beginning of history. The myth on the birth of Rome is one of many, likely to be the best known among Europeans. The Biblical account of the tower of Babel is another example. The birth, social life and economy of sites like Machu Picchu (Peru) are still alimented by recent studies. Other accounts are found in the traditions of Chinese, Indian and other urban societies. Archeologist having excavated or excavating ancient urban settlements can tell their story. Town-planners may present their views and theories. Sociologists and psychologists will contribute to the awareness of social and psychic influences of urban living. The cultural context of **"The birth of urban settlements"** will be considered, along with the role of trade, agriculture and socialization in their development. Early urbanization trends in the Middle East, the Far East, Europe and elsewhere will be discussed. Also, the **"Later Urban Development"** of villages becoming towns and of towns becoming mega-towns will be looked at as social, economic and political phenomenon, trends and outputs. Tentatively, a session might be devoted to the **"Future of Urban Settlements"**. Interested colleagues and friends are invited to contact atelier.etno@gmail.com, indicating their profession and country, including a summary (250–500 words) of their proposed paper.

MALTA: ANOTHER QUERY

An additional query was addressed to Dr Anthony Bonanno

Is there an estimation of how many people may have been counted in a generation in Malta at the time of the Neolithic temples? How many burials have been recovered for that period of 1,500 years? Do burials help in these estimations?

Reply by Bonanno

Colin Renfrew, in his 1973 book *Before Civilisation*, made an estimate of 11,000 inhabitants for the two islands for the Temple period. Generally, this is thought to be an overestimate.

In 1910 Temi Zammit made an estimate of 7,000 individuals buried in the Hal Saflieni Hypogeum, based on a small sample of earth and bones he excavated himself. The rest of the cemetery was cleared without a proper record. The closest temple clusters are off Tarxien and Kordin. The Xaghra Circle (Gozo) hypogeum (1987-1994) yielded 220,000 human bone fragments. The present estimate is that they represent about 800 individuals. The closest temple clusters are those of Ggantija and Santa Verna. One would expect

the existence of another hypogeum close to the Hagar Qim and Mnajdra temples, but it has not been discovered yet. A recent singular find of a small chamber tomb at Ta' Kercem in Gozo suggests that not all the inhabitants of Gozo were buried at the Xaghra Circle hypogeum.

Editorial comment

If Zammit's estimate of 7,000 individuals buried at the Hal Saflieni Hypogeum was correct, for a period of 1,500 years, that would make an average of 4.6 burials per year. If 800 individuals were indeed buried at the Xaghra Gozo hypogeum, again, theoretically, if the use of the hypogeum lasted 800 years, that would make an average of one burial per year. Probably not all the burial grounds have been found and the technical data, even if reliable, would not be conclusive. Even if all the burial grounds were found and the number of

the buried individuals was realistically estimated, it would be necessary to fix the average living age at the time and the average period of a generation in order to evaluate the average number of inhabitants per generation. Obviously, the estimation would change if the average life length was 30 years or if it was 70 years, or if the average time of a generation, from birth to average age of reproduction, was 18 or 30 years. Another factor to be considered is the number of huts and other living structures known so far, related to this period of 1,500 years: an average of less than one every hundred years. According to the rarity of these remains, it is unlikely that Malta was overpopulated. The puzzling question is how could such a shallow population have built some 30 massive megalithic temples. Were indeed the Maltese Neolithic temples built and worshipped by the Maltese Neolithic inhabitants? Could there be a different solution?



Fig. 1. Malta. The front entrance of Hagar Qim Temple (Anati Archives, MLT 87 EA IV-33).



Fig. 2. Malta. Aerial view of the temple at Mnajdra (Anati Archives MLT 87 EA XXXVII-37).

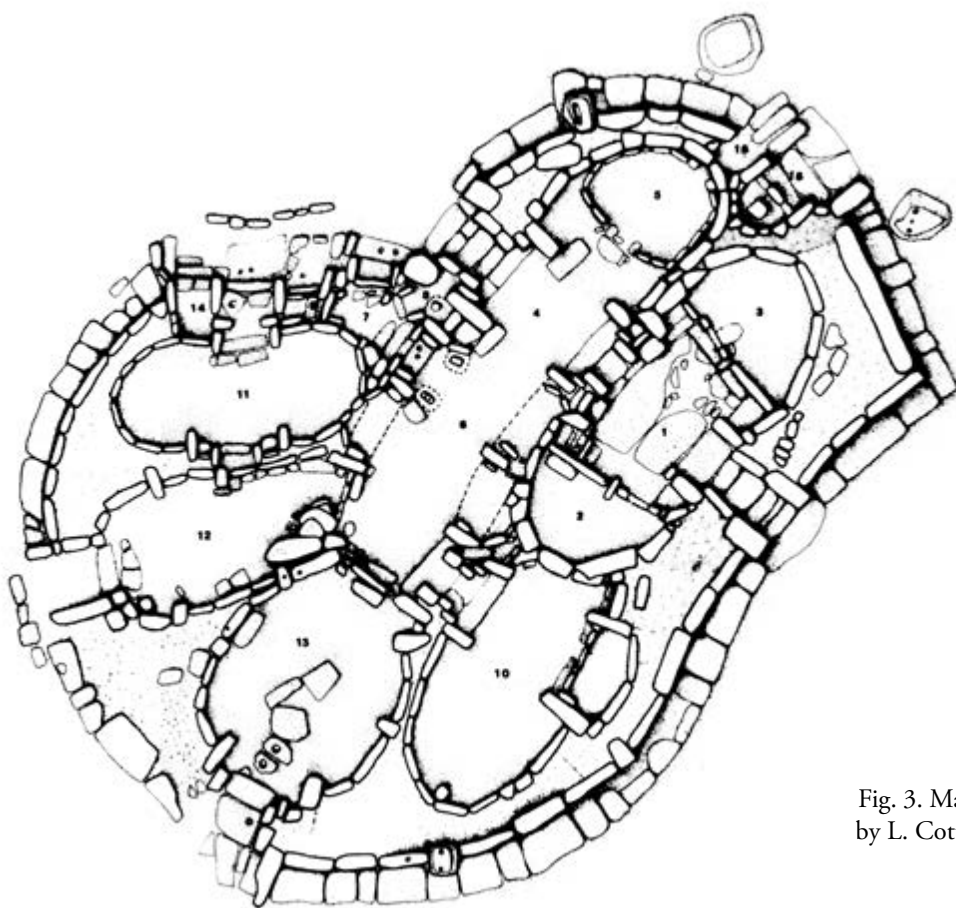


Fig. 3. Malta. Plan of Hagar Qim temple. Tracing by L. Cottinelli (Anati Archives).

FORTHCOMING NEW DEBATES

Readers are proposing themes for debate. When at least three articles are submitted on the same theme, the topic is considered for a forthcoming issue.

- 1 - **ON THE DIFFUSION OF CULTURE.** How are human abilities, concepts, and traditions born, and how do they travel and have their course?
- 2 - **SOCIAL STRUCTURE AS REVEALED BY PREHISTORIC AND TRIBAL ART.** How pictures reveal social relations and social organization.
- 3 - **DEFINING THE CULTURAL IDENTITY OF *HOMO SAPIENS*.** Art, material culture, myths, beliefs, and conceptual trends.
- 4 - **WHERE DOES *HOMO SAPIENS* COME FROM?** Where, how and when?
- 5 - **IS *HOMO SAPIENS* THE INVENTOR OF FIGURATIVE ART?** Is visual art the sign of his presence?
- 6 - **PERSONAL IDENTITIES OF ARTISTS.** Identifying the hands of a specific artist, school or tradition in prehistoric and tribal art.
- 7 - **BURIAL CUSTOMS AND PRACTICES** as expression of beliefs in the afterlife. How was the world of the dead conceived?
- 8 - **IMAGES OF WARFARE AND FIGHTING IN PREHISTORIC AND TRIBAL ART.** Their commemorating role and their historical value.
- 9 - **SEAFARING DEPICTIONS: RECORDING MYTHS OR EVENTS?** Considering the story of seafaring and its earliest documentation.
- 10 - **REGIONAL PATTERNS IN ARTISITIC CREATIONS.** What generates local characteristics in artistic expression?
- 11 - **THE ORIGINS OF RELIGION AND THE ORIGINS OF ART.** Possible connections.
- 12 - **WHEN AND HOW PEOPLE FROM THE NEW WORLD (AMERICA AND AUSTRALIA) DISCOVERED THE PRESENCE OF THE OLD WORLD (AFRICA AND EURASIA)?** What did they know of the Old World before recorded contacts?
- 13 - **MYTHS OF ORIGINS: WHERE DID THE ANCESTORS COME FROM?** Global and local versions.
- 14 - **THE PRIMARY MYTHS AND THEIR COMMON ROOTS.** Archetypes and other widespread patterns
- 15 - **VERNACULAR DECORATIVE PATTERNS AND THEIR SOURCES.** Decoration of objects, huts or rock surfaces as the expression of identity.

PROPOSALS FOR NEW DEBATES

Proposals for papers and suggestions on these and other issues are welcome.

CONTENTS

Emmanuel Anati (Italy) Rethinking Jericho and the Birth of the World Earliest Town	10
Amélie Bonnet Balazut (France) Paleolithic Art: the Animal Beginnings of History	20
Stavros D. Kiotsekoglou (Greece) Parallel Lives of Two Districts' Cultural Landscapes: Albano di Lucania (Italy) and Lagyna (Greece)	30
Giuseppe Orefici (Perù) The Geoglyphs: Open Spaces and Collective Ceremonies in the Nasca World	41
Jitka Soukopova (Czech Republic) Prehistoric Colonization of the Central Sahara: Hunters Versus Herders and the Evidence from the Rock Art	58

Authors are responsible for their ideas and for the information and illustrations they submit. Publication in EXPRESSION quarterly journal does not imply that the publisher and/or the editors agree with the ideas presented

RETHINKING JERICHO AND THE BIRTH OF THE WORLD EARLIEST TOWN

Emmanuel Anati

Atelier Research Center for Conceptual Anthropology (Italy)

The Riddle of Jericho

Why and how did the first urban town in the world come to life? A debate that raised the interest of archeologists, anthropologists, sociologists and the vast public was somehow put aside without a solution half a century ago. It is now awakening new reasoning, mainly by looking at it under a different approach: that of conceptual anthropology. This is also an opportunity of reviving the ideas of scholars of half a century ago, including those of the present writer (now over 90), and see them today under new light.

The site of ancient Jericho, Tell el-Sultan, in the Jordan valley, north of the Dead Sea is, so far, the only place in the world where a walled town has been found to date back to pre- or proto-Neolithic times. This walled city, four thousand years older than any other similar settlement known, is one of the biggest puzzles of archaeology. What did such abnormal settlement do at a time where hunting and gathering were still the main economic resource? What was the purpose of its massive defense system: defense from whom and for what?

The site is over 200 m. below sea level, in one of the hottest world climates. The foundation of the town goes back to the Mesolithic Natufian culture and survived for a few thousand years in the Pre-pottery Neolithic. Its beginning is older than the available C14 dating of 6850 and 6770 B.C. which already take us back ca. 9,000 years. The foundations of Jericho is tentatively considered to be about 10,000 years old (Kenyon, 1957).

Kathleen Kenyon, who took over from the Garstand (1948) the direction of the

British excavations at Jericho and discovered the Pre-pottery town, estimated that Jericho sheltered over two thousand people. Compared to the average size of hunting-gathering and incipient farming hamlets of the period, the phenomenon is obviously peculiar. How such concentration of people could be fed? Who managed it? And what was its function? There must be a reason for such a concentration of people at that age, in one spot.

The Pre-pottery town was surrounded by an enormous defensive wall built of massive stones, some of them weighting tons, quarried a few miles away. Behind the walls, lived a well-organized community, in a monumental city which, at the epoch, was one of the marvels of the world. A massive round tower had an internal passage with solid stone staircases leading from bottom to top: a model of sophisticated architecture. At the foot of the defense wall, Kenyon discovered an even more astonishing detail: the town and the wall were encircled by an artificial moat. How to explain such planned defense system in its age? While



Fig. 1. The Oasis of Jericho seen from the top of Tell el-Sultan. (Anati Archives, Photo E.A. 67-10)



Fig 2. Prehistoric Jericho. The Pre-pottery tower (Anati Archives, Photo E.A.75).

most of the people of the region, and the rest of the world, still lived in caves, huts or hamlets, the town of Jericho appears to be a surprisingly abnormal case. The fortifications were not the only public works uncovered at Jericho. The excavations unearthed large public buildings, storage structures and cult sites with important statuary figures and plasticized skulls likely to be an expression of ancestral cults (Kenyon, 1957). The people of prehistoric urban Jericho did not know the use of the wheel, did not have domestic animals for food or transportation (Zeuner, 1955, pp. 70-86). They used the same types of flint implements of the late Natufian Mesolithic and then Pre-pottery Neolithic, as other contemporary groups and did not use pottery and cooking pots.

Attempts were made to find out a logical explanation to the fact that such an early urban settlement flourished in one of the hottest places in the world, where today there is no rain for almost half of the year and an average of only 100 mm of annual rainfall. In the present climatic conditions, no agriculture is possible without artificial irrigation.

Looking at the evolution of sedentary settlement, Jericho does not fit into the general picture. Small farming communities became common in Mesopotamia, Anatolia, Syria, Israel-Palestine and Egypt in the late sixth and the fifth millennia B.C. but, besides Jericho, there is still no evidence for fortified towns before the

fourth millennium.¹

The first archeological levels of Jericho belong to the Natufian Mesolithic culture. The defensive traits, meant to grant the isolation of the settlement and a practical impossible crossing besides the gate, are

¹ A probable exception might be the tell of Beth-Shean, but only further excavations can show whether this site was indeed fortified in pre-pottery times. At Jarmo, in north-eastern Iraq, Prof. R. J. Braidwood retains that the farming village was established in the course of the seventh millennium B. C. (cf. R. J. Braidwood and B. Howe, *Pre-historic Investigations in Iraqi Kurdistan*, Oriental Inst. Publ., Chicago, 1960, p. 159). At Hacilar in Anatolia J. Mellaart has discovered a farming village which is believed to have started in the seventh millennium B. C., though the earliest radiocarbon date is 5590 ± 180 B. C. Below it there are three other levels of the same culture (the lowest of which yielded a radiocarbon dating of 5487 ± 119 B. C.), and below, a hiatus separates from the Pre-ceramic Neolithic levels which are attributed to the seventh millennium (cf. J. Mellaart, "Excavations at Hacilar, Fourth Preliminary Report, 1960," *Anatolian Studies*, Vol. XI, 1961, pp. 39-75; cf. also *Illustrated London News*, April 5, 1961, pp. 588-590). These two farming villages are, so far, the earliest settlements of their kind in the Near East. Jericho represents, however, a different kind of settlement: it is a walled city, with a planned defence system, much earlier, and more sophisticated than the farming villages of early tillers of the soil. Other farming villages developed during the sixth millennium, but not until the fifth millennium does this pattern of settlement become common and widespread. At Mersin, in Cilicia, the C 14 dating of 5990 ± 230 B. C. (W. 617) was provided by the early level of settlements, but a slightly later cultural assemblage with rather similar material culture was dated at Byblos "A" to ca. 4600 B. C. (W. 627 G. S.) and a probable date in the late sixth millennium can be safely accepted for the earliest Byblos. Diana Kirkbride at Beida in Jordan, has discovered a Pre-Pottery site dated by C 14 to $—6830 \pm 200$ (British Museum). In Egypt no village life has yet been found before the late fifth millennium B. C.

preceding the age of agricultural villages. Considering that other known human groups living in the area during the same periods were by far much smaller in size than the unit living at Jericho and their economy was mainly based upon hunting, gathering and incipient farming, the gigantic defense structures of Jericho take on an even more puzzling aspect.

The building of public works of the size of Jericho, imply sophisticated planning, central coordination of labor, substantial number of workers and powerful leadership. Analogous man-power conditions are displayed by the monumental ceremonial site at Gobleki Tepe in Anatolia (Schmidt, 2010; Luckert and Schmidt, 2013). The site was a compound made of public buildings, devoted to cult and ceremonial activities. It was not defended by fortifications. The site of Jericho remains, for its age, the only known fortified urban center.

The Kenyon – Braidwood Diatribe

Ever since Kathleen Kenyon published her reports on pre-historic Jericho, a scientific discussion progressed between her and other British archaeologists on one side, and Robert J. Braidwood and his American followers on the other. In the words of this scholar, many prehistorians believe that “everything must have started in the exact area where they themselves have been most active” (R. J. Braidwood, 1957, p. 73) and since the earliest appearance of a food-producing economy was claimed by both these scholars for their own area, each one tried to bring forward arguments to prove the rightness of his/her own theory. Both of them claimed to be right and the other to be wrong. Braidwood was followed by other archaeologists who argued that the C 14 dating at Jericho were totally unacceptable, and that this site represented a “peripheral town pattern” to be fitted into the same horizon as other early urban centers of the Near East, three to four thousand years later than claimed by Kenyon. Braidwood added that “unless the whole fabric of other dates and reasoning is wrong, the co-tradition itself cannot have been so early.” In other words, he stated that the dates established for the birth of fortified Jericho cannot be true. The first town must be put on line with the age of the other known fortified towns. Braidwood insisted in his view despite the C14 dating and the context of the material culture. Something did

not fit the general framework of cultural evolution. This conclusion is the consequence of the theory that “the late prehistoric Near East was the scene of a single generalized area co-tradition, which had a more or less uniform development, with specific points of acceleration through time, in the interconnected regions where its food-getting economy was environmentally practicable” (R. J. Braidwood, 1957, p. 78).

This ecological consideration, which was repeatedly emphasized by Braidwood, is no-doubt relevant and leads us to remark that natural resources, geographical setting, and climatic environment had paramount influence, in all times, in differentiating cultures all over five continents. In the Near East, deserts, fertile river valleys and mountainous areas had nomadic and sedentary human groups, hunters, food collectors, incipient farmers, fishers and what else. Unfortunately, the idea that each period had a single way of life is still present in some textbooks and in some minds. Even today culture is not uniform in the Near East as elsewhere. By the side of urban and rural populations, we still find nomadic Bedouin goat and camel breeding. There are communities of caravan traders, oasis dwellers basing their economy on growing dates and spices, animal breeding semi-sedentary pastoralists, farming communities, urban towns, industrial areas, and other groups relying upon other economies. Religious centers like Jerusalem or Mecca developed millenary economies relying on faith. Lately, also petrol fields and touristic centers are added to the variety of specialized activities.

Neolithic cultures were not uniform, not only in the area of Syria-Palestine; and considerable differences exist between different regions of the Near East. The stage of incipient farming produced, even within this area, several different patterns of culture. At Jericho the developmental frame of material culture is entirely suitable, and Carbon 14 samples appear to have yielded reliable dates in complete agreement with the currently accepted chronology of the material culture. However, pre-pottery Jericho was eight acres in area, while other human groups with the same material culture, still lived in semi-permanent huts and had an economy mainly based on hunting, food gathering and, in some cases, incipient farming.

According to Kenyon the population of pre-pottery Jericho must have been about 2,000. She rightly ar-



Fig. 3. Prehistoric Jericho. A sector of the pre-ceramic wall at the bottom of the trench. (Anati Archives, Photo E.A. 67-05)

gued that “such a population could not have been supported on supplies of wild grain and wild animals obtainable within reach of the settlement”. She concluded that agriculture must have been the main occupation: “The expansion of the settlement precedes the building of defenses, and thus the need for irrigation had called into being the organization of which defenses are evidence.” (K. Kenyon, 1957, p. 45).

Braidwood claimed that the climate and natural vegetation of Jericho, over 200 meters below the sea level, was certainly no better for agriculture than hilly regions such as the area of the farming village of Jarmo. Within the area of Syria-Palestine this claim is perhaps even better justified and we are faced with intriguing questions: Why do such Mesolithic assemblages as the site of Einan, or the caves of Mount Carmel, display a material culture indicating a more

evolved agriculture than at Tell el-Sultan in pre-pottery Neolithic?² Has the earliest level at Jericho produced such an abundance of sickle-hafts and sickle-blades, not to mention mortars and pestles, as many of the known in other much smaller Mesolithic sites? And indeed, does this unique fortified city illustrate the culture of people in a stage of incipient farming?

The Theory of Trading

The results of the excavations, summarized by K. Kenyon in her “*Digging up Jericho*” (1957) and then in “*Archaeology in the Holy Land*” (1960), arose the question of the place and time of the origins of agriculture, Mesopotamia or the Jordan Valley? But, was indeed agriculture the economic source for the birth of Prehistoric Jericho? The fortified town flourished in a social context previous to the expansion of farming way of life. The ongoing debate was upset by a paper proposing that the earliest known urban settlement came to life not because of husbandry but thanks to trade (Anati, 1962).³

Despite the enthusiasm of Prof. Albright, at first the theory was not successful. Reviewers and other opponents claimed that a trading center of such dimension would not make sense in a context of hunter-gatherers. Jericho was best defined as a precursor of the farming way of life. The theory was further elaborated in “*Palestine Before the Hebrews*” (Anati, 1963) and became considered by part of the academia as an “original” hypothesis among other possibilities. In these texts presenting the theory, some crucial questions remained unanswered: in an environment of hunter-gatherers and incipient farming, why such massive fortifications? Who would be the potential enemies deserving such efforts? And, in such socio-economic context, if considering the idea of trade, trade of what and with whom? Meanwhile, some rethinking made the query even more complex than originally conceived.

The traditional view was that the first farming villages gradually grew to become towns; urban society would have evolved due to the expansion of farming and the growth of the human units. When the mentioned the-

² See J. Perrot. in R. Neuville, Archives de l’Institut de Paleontologie Humaine, Vol. 24, 1951, p 160.

³ The mentioned article was published in BASOR, at the invitation of Prof. W. F. Albright, after discussing the content with him, with Dr. K. Kenyon and Prof. R. J. Braidwood.



Fig. 4. a-b Prehistoric Jericho. Fragment of statue of solidified and painted mud, from a public building in pre-pottery layers. (Anati Archives).

ory was published, Gordon Childe, a leader of archaeological theory and thought, had suggested, regarding the birth of Bronze Age cities, the function of trade in the early development of the urban way of life (Childe, 1958). But no one, to our knowledge, had suggested such possibility for the Mesolithic or Pre-pottery Neolithic. The concept of gradual growth, from village to town, had remained the basic structuralist vision on the evolution of urban settlements.

Various hypotheses, on search for security, of systems of cooperation, of the psychological need of being part of a large solidarity group, may have been pertinent as functions in the birth of urban communities. As emphasized by sociologists, another cause may have been the advantage of internal exchange and cooperation, involving better possibilities in selecting mating partners. The evolutionary vision of development from hamlet to village and then to towns, was broadly accepted in the setting of incipient agricultural communities (Braidwood, R. J., 1952).

The town of Jericho was born in the Natufian Mesolithic culture, when the main economic resources were those of hunter-gatherers and incipient agriculture. It appears to be out of these various theoretical motivations. Farming villages evolved later, with the Neolithic economy of agricultural food producers. And all other fortified cities came still

later, with the exception of Jericho.

After over one century of excavations and discoveries, Jericho appears to remain a unique case, it does not fit a pattern. An anomalous urban reality came into existence in a peculiar social context. The concept that trade may have been the cause of the birth of the earliest known urban settlement was considered with reluctance. Could it be that trade came before farming as cause of birth of urban settlements? The idea was in contrast with academic conventional views.

From what we know of modern urban centres, many of them appear to be resulting of economic or socio-political conditions as Brasilia, Doha, Sydney, Las Vegas, Tel-Aviv or Novosibirsk. Few of them grew out of farming villages. Rethinking the theoretical traditional view of towns being the result of successful farming activities, the question arises of whether this may be a generalized process. Would it apply to London, Rome, Berlin, Moscow or Beijing? Or to Bronze Age fortified towns like the Canaanite Megiddo, or the Hyksos Avaris? May we postulate that the main reason for the development of urban centers defined as towns is rarely agriculture, more frequently is trade. As a general trend, trade appears to be the main cause of both, industry and urbanization. Would this apply to Jericho, the oldest known fortified town in the world?

The Function of Agriculture and Other Resources

If Jericho was such a paradise for early tillers of the soil, why was it abandoned when the pre-pottery town was destroyed? And why does another gap of almost one millennium occur at Jericho just in the Chalcolithic (Ghassulian) period, when agriculture was flourishing all over the rest of the Near East?⁴

The material culture published from pre-pottery Jericho contains little to demonstrate that agriculture was more developed there than in most of the known Natufian hamlets and cave-dwellings, and it is hard to believe that a group of incipient “barbarians” (Childe’s terminology), could assemble such an economic surplus as that implied by their enormous defense system, simply relying upon a few crops cultivated below the spring.

On examining the character of other Neolithic Near-Eastern sites, it looks unlikely that the walls of Jericho, its sophisticated architecture, could be the expressions of a society basing its economy upon incipient agriculture. On the other hand, the main economic bases of the other known human groups of pre-pottery age were hunting and gathering, with incipient farming or just enhancing natural crops. It is even more unlikely that an urban center like Jericho, with the manpower implied by its public buildings, could rely upon such economy. Arrowheads, and other flint implements show that hunting was an important occupation, but again it is unlikely that the enormous surplus evidenced by the public structures of Jericho could have resulted from hunting.

If the level of the Dead Sea and that of the Jordan river were higher than today, the lake much larger, and the shores of the lake nearer Jericho than today, fishing might have been another economic resource. The encounter of the sweet waters of the Jordan river, before reaching the salty waters of the Dead Sea, may have been rich in fishes but, in the geographical context of

4 As noted in the cited article (Anati 1962), in a personal conversation, Dr. Kenyon pointed out that the Chalcolithic gap might have been shorter than she originally thought. However, we must take into consideration the fact that the Ghassulian culture is absent at Jericho, while it is well represented all around the Dead Sea and in the lower Jordan Valley. The Ghassulian culture, at Ghassul, not far away from Tell-el-Sultan, in the Judean mountains at ‘Ain Gedi, and in the Northern Negev, illustrates a well-defined and rather long cultural period. It probably came to an end towards 3200 B. C. after its presence in the region for a minimum of 800 years. At Beer-Sheba, a C 14 for its late phase is ca. 3325 B. C. (W. 245).



Fig. 5. Prehistoric Jericho. A pre-pottery plastered skull with shells as eyes and bands of color painted on the head (Anati Archives, cf. Anati 1963, p. 255).

Jericho, it would be surprising if the earliest town in the world, near the shores of a heavily salted lake, may have relied on a fishing economy.

Trade: what Kind?

The urban agglomeration of pre-pottery Jericho and its defense system, speak for strong centralized leadership, and for a political organization which must have originated from special economic conditions. Only trade comes seriously into consideration as a major means of such a wealthy town sometimes between 9 and 10,000 years ago. At Jericho we find tools made of obsidian, probably from Anatolia, lumps of turquoise from Sinai, and cowrie shells from the shores of the Mediterranean. Jericho had active contacts with other human groups and trade implies sellers and acquirers.

The Dead Sea is an important source of raw materials. The major three were salt, bitumen and sulphur.

Hunting societies make little use of salt. When flesh is consumed raw or roasted, its salts are not lost and it is not necessary to add sodium chloride. Some nomadic pastoral Bedouin make little use of salt even today, and populations not using salt appear throughout history. The Odyssey (XI, 122 ff.) speaks of “inlanders” who do not use salt, while Numidian nomads made no use of salt in the time of Sallust. On the other hand, when cereal or vegetable diet calls for a supplement of salt, and so does boiled meat, salt has always been necessary to food-producing societies (cf. *Enc. Britannica: Salt*). Therefore, salt was becoming an indispensable substance at the time when Jericho was becoming a walled town. Since historic times the Dead Sea has always been the principal source of salt (cf. Genesis, 14, 3; 34, 3; etc.). Salt was used as seasoning, as medicine and for ritualistic and cult function. It is worth stressing how the Bible is repeatedly referring to the use of salt.

Remains of ancient salt mines, on the shores of the Dead Sea, are common, and salt mines are also mentioned in the Bible. (Zephaniah, 2, 9; Book I of Maccabees, 11, 36). The Bible, though in its present form is less than 3,000 years old, preserves much older traditions. It is one of the oldest texts where salt is frequently mentioned for seasoning food. This is best expressed by Job (6:6) in the question “*Can that which is unsavory be eaten without salt?*” Salt appears also as a vital part of sacrifices (Lev. 2, 13; Ezr. 7, 22; Ezk. 43, 24.) and this habit undoubtedly goes back to prehistoric times. In the book of Numbers (18:19) we read: “*All the heave offerings of the holy things, which the children of Israel offer unto the Lord, have I given thee, and thy sons and thy daughters with thee by a statute forever: a covenant of salt for ever before the Lord unto thee and thy seeds with thee.*” The tradition is followed in the New Testament, where we read in Mark (9:49): “*For every one shall be salted with fire, and every sacrifice shall be salted with salt.*” Salt is mentioned in the Bible also as an antiseptic or a medicine. Newborn babies were bathed and salted, (Ezk. 16, 4) while Elisha healed the waters of Jericho by casting a cruse of salt into the spring. (Kings II, 2, 20 ff).

In the Near East salt and incense, economic and religious staples of the ancient world, play a paramount role in ancient highways of commerce. The inhabitants of Syria-Palestine today prefer the finer salt of the Mediterranean to that of the Dead Sea, but until a

few years ago Bedouin used to make artificial evaporation lagoons on the shores of what the Bible calls “Salt Sea,” from where camel caravans carried salt to markets in Jerusalem, Hebron, Beersheba, and Gaza, as documented by Leo Picard (Picard, L. 1954).

Bitumen was also an important subject of trade. It is found in lumps or masses which appear on the surface of the Dead Sea or on the shore, and the Dead Sea was such an important source of it as to receive from Pliny, Strabo, Diodorus, and other authors the name of “Lake of Asphalt.” From archaeological evidence we know that bitumen was used already well before Mesolithic times to fasten in their hafts sickle-blades, flint knives, scrapers and other composite stone tools.

In the Bible, the tradition of using bitumen goes back as far as the time of Noah, who made use of it in building the ark (Genesis, 6, 14). Later, Moses’ mother is said to have daubed with bitumen the ark of bulrushes in which Moses was put in the Nile and in which he was found by the daughter of Pharaoh (Exodus, 2, 3-4). A similar account occurs in the Mesopotamian legend regarding the ark in which Sargon was left in the river Euphrates. In the late thirties of the last century, the American explorer Edward Robinson noted that the bitumen of the Dead Sea was used by the inhabitants of Bethlehem and Jerusalem for manufacturing “*handicraft objects such as arabesque bowls, rosaries, crosses and so on,*” (E. Robinson, 1841, p.221; cf. also C. Ritter, 1850). The tradition of molding bitumen into vessels was still carried on a few years ago, by the Ta’amirah Bedouins of the Judean desert. (Picard, 1954). In prehistoric times, bitumen was an important raw material, and since the Dead Sea is a major source of it, there is no reason to believe that it was not gathered there by the inhabitants of the nearby settlement of Jericho.⁵

Other possible source of wealth was sulphur, which is gathered on the surface and shores of the Dead Sea and is still used by Bedouins to prepare medicines and to light fires. All these materials are perishable, so that little salt, sulphur, or bitumen may be preserved inside the walls of prehistoric Jericho.⁶

5 Some blocks of bitumen have in fact been discovered in pre-pottery levels at Jericho (personal communication of Dr. Kenyon).

6 Dr. Kenyon informed me of the presence of large reservoir-like stock-stores found in pre-pottery layers at Jericho. One of them had traces of intense burning, probably indicating that the material it stored was inflammable.

Socio-economic Implications

From these considerations, we postulate that the oldest known fortified town in the world came into existence thanks to trade, which enabled the accumulation of health and manpower. A major query was how could both, wealth and manpower, be so lavish as evidenced by the fortified town?

After over a century of surveys, explorations, excavations and discoveries in the Near East and elsewhere, no similar settlement of a similar age has come to light. Jericho is the earliest known fortified town in the world and remains a unique case of its nature in its age. So far it seems to be a single, isolated example which does not represent a cultural pattern: the building of a fortified town was not a trend of its age but the result of something anomalous.

Its buildings represent a remarkable participation of, coordination, engineering and manpower (CEM), an unusual combination in an age, though we know of at least another comparable case, that of Goebekli Tepe (Luckert, K.W. and Schmidt, K., 2013 88; Schmidt, K. 2010). It displays the analogous three gifts. As it looks like, while that one had the goal of pursuing a

religious pattern, Jericho was built to protect somebody or something and its walls had a military function. Both cases surge in an age where, small size hunting-gathering bands were primarily concerned with food supply and daily survival. But where, both mentioned sites indicate the birth of centers of power. For the history of socio-political institutions, it is a very relevant factor. What are the social implications? The decoding the dynamics of such abnormal cases brings us to the core of civilization (Childe's terminology).

They both are expression of a socio-political pattern indicating the concentration of economic resources in the hands of an elite group. Both cases imply the emergence of an autocratic leadership with the necessary determination and breath to last for generations. Goebekli Tepe was a sit of religious gathering most likely managed by a priestly elite, attracting faithful believers, it was a sort of prehistoric Vatican or Mecca, where wealth was likely accumulated by the donations of devotees. Such peculiarity is evidenced by other manifestations around the world, in different dates but in similar conceptual horizons, from the megalithic shrines of the Atlantic shores of Europe, in Portugal, Spain, France and Ireland, to the ritual monumental structures of prehistoric Mexico, to the Mohai of Easter Island.

At Jericho we may tentatively figure out the presence of a leading class, a royal dynasty or a priestly confraternity, disposing of the power and ability to feed a remarkable labor force evidence the public structures of prehistoric Jericho. How could this leading class dispose of the necessary resources to sustain hundreds of workers for generations? Various tasks included planning and conceiving, building and maintaining architectural structures, extracting, transporting and storing the goods, trading, producing food and necessities for a crowd which was-not food-producing, and armed contingents to protect goods, people, the leaders and the fortifications. And probably also an administrative bureaucracy, and an apparatus of servants granting the leaders their privileges and services.

The defense structures were meant to protect, but against whom? What logic may be attributed to the size of defense structures? The building of the fortified tower and walls required a remarkable employment of manpower and economic engagement. Why? The surrounding social context was that of clans of hunt-



Fig. 6. Prehistoric Jericho. Pre-pottery plastered skull: the image of a noble ancestor (Anati Archives).

er-gatherers and possibly incipient animal taming and garden cultivation. Were they such treacherous and powerful enemies to justify this gigantic martial system? Was it indeed aimed at protecting the town from dangerous neighbors? No population at that time was strong enough, and dangerous enough, to justify such defenses (Frankfort, 1951).

Looking at the position of the tower, it appears that it may have been built to watch not outside the walls but inside them. The sentinel on top of it probably had the task of controlling what was happening down below, inside the walled compound. Its structure is providing some hints regarding the system of management of prehistoric Jericho. The regime may have based its power by keeping prisoners or slaves, preventing them to escape. Another important function may have been that of protecting precious stored goods to avoid damages or stealing. May we suggest that the imposing defense system was not against possible external attacks, but to prevent flights of slaves and the theft of goods. We postulate that pre-pottery Jericho is not only the first town in the world but also the first example of a slavery organization and of a totalitarian political system.

As previously detailed, salt, bitumen and sulphur may have been the precious products of the first minery power in the world. We may figure out that they were extracted, collected, stored and offered as essential commodities for food, medicine, artisanship and other functions. Using them as therapeutic remedies by local medicine-men may have caused miraculous healing recoveries. Bitumen was an exceptional binding raw material for producing composite tools, besides having medical uses still practiced today for healing fractures and blessing, and for curing stomach ulcers and tuberculosis. Sulphur served to produce miraculous fireworks, besides curing skin diseases. Salt, as we have seen, besides its spicing food, may have been used for general medical treatments, a prehistoric "Aspirin" of many uses.

Not unlikely, the system included a sort of monopoly of both, the sources and the secrets of their uses. Ill people in need to be cured and other consumers, reached the gates of Jericho, and the regime may have developed an exchange system providing goods and medical treatments against donations and manpower: a prehistoric Lourdes? Accordingly, the customers may have had to pay for the products with their work

or with donations of goods, both major means of exchange before inventing money and still in use for cult sites. To our mind Prehistoric Jericho, its defenses and its public buildings, were not the result of an autarchic pre-pottery economy. Was the fortune of prehistoric Jericho the result of a successful market selling both goods and miracles?

Who were the founders of the world earliest town and earliest trading center? Could they have been a clan of Mesolithic medicine-men or sorcerers? Whatever the case, Jericho tells us a most astonishing story of wealth, leading to the success of what may have been the first economic empire in the world: small for its size but immense for its age and meaning.

We postulate that, contrary to current views, pre-pottery Jericho did not come into existence due to the birth of farming but by trade of products so valuable for their time as gold, diamonds, petrol or anti-biotics in recent times. If this be the case, in the dispute between Kenyon and Braidwood, both were right. Simply they were so much concerned about the birth of agriculture that did not identify the real socio-economic nature of Jericho. In our opinion, the anomalous fortified town grown among hunters-gatherers was the expression of the earliest commercial, capitalistic, dictatorial regime in the world. A new facet is unveiled on cultural evolution. If we are right, a meaningful new chapter is added to the history of Mankind.

References

- Anati, E.
- 1962 Prehistoric Trade and the Puzzle of Jericho, BASOR, n.167.
- 1963 *Palestine Before the Hebrews*, New York, Alfred A. Knopf (See pp. 25-31).
- Braidwood R.J.
- 1952 *The Near East and the Foundation of Civilization*, Eugene, Oregon, Condon Lecture.
- 1953 Early Village Communities in Southwestern Asia, *JWH*, Vol. 1.
- 1957 *Antiquity* XXXI (See p. 73).
- Braidwood R. J. and B. Howe
- 1960 *Prehistoric Investigations in Iraqi Kurdistan*, Oriental Inst. Publ., Chicago, p.159).
- Childe, V. G.
- 1950 *What happened in History*, London, Harmondsworth, Penguin Books.
- 1958 *The Prehistory of European Society*, Harmondsworth, Penguin Books.

- Frankfort, H
 1951 *The Birth of Civilization in the Near East*, London, William and Norgate.
- Garrod, D.A.E.
 1957 *The Natufian Culture: Life and Economy of a Mesolithic People in the Near East*, Proceedings of the British Academy, vol. XLIII.
- Garstand, J. and J.B.E. Garstand
 1948 *The Story of Jericho*, London, Marshall Morgan and Scott.
- Kenyon, K.M.
 1957 *Digging Up Jericho*, London, Benn. (See p. 105).
 1960 *Archaeology in the Holy Land*. London, Benn. (See p. 56).
- Luckert, K.W. and Schmidt, K.
 2013 *Stone Age Religion at Göbekli Tepe*, (Triplehood)
- Mellaart, J.
 1961 Excavations at Hacilar, Fourth Preliminary Report, 1960, *Anatolian Studies*, Vol. XI, 1961, pp. 39-75; cf. also *Illustrated London News*, April 5, 1961, p. 588.
- Perrot, J.
 1960 Le Mésolithique de Palestine et les récentes découvertes à Einan (Ein Mallaha), Preliminary report on the 1959 Season, *I.E.J.*, Vol. X.
- Picard, L.
 1954 History of Mineral Research in Israel, Jerusalem, Economic Forum, 1954. .
- Robinson, E.
 1841 Biblical Researches in Palestine, London, p. 221.
- Ritter, C.
 1850 Vergleichende Erdkunde der Sinai halbinsel, von Palestina und Syrien, 1850, II, p. 758.
- Schmidt, K.
 2010 Göbekli Tepe - the Stone Age Sanctuaries. New results of ongoing excavations with a special focus on sculptures and high reliefs, *Documenta Praehistorica XXXVII*, pp. 239-255.
- Stekelis, M.
 1958-1960 Nahal Oren, Mount Carmel; From Natufian to Tahurian, *I.E.J.* 8, 1958, p. 131. See also *I.E.J.* 10, 1960, p. 118.
- Zeuner, F. E.
 1955 The Goats of Early Jericho, *PEQ*, April 1955, pp. 70-86).

PALEOLITHIC ART: THE ANIMAL BEGINNINGS OF HISTORY

Amélie Bonnet Balazut
National Museum of Natural History, Paris (France)

Introduction

What can the earliest expressions of visual art teach us about the minds of those who imagined and brought to life this art, thus informing our own aesthetic experience? What can anthropology contribute to the study of this specifically human behavior, by

exploring the animality of the creative forces within it, where animal forms represented the supreme manifestation of art over 30,000 years ago? How can we reconcile this expression of an animal life force with considerations about art and prehistory, so as to introduce new questions of aesthetics into the field of anthropology? This anthropological approach to the origins of aesthetics within a paleontological perspective, focusing on the animal beginnings of human history, paradoxically reveals itself to be a means of going beyond anthropology. The anthropocentric focus of anthropology must give way to an ontological anthropology that goes beyond the merely human. We can thus consider the animal aesthetics of humanity as belonging to the aesthetics of life, the immemorial secret that Paleolithic art brings to life so vigorously for us today.

Apaleontological perspective on the anthropological approach to aesthetics

The way in which the animal figures represented in Paleolithic art merge with the sovereign elegance and aesthetic vitality of the forms encountered in nature is unparalleled in art history. The mimetic alignment of these representations with natural animal forms is so strong that it even represents the human figure itself, replacing it by these presumably more elegant animal figures. Paleolithic artists chose to represent animal figures, cloaking human particularities with prestigious animal forms that entirely covered the human figure. The formal characteristics of human appearance and all semblance of reality were then abandoned and replaced by a new therianthropic being, half-human half-animal, and generally zoo-cephalic.¹ Among the most famous of these therianthropes are the sorcerers of the Three Brothers, the buffalo-man in the Gabillou cave, the bird-men of



Figure 1. Bison-headed man, known as “The Sorcerer with the Musical Bow”, Trois-Frères Cave (Ariège, France). Rock engraving (height: 30 cm). Tracing by Abbé Henri Breuil.

¹ This idea is further developed in A. Bonnet Balazut, *The animal, mirror of humanity*, *Expression* n°22, 2018, and in *Portrait de l'homme en animal*, PUP, 2014.

Lascaux or Altamira and of course the lion-man of Hohlenstein-Stadel (figs. 1-5). In all these artistic manifestations, animal and human vigour combine and condense, finally becoming a single being.

What this process of merging identities reveals, embodied here by the image of the therianthrope, is the intrinsically hybrid nature of our own aesthetics, ultimately underlying all aesthetic manifestations. At the heart of figurative aesthetic vitality is the animal life force, the primary sensory source of unconscious visceral perceptions, which for Leroi-Gourhan is the foundation of the aesthetic behavior on which are based the relationships that link all living beings.

The definition of aesthetic behavior must be extended to include all behavior relating to the perception of movement and form in the world around us. Animals also possess these skills, making of aesthetics a paleontological fact that can no longer be neglected or debated, as proposed in the broadest sense by Leroi-Gourhan. We adopt this paleontological perspective, which does not seek to disqualify its intellectual outcome through aesthetic manifestations of art. It rather seeks to show that aesthetic perception, and the resulting expression of aesthetics, whether artistic in nature or more deeply rooted in physiology, are always deeply linked to natural behavior, and therefore closely related to the senses, which dominate relationship behavior in real life. Thus “all acts are, as it were, displayed against the same background, and that everything ... from the most purely artistic manifestations to the simplest gestures, is bathed in the same aesthetic atmosphere” (Leroi-Gourhan 1956a: 1).

Leroi-Gourhan first suggested investigating the animal sources of human aesthetics more than 60 years ago: “human aesthetics, deeply intellectualized in its higher forms, is no more different from animal aesthetics than the physiology of the human body is essentially different from that of other mammals” (1956a: 3). Paleolithic art has been openly engaging us to perceive this for more than 30,000 years. Human beings live a richly sentient life, as do all mammals. The entire animal mechanism of life follows the rhythm of sensory equipment with biological properties common to all living beings: the senses, which ensure the perception of values and rhythms. The domain of sensitivity, where living beings exist, conditions our existence to visceral sensitivity, linked to rhythm. Rhythm is pro-

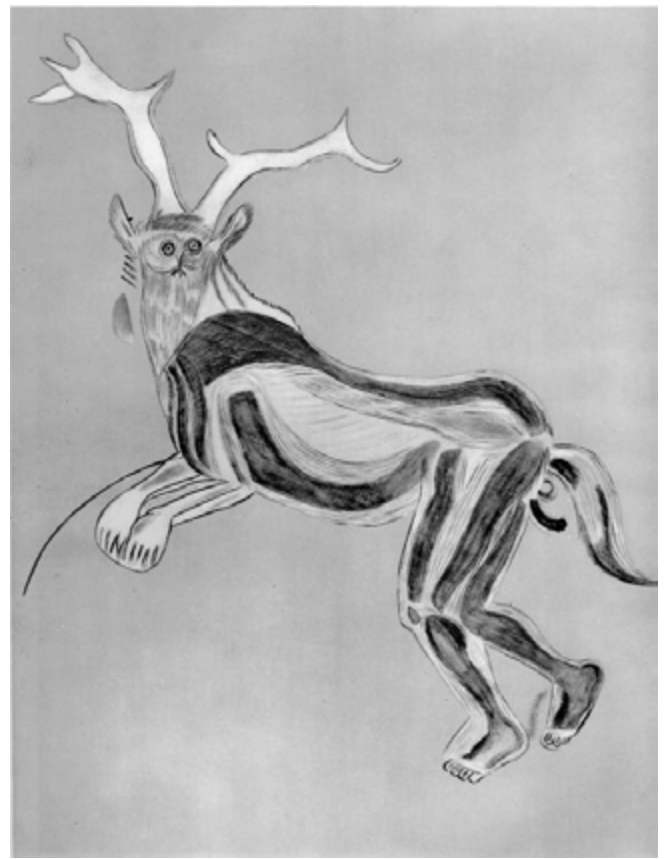


Figure 2. Composite figure, known as “The Sorcerer”, Trois-Frères Cave (Ariège, France). Rock painting and engraving (height: 75 cm, width: 50 cm). Tracing by Abbé Henri Breuil.

foundly anchored in the physiology of living beings, and its endogenous principle determines the action of each being’s physiological impulses, thus transforming aesthetics into behavior experienced in muscles and organs, and dependent on organic infrastructure. This endogenous principle encourages us to follow the example of Leroi-Gourhan, who considered “aesthetics as a form of natural human behavior deeply rooted in its physiological structure” (Leroi-Gourhan 1956b: 1). Thus, the fundamental idea is that aesthetics has its source in an immemorial background, made of flesh, bones, muscles, and viscera. All the sensory perceptions at the origin of aesthetic behavior in all living beings are rooted in the physiological basis of this background. Each being in this kingdom, in harmony with all other beings, weaves a network of relations where aesthetic manifestations proliferate. Aesthetic perception and expression are always deeply involved in natural behavior, and are fundamental manifestations, not only among human beings. It is important



Figure 3. Composite figure, known as “The Sorcerer”, Gabillou Cave (Dordogne, France). Rock engraving (height: 37 cm). Tracing by Abbé Henri Breuil. Photograph by Jean Clottes.

to take the full measure of this non-exclusivity, which is the only way to reach the decentring necessary for us to become wild beings once more, thus allowing us to regain the indomitable otherness of our animal origins, with the first step being a return to the elementary sensations of aesthetics.

This empathetic decentring consists in “leaving behind the vital pace of the purely human to coincide elsewhere” (Morizot 2018: 28) by looking for behavioral singularities in animal life that teach us more about ourselves. To do this, we rediscover what the French philosopher Baptiste Morizot sees as key points, the convergences between ways of being alive into which a true community of vital problems is woven. Reconsidering the animal sources of aesthetics, and subse-

quently the animal aesthetics of man, is therefore the first, most indispensable step, if we are to envisage this coincidence deep within ourselves.

The aim of this paleontological approach to aesthetics and, consequently, to anthropology, is to go back to the animal beginnings of our history, and thus of our sensitivity as living beings, without which we could not have experienced the cultural development that characterizes humanity, to which Paleolithic art guards the secret. “It is essential to start from the beginning, with the only forms that are Paleontologically guaranteed, if we seek to give an account of the transition to higher forms and, above all, of what remains archaic within them” (Leroi-Gourhan 1965: 85). Observing how deeply buried such physiological manifestations are at

the heart of aesthetic practices, even in their superior forms, confirms for Leroi-Gourhan their quality of the paleontological substratum. As this substratum is so deeply buried and so archaic, all those who seek to identify it must undertake anthropological research, which blends the humanities together with biology.

Ontological and conceptual research

Taking humanity back to the animal beginnings of history—the basis of all anthropological research, once freed of authoritarian conditioning in the guise of disciplinary rigor—forces anthropology to follow a more open path, with broader boundaries, including everything that will lead to comparative knowledge of humanity since its origins.



Figure 4. Bird-headed human figure from the polychromatic ceiling, Altamira Cave (Cantabria, Spain). Rock engraving. Tracing by Abbé Henri Breuil.

This more open approach began almost a century ago, when the father of French anthropology, Marcel Mauss, refused to separate humanity into components, and so lose the benefit of the confrontation between different manifestations of humanity. Thus, it was first proposed to unite the Museums of Natural and of Human History, where all the trends of anthropological and ethnological sciences can be gathered together.

André Leroi-Gourhan subsequently became an advocate of this transdisciplinarity, in both his research and his written works, where prehistory and present-day cultures are successively studied as they are manifested in relation to technology, sociology, and aesthetics: “The study of humanity by all possible means, but in a comparative perspective, trying to make the most of the dimensions of the human phenomenon, encompassed by racial and cultural differences, throughout the entire span of space and time” (Leroi-Gourhan 1956 : 5).

The prehistorian Emmanuel Anati seeks to extend this comparative perspective to the notion of conceptual anthropology, by combining disciplines as a union of memories, with a broader basis for conceptual research, by bringing together the humanities and social sciences, which the prehistorian imagines as a rampart against the extreme specialization that threatens to reduce scholars to mere technicians. This union of different disciplines (e.g. anthropology, ethnology, sociology, archeology, philosophy, semiology, history, and psychoanalysis) will offer a broader dimension of knowledge, and a greater capacity for analysis and synthesis, able to tackle questions that this united commitment can help to clarify.

This shared, and therefore open, commitment recognizes the legitimacy of indigenous, animist, and totemic ontologies, which differ in that they place animals and not humans at the center. This ontological turning point in anthropology, which began at the end of the 20th century, is affirmed today, with discernment and sagacity, by the Canadian anthropologist Eduardo Kohn. His research not only considers representation beyond the human (thus finally taking non-humans seriously), but also envisages “an ontological anthropology beyond the human” (Kohn 2017: 28), taking into account the many ways in which the beings that make up this world engage with one other, and the unexpected affinities between them. This resolutely

open anthropology requires us to consider the alignment of kinship, which characterizes the ontological matrix and the pragmatic orientation of animistic imagination, in which all lives are intertwined.

One of the founding fathers of American environmental thought, Paul Shepard, also recommended moving beyond the anthropocentric framework of anthropology. His major intuition is based on an ontology of coexistence and an ethics of connection, which considers a proposition that our Pleistocene ancestors probably also believed: “human beings are nothing without the other living beings with whom they cohabit on Earth, and to whom they open themselves up, thus occasionally putting themselves in danger” (Shepard 2006: xiii).

Animals, whose vital potential can be actively mobilized by humans for renewal and transformation, have thus shaped the intelligence of the “other animals that we are”. This idea, suggested by the French ethologist and philosopher, Dominique Lestel, in the title of his recent essay, “We are the other animals”, and which follows on from Shepard’s proposition, today signifies that we exist only through the existence of other living beings, that “humans are others, just as others are part of humanity” (Lestel 2019: 14).

Admitting that humanity was thus formed within the texture of animality is indispensable if we hope to build lives shared with “others beyond humanity”. It is necessary to consider the animal aesthetics of humanity as part of an aesthetics of life, the immemorial secret that Paleolithic art still brings to life so vigorously for us today. We shall show that the aesthetic and ontological questions that parietal prehistoric art continues to offer to our contemporary gaze, and the multiple interpretations that it continues to provoke far beyond the restricted circle of specialists, all concern the vital recommitment awakened at the very heart of humanity. This commitment means that we are interwoven into the immersive fabric of the living, which Morizot considers as a projection far from the self into a greater self, that “makes us unfold as sensory animals” (Morizot 2018: 97).

Following in the footsteps of these researchers and thinkers, we therefore propose that the inevitable overlap and complementarity between disciplines that consider humanity, animals, and all living beings as their center of interest should no longer be the ob-



Figure 5. “Lion Man”, Hohlenstein-Stadel Cave, Baden Wuerttemberg, Germany. Figurine carved from mammoth tusk (height: 31 cm, width: 7.3 cm). Photograph by Yvonne Mühleis. © Landesamt für Denkmalpflege im RP Stuttgart/Museum Ulm.



Figure 6. Lion Panel, end chamber, Chauvet Pont-d'Arc Cave (Ardèche, France). Charcoal drawing on rock. Photograph by Jean Clottes.

ject of scientific dogmatism, but should at last work towards sharing ontological and conceptual research, while preserving the respect due to this “kingdom of the marvellous” (Portmann 1961: 221), which still seeks to conserve its share of mystery.

The immemorial secret of Paleolithic art

The German zoologist, Adolph Portmann, who proposed the expression “kingdom of the marvellous”, put forward the scientific proposition that knowledge of the secret forces that innervate living forms in their singular appearance goes beyond whatever the researcher could say about them. It may seem paradoxical that science can lead to the marvellous, since Westerners are accustomed to expressing everything in facts and figures, thus taking away their magical aspect. Without ever envisaging that the Western mind seeks only to dominate nature, Portmann pushes the study of natural phenomena to the limit, and deep-

ens our knowledge of the broader reality of our experience: “This is the attitude that leads us to believe that the paths of natural experience necessarily lead to the marvellous” (Portmann 1961: 221). Portmann imposed this experimental and ultimately phenomenological attitude on himself by investigating the conditions necessary for the appearance of animal forms. After seeking to broaden his views on the living by focusing on its extraordinarily expressive nature, the spectacle of animal forms became for Portmann an autonomous representation destined for no receiver, since it had no other meaning than its expressive, representative value.

As Portmann so aptly put it: “what drives us to take care of animal forms is the feeling that we find in them a little bit of ourselves and thus participate in some way in their secret, intimate life” ((Portmann 1961: 53). For this 20th-century zoologist, this attitude seems to be embodied in artistic creation, which is now more



Figure 7. Horse Panel. Chauvet Pont-d'Arc Cave (Ardèche, France). Charcoal drawing on rock. Photograph by Jean Clottes.

attentive than in the past to the work of these secret forces: “Was not artistic creation inspired by the astonishing diversity of animals, in which it saw a form of brotherhood? Is not the secret of these beings to some extent our secret also?” (Portmann 1961: 222).

Artistic creation has not only been inspired by these secret forces, which encompass the pure expression of the sovereign elegance of animal forms, but has also been aligned with them by mimicry, from the earliest times. If we return to the immemorial sources of Paleolithic art, artistic creation is revealed to have been much more attentive in the past to this brotherhood, to this alignment of kinship, than it will ever be again (in contrast with what Portmann suggests).

Anyone who has ever come face to face with the panels covered in figures of lions, buffaloes, rhinoceroses, and horses in the Chauvet cave (figs. 6 and 7), is astounded by the aesthetic vitality that emanates from these figures, cherished for their unsurpassed grace and expressiveness. Anyone who has contem-

plated in a showcase the statuette of the Lion-Man in Hohlenstein-Stadel (fig. 5) is able to discern how much the identification with the secret forces underlying the sovereign elegance of animal forms is at its peak in this art. Whether we focus on the plethoric presence of the animal figures, or on the rarer composite half-human half-animal figures, all of them express this confounding fraternal identification, through which the creative, natural, and artistic forces that innervate these forms compose an unprecedented symphony.

Just as rhythm determines the action of the physiological impulses underlying the spontaneous manifestation of animal forms, by the very fact of our kinship with the animated world, we envisage the transfer of this endogenous principle through the mimetic alignment of our artistic manifestations. The endogenous rhythmicity that innervates aesthetic behavior in all its spontaneous manifestations is as much at work in the aesthetic vitality that carries the pure expression of the



Figure 8. Great Bison (Bi1 sector 108), Cosquer Cave (Cap Morgiou, Bouches-du-Rhône, France). Rock painting. Photograph by Jean Clottes.

sovereign elegance of animal forms, as in the operative dynamics determining Paleolithic figurative art. The same sense of amazement and wonder assails us when we are surprised by the ephemeral eruption of a deer in the heart of the forest, or when we see the great bison at the end of the first section of the Cosquer cave, and are transported by the vital momentum that animates it (fig. 8).

The sole reality to which figuration relates, and beyond which all other values may be considered secondary additions, is the rhythmic expression of our merging with the aesthetic vitality of living forms. Leroi-Gourhan recognizes this process as ultimately being at work in all our aesthetic manifestations: “what makes it possible to consider all manifestations as aesthetic ... is precisely the fact that they all respond to the search for rhythmic expression” (Leroi-Gourhan 1956b: 12). This rhythmic, animalistic, organic expression is deeply linked to the physiological apparatus. The creative forces of Pale-

olithic art are the initial expression of this rhythm, plunging us back into the immemorial secret.

The condensed image of the man and the lion in the Hohlenstein-Stadel figurine (fig. 5) reveals how animality, in this case feline animality, was the true model for these early artists: an archetype with which they had to identify, to gain strength and prestige, and finally to exalt their own spontaneity as living beings, engaged in the deep rhythmicity of sensitive life. As Morizot rightly reminds us, “what we can learn from the subjectless sovereignty of the solitary feline... [and] from the concentration without parasitic thoughts of the bear, are animal arts, animal arts of living that, hidden inside us, have nourished us with their power, these arts that we have only adapted or forgotten” (Morizot 2018: 111).

From these animal arts, in the mimetic alignment of which our Paleolithic ancestors were the first to find the immemorial secret of their own creative forces, emerges a wild art of living. The projection that the

therianthrope image brings to life still has the power to lead us to grace, far from ourselves, in a broader self. Metaphorical figure of brotherhood amongst living beings, the zoocephalic image of the therianthrope has allowed us to envisage the transformation of this alignment of kinship into the mimetic alignment of artistic creation itself. It has also allowed us to imagine, to make palpable, through this figurative transfer of formal assimilation, the merger between the natural and artistic creative forces at work in the animal aesthetics of man, which reveals itself to be part of an aesthetics of life, an immemorial secret interwoven into all living beings.

In the reciprocal impregnation of this merger of natural and artistic creative forces, of which the metaphorical figure of the therianthrope is the condensed form, Paleolithic artists were thus able to draw animal wisdom from the very aesthetics of life. This wisdom extends into the highest forms of aesthetic life, making the constitutive hybridity of our own aesthetics the main element of our individual liberation, freeing us from the endogenous rhythmicity of our physiological essence.

We therefore agree with Morizot that, through its emancipating power, “the therianthrope, recognized in its constitutive and ennobling animality, by its animal ancestrality, and by the ecological relations with animals that are the basis for its mode of existence, thus paradoxically becomes a defining figure of humanity” (Morizot 2016: 236). The grace of this defining, original, ancestral figure makes conceivable, for the authors of these images, the alignment of kinship that existed *in illo tempore*, in mythical times, when the rupture between humanity and the animal world had not occurred, and a single source of animal life nurtured all beings.

Humanity has gradually dissociated itself from this collusion with the original mythical continuity, through a movement of substitution that Leroi-Gourhan identifies as the substitution of the ethnic group for the species, with cultural identification replacing that of the species (Leroi-Gourhan 1965: 122). This substitution, through the mimetic principle that originally consisted in the preservation of peculiarities of phyletic origin that characterize animal forms, has ultimately moved away from the model of its own animal ancestrality. Our identifi-

cation as mammals, living in the depths of sensitive life, has been replaced by a form of cultural and social identification, which began with a quest to tame rhythmic balance, while remaining in the mimetic alignment woven into the fabric of the living. This quest finally resulted in a necessary affront to the dynamics of this ancestral sensitive life.

This evolution of aesthetic vitality, over which intellectualization and the conditioning of this rhythm gradually take precedence, will be reflected in art, from the end of the Paleolithic, by the overrepresentation of the human figure at the expense of the sovereign elegance of animal forms, which was nevertheless the model for artistic expression for tens of thousands of years.

From mimetic alignment to this animal ancestrality, which initiated human cultural substitution, Paleolithic art by its primary position is today paradoxically one of the last forms of art to bear witness to the role of tangible interface between these two realities, which could at one time have been attributed to images. At the boundary between the visible and the invisible, the profane and sacred worlds, between the living and their ancestors, between human history and the time of myths, the image of the therianthrope, through the figurative transfer that it brings about, thus has the metaphorical power to make tangible the alignment of kinship, governing this animal ancestrality. Whether these figures represent parents, ancestors, or ancestral spirits, what matters is not so much their identification and genealogical membership, but rather the phyletic survival of this ancestral animality, in reciprocal impregnation. The hybrid image of the Paleolithic therianthrope remains standing today, in loving memory of who we are.

As a dream image of this initial prehuman world, the condensed figure of the therianthrope actively testifies to a past that is still present: that same active animalistic dream that passes from generation to generation, spread secretly by means of art. Emerging from the depths of time, the inaugural gesture of these Paleolithic artists still testifies today of the survival of this strange transgenerational secret, carefully hidden in the imaginary hole opened by the cave. A stolen, sacred kingdom lies therein, in the absence of which, paradoxically, we regain that ancestral presence within us, the animal beginnings of history.

References

- Bonnet Balazut, A.
- 2018 The animal, mirror of humanity, *Expression* n°22.
- Kohn, E.
- 2013 *How forests think: towards an anthropology beyond the human*, University of California Press.
- 2017 *Comment pensent les forêts*, Bruxelles, Zones sensibles.
- Leroi-Gourhan, A.
- 1956 Préface in *L'Homme. Races et mœurs*, vol. IV. bis, Paris, Encyclopédie Clartés.
- 1956a La vie esthétique, fascicule 4860, in *L'Homme. Races et mœurs*, vol. IV. bis, Paris, Encyclopédie Clartés.
- 1956b Les domaines de l'esthétique, fascicule 4870, in *L'Homme. Races et mœurs*, vol. IV. bis, Paris, Encyclopédie Clartés.
- 1965 *Le geste et la parole. T. II. La mémoire et les rythmes*, Paris, Albin Michel.
- Lestel, D.
- 2019 *Nous sommes les autres animaux*, Paris, Fayard.
- Morizot, B.
- 2016 *Les diplomates, Cohabiter avec les loups sur une autre carte du territoire*, Wildproject, Marseille.
- 2018 *Sur la piste animale*, Arles, Actes Sud.
- Portmann, A.
- 1961 *Les formes animales*, Paris, Payot.
- Shepard, P.
- 2006 *Nous n'avons qu'une seule terre*, Paris, Biophilia, José Corti.

PARALLEL LIVES OF TWO DISTRICTS' CULTURAL LANDSCAPES: ALBANO DI LUCANIA (ITALY) AND LAGYNA (GREECE)

Stavros D. Kiotsekoglou

PhD Archaeologist, School of Classical and Humanities Studies of Democritus, University of Thrace (Greece)

Albano di Lucania

Albano di Lucania (fig. 1) is a small town in the center of the region of Basilicata (Italy). Its location is a crucial panoramic spot in the valley of the Basento River against the slopes of Mount San Leonardo, in front of the Lucanian Dolomites. On the edge of a precipice, facing the Lucanian Dolomites, towers a massive sandstone monolith more than 10 m high. On its top, as if positioned between heaven and earth, there rests an enormous boulder that looks like the hat of an umbrella mushroom (fig. 3), from which the monolith acquired the name of *Rocca del Cappello* (Rock Hat). On the southeast side of the monolith is engraved a circle with two small grooves on the right side (fig. 4) (Pipino 1999; Scelzi 1986). This is a geological phenomenon similar to the one in Monks' Valley, Cappadocia which with its rock abrasions attracts everyone who approaches; its mushroom form transforms it into a phallic hierophany, which displays a totemic symbolism. These imperishable signs announce the spread of the veneration of such stones, which arose in prehistoric times and are rooted in

human religious conscience. The orientation of the circle towards the course of the sun (fig. 4) is shown by the human symbols engraved on the monolith, which combines the solar circle and the monolith (fig. 3). Towards the southeast side of the *Rocca del Cappello*, on an oblong rock, two pits were carved in the upper part forming a large human rocky face, giving an anthropomorphic appearance to the upper part of the rock (fig. 2). A Latin cross sign is engraved nearby, on the side of another well-polished sandstone spike (Pipino 1999; Scelzi 1986). The surrounding area, characterized by the presence of some caves and dry containment walls, is crossed by a path that seems to come from Monticello; it descends with strange turns between the cliffs for about 2 km and ends in front of the monolith. In some places, this path is paved with anthropometric steps, made up of square blocks of non-local stone and protected by dry-stone walls. Going from top to bottom, on the left there is the first monolith, called the *Rocca Molaria* for its rounded shape, almost 7 m high. At the bottom, where there is the first stretch of steps,



Fig.1. Map of Italy with the location of Albano di Lucania. <http://www.prolocoalbanodilucania.it/images/mappaAl.jpg> (20-11-2019).

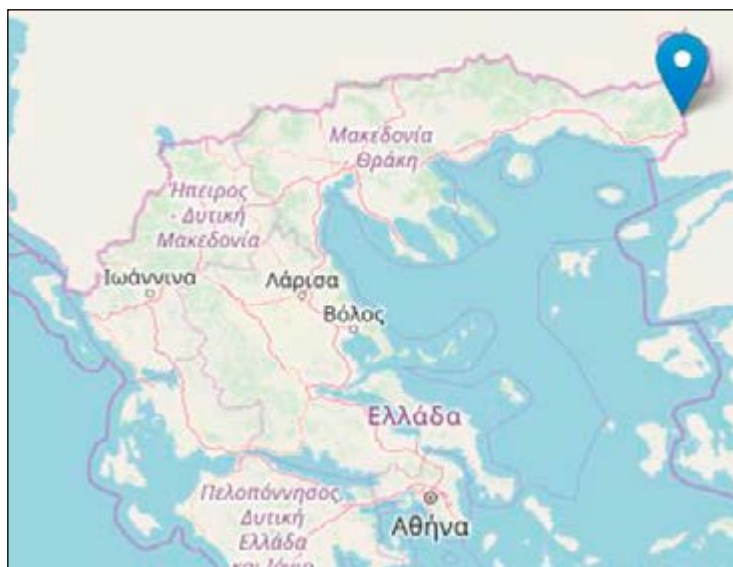


Fig.1a. Map of Greece and location of Lagyna village. <https://buk.gr/el/poli-peri-oxi/lagyna-0> (20-11-2019).

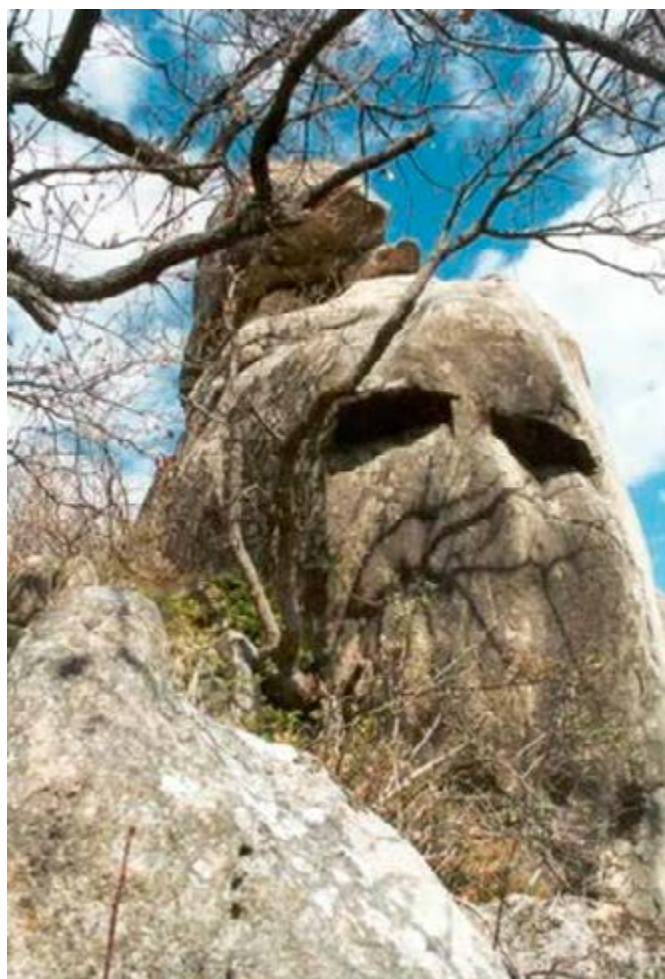


Fig. 2. Natural rock with carvings as eyes that give it anthropomorphic characteristics (Albano di Lucania in Italy). http://www.luoghimisteriosi.it/basilicata_albanorocca.html (20-11-2019).



Fig. 2a. A natural rock with carvings as eyes that give it anthropomorphic characteristics. There is an altar on the top of the natural rock. Situated in the archaeological site in Lagyna of Evros (Greece) (Kiotsekoglou 2012).

on the right rock wall, there is engraved a circle, 1 m in diameter; its orientation is towards the position of the rising of the sun. Further down, on the left of the crest-shaped rocks, there is a small circle engraved on the southwest side of the apex of another monolith. On the same monolith, a bench shape formed in the rock (fig. 6) is called the *Seggiodel Diavolo* (Devil's Chair) by the locals. This throne or bench, composed of a back and a footrest, can comfortably accommodate three people. The bench, built about 2 m above the ground, is on the southwest wall (Scelzi 1986). There are five pairs of basins dug in the rock along the whole path. These are on two levels and have contact with each other through a hole. It seems that they resemble grape presses carved in the rock, as one can see in the photographs published on the internet (Battistini 2011: 20; Brandi 2017: 41).

Lagyna

Lagyna (Λάγυνος = pitcher) is a village in Greek Thrace (fig. 1a), located near the River Evros. There rises a sharp-pointed spur of rock on the slope of a rocky elevation at the archaeological site of Lagyna. The exuberant morphology of the surrounding rocks and bizarre contours were of particular importance for the religious consciousness of primitive man, who smoothed a lower mushroom-shaped spur, giving it a pure mushroom form (fig. 3a) (Kiotsekoglou 2012: 127-128; Kiotsekoglou 2012[a]: 235-236; Kiotsekoglou 2015: 41-42). The cultural complex of the mushroom is a piece of archaic holy place symbolism, which covers the entire Indo-Mediterranean area (Eliade 1981: 218, 256-258). There is a place called Magazi near the village of Lagyna. In this region, the identification of mushroom-like carvings in stone relief combined with two carved circles (fig. 4a) undoubtedly points to a sacred place and a meeting spot for devotions and rituals. The confirmation comes from the small wine press (fig. 5a) near the mushroom relief (where the product of the grapes (must) is mixed with the entheogenic plant (mushroom), forming the beverage required for the ecstatic rituals of Dionysus Sabazius. The carved circles (fig. 4a) refer to the solar cult in the region of Thrace, which was commonly carved or engraved in rocky elevations or hills (Kiotsekoglou 2012: 137-138; Kiotsekoglou 2012[a]: 241-242). The sacredness comes from the view of the landscape and

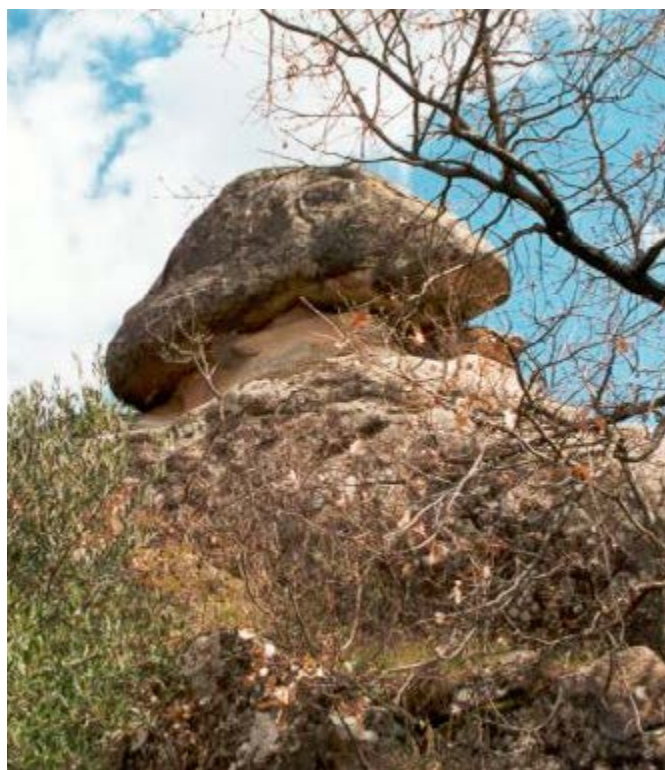


Fig.3. The Rock Hat, a totemic symbol in mushroom shape, Albano di Lucania (Italia). <http://www.luoghimisteriosi.it/basilicata/Albano%20di%20Lucania/02cap.jpg> (29-11-2019).

the impression created by the geographical relief. It is at the very moment when the first rays of the sun appear above the rock and illuminate the top of the stone mushroom. Marija Gimbutas (2001: 110) says:

“In monuments like Stonehenge, the sun rises over a special stone. During the winter solstice, the longest night of the year, the light beam must have been a powerful symbol of the light of renewal and, by extension, the renewal of life.”

These are elements that influence the religious consciousness of primitive man. It is a landscape in which man lives, intervenes, gives meaning and derives sources for symbolism (Melas 2003: 199). About 400 m southeast of the megalithic mushroom of Lagyna, there is an elevation, whose top is crowned by walls of a dissolved fortification and built of stones without mortar. The handmade pottery that the author found on the surface of the fortress dates back to the ninth and eighth centuries BCE. There are also ceramics of the period with the internal spokes of the wheel visible (Kiotsekoglou 2012[a]: 235). About 300 m north of the megalithic mushroom, the terrain is dominated by



Fig.3a. This mushroom totemic symbol, 5 m high, is located in Lagyna di Evros (Greece) (Kiotsekoglou 2012).

an elongated rocky hill, on whose slope is a carved anthropomorphic niche, undoubtedly a sacred place dedicated to a rock deity (fig. 2a). There may be observed two elongated niches carved into the rocks that make up an anthropomorphic face (a mask), thus recognizing with certainty an open-air Thracian sanctuary dedicated to the usual female rock deity. The element that allows the identification is an altar for sacrifices in honor of the chthonic stone of the mother goddess. This carved cavity with a flow channel is above the anthropomorphic niche. The two principles – the masculine (fig. 3a) and the feminine (fig. 2a) that coexist in harmony and balance, and form the structure of the whole universe – are also evident in the holy places of Greek Aegean Thrace (Kiotsekoglou 2012: 128; Kiotsekoglou 2017: 75; see Fig. 3). There are heaps of stone at regular intervals near a water source in the flat area located between the elevations on the lower slopes. These may be related to the dilapidated houses of a large installation or settlement that subsisted by managing livestock and agriculture, in particular, viticulture, for which we get information from the three



Fig.4. Solar circles incised on the Rock Hat (Albano di Lucania, Italia) <http://www.luoghimisteriosi.it/basilicata/Albano%20di%20Lucania/02cap.jpg> (20-11-2019).



Fig.4a. This mushroom carved in low relief has as its context two engraved solar discs. It is located in the archaeological site of Zirinis or Zervae in the Magazi locality, which is almost ten kilometres from the village of Lagyna of Evros (Greece) (Kiotsekoglou 2012).

wine presses carved in the rocks located at the ancient village (fig. 5b) (Kiotsekoglou 2009: 33-53).

Two altarthrones are carved at another megalithic site called *Monastiri Lofos*, apparently dedicated to the aniconic presence of the great mother goddess (fig. 6a).

Comments

In both Albano di Lucania and Lagyna, the collaboration between nature and man load the landscape with meanings and values, thus in effect making it an impressive cultural phenomenon. The entire archaeological landscape, regardless if inhabited or not, is a sign, a phenomenon of meaning and therefore of culture. This landscape becomes culturally charged, at this moment in which there are visible signs and elements as a result of human actions and interventions, as well as processes of creation. In both Albano di Lucania and Lagyna, there are similar megalithic monuments: a mushroom-phallic monolith, an anthropomorphic rock, engraved solar circles, thrones carved on the rock, grape presses around and within the archaeological sites. What is the common intellectual and spiritual heritage uniting these societies? What are the visual arts, worship, rituals, myths, traditions and other aspects of human conceptual expressions? Our review will start backwards, i.e. from the period when Dionysus was the god of wine, with the habits of the historical period as deciphered by the information provided to us by the numerous grape presses of Albano and Lagyna. There is no doubt that the worshiped god associated with the presses and the production of wine is Dionysus, the principal divinity of the community and population's well-being, and in our case of the two communities (fig. 5, 5a, 5b). The grape harvest, together with the pressing of the grapes which followed it, was one of the most important agricultural tasks, a reason for celebration and symposium, accompanied by similar customs and rituals that helped shape the culture. Brandi informs us of the carnival celebration in the Basilicata area and the events of hierogamy (marriage of tree trunks, in this case) for fertilizing, the earth, trees, plants and rites of passage in general (Brandi 2017: 42-44).

In the classical tradition, the god of drunkenness par excellence is Dionysus; it provoked an 'exit from oneself' and revealed himself to the faithful as the god of a 'different' life. Since the essential charac-



Fig.5. Three wine presses at the Rocca del Cappello (Rock Hat) site. The latter combined with a throne. http://www.luoghimisteriosi.it/basilicata_albanopalmenti.html (20-11-2019).



Fig. 5a. Winepress cut into the rock near the mushroom and solar circles in Magazi, which is almost 5 km from the village of Lagyna in Evros, Greece (Kiotsekoglou 2012).

ter of his figure is that of being the god who causes mystical madness in his followers, one must ask how this radical modification of ordinary consciousness was induced. Traditionally, Dionysus is interpreted as the god of the vine and alcoholic intoxication, at least in Alexandrian and Roman poetry; but, on closer inspection, the ecstatic experience determined by the rituals dedicated to him is somewhat different from alcoholic intoxication: alcohol, as it is known,

is a depressant of the central nervous system, it does not cause, except in extreme cases, hallucinations. The Dionysian ecstasy instead is characterized by an exasperated excitement, a great physical vigor, hallucinatory states and a mystical identification with the divinity. Dionysus, in his original form, was not a god of wine as the classical authors have handed down to us, but a divinity associated with psychoactive plants such as mushrooms and other psychedelic plants such as *Datura stramonium*, *Hyoscyamus niger*, *Strychnos nux vomica*, *Mandragora* (Samorini 2001: 115 *et seq.*).

The psychotropic effects of the fly agaric are successfully adapted to the manifestations traditionally attributed with the mushroom called *Amanita Muscaria*, which is associated with Dionysus and represents one of his attributes as “God does it”. The Dionysian ecstasy is a characteristic of the mysteries and initiations, in practice a domesticated form of shamanic ecstasy (Wohlberg 1990: 333-342). On this, we receive a helpful hand from the iconography concerning Greek and Greek-Italic origins and some tablet-sof Locri (figs. 7, 8), which confirm this symbolic connection between Dionysus and *Amanita muscaria* or *Amanita pantherina*. The fully fungal form of the grape bunches makes us suspect the schematic representation of the purity of the true ones, which scholars generally would like to recognize as a:



Fig.5b. Three winepresses in Lagyna di Evros (Greece) (Kiotsekoglou 2012).

“simple and pure graphic evolution. The unusual shape of the grape bunches and their surface sprinkled with dots seem to intentionally refer to the fly agaric mushroom. We could be in the presence of a case of the fusion of two symbols, both attributes of Dionysus. Probably, some painters knew what others did not know and have deliberately hidden their knowledge behind interpretive schemes already widely recognized at that time, producing double-reading images, one sacred (a mushroom) and the other a cosmic – non-religious one” (Samorini and Camilla 1994).

In some other cases, on the mushroom are depicted clear lines such as on the krater from 320 BC, which shows female figures holding an enormous

mushroom; the krater is in the *National Archaeological Museum D. Ridola* in Matera, Italy (fig. 9). The illustration of a banquet implies their consumption during the symposium (Russo 2011: 6-25) (fig. 11). The mushroomphallic monoliths in Albano and Lagyna are geological phenomena, on which the apparent human intervention through carvings or abrasions is visible. At the Lagyna site, the investigations found the result of a deliberate choice of the rock which first receives the rays of the sun. The Thracian inhabitants' thought is revealed, whereby the rock mushroom illuminated by the first rays of the sun



Fig.6. Devil's Throne, consisting of a bench carved into the southwest wall of a large monolith (Albano di Lucania). <http://www.luoghimisteriosi.it/basilicata/Albano%20di%20Lucania/03s.jpg> (15-11-2019).

turns into a hierophany and acquires a devotional character (Macrob. Saturn.1,18,11). The totemic entity of Albano with its phallic symbolism and an apotropaic meaning reveals the same religious and mystical dimension as the mushroom rock of Lagyna, which bears the symbols of the sun engraved on its body. The mushroom relief of Magazi connected with the two circles which symbolize the sun decodes and confirms the beliefs of the two local populations, Oenotrians of Italic origin and Kikones of Thracian origin, that their worshiped deity in phallic mushroom form and solar vitality is an ecstatic god with sacred drink that gives birth to the divinity within oneself. The participant in the ritual and consumer of the drink, or of the substitute of God, which the mushroom represents, would be found beyond the limits of this world, within the divine presence, in

contact with it (Kiotsekoglou 2012: 137-138). The name of the place, Magazi (in Greek Μαγκάζι) is what confirms the ecstatic rituals and the use of psychotropic substances, and also confirms that it is a sanctuary of an ecstatic deity, which cannot be anything but Dionysus Sabazius (the iconography of a deity that we can see in the illustrations) (Kiotsekoglou 2012a: 241-142). It derives from the word μαγγανεύω which means "I do magic spells," the use of deception and magic-fraudulent tricks (Dimitrakou 1964: 4421). The data highlight and verify the references of G. Samorini that Dionysus in his original form was not a god of wine, as his transformation as such comes in a Classical Greek period (Samorini 2001: passim). The symbolic diffusion of the sun in the rock mushroom structure defines a sacred place. The landscape comes to life; nature undergoes a metamorphosis, from which the myths are loaded. The solar radiance touches the chthonic vegetable symbol with its heat, which shows only in the sun-rays' presence. The union of the solar and chthonic elements reminds us of the myth of the religious conflict between Lycurgus (the king of the Edonians in Thrace) and Dionysus, with the prevalence of the second and final union with the peaceful coexistence of the two cults (Kakridis 1986: 296). The manifestation of divinity in the form of a megalithic stone mushroom revealed (fig. 116) the source of renewal, fertility, life, indestructibility and life without death. It is the source to which primitive man turns because it justifies in his eyes the hopes he has for immortal-



Fig.6a. Throne located on the top of the hill of Cepel Kaya (Monastiri-lofos) in Aegean Thrace.



Fig. 7. Pinax depicting Persephone enthroned with Dionysus holding a vine, terracotta, Sanctuary of Persephone, Mannella district, Locri, Calabria, Italy, 5th century BC. https://66.media.tumblr.com/13a7607209e13849fd71a9ea3c582d34/tumblr_o_4grdzjp41tvfkrqo2_400.jpg (30-3-2020).

ity (Kiotsekoglou 2012: 127-128). The local tradition in the Bulgarian part of Thrace says that similar stone mushrooms found in open-air sanctuaries have a healing power (Markov 2008: 177-179). Other locations of Thracian rock sanctuaries in Bulgaria are Malko Tarnovo (fig. 61), Beli Plast (Kardzhali) (fig. 60), as well as the spectacular cliffs of Kapıdağ, Mantar kaya (Porozhanov and Portalsky 2012: 58). In the cultural landscape of Albano di Lucania, next to the mushroomrock (fig. 3), which symbolizes the male principle, there is a rock with anthropomorphic characteristics, which constitutes the female principle (fig. 2), because a human society without women is like a landscape without a river, without a lake and without a sea. Therefore, a sacred landscape cannot exist without female divinity. The same anthropomorphic rock was carved 300 m away from the phallic monolith in the cultural landscape of Lagyna (fig. 3a). The presence of the great mother goddess (fig. 2a), the fertilizing divinity worshiped all over the Mediterranean, as Marija Gimbutas points out, is also decoded (Kiotsekoglou 2020: 16-32). The anthropomorphic character of the depictions on carved rocks help to

express the embodiment of the omnipotent goddess of fertility, which dominated in the sanctuaries on hilltops, a key selection point that caused a sense of power and sanctity. In both the Neolithic and the more recent historical period, the depiction of the goddess of earth's fertility is with a male partner, where the ritual mating ensured the smooth process of the cycle of vegetation and fertility with the known rituals of the sacred marriage (ἱερός γάμος) (Gimbutas 2001: 194 et seq.) The male principle and the female principle are embodied in the rocky landscapes of Albano and Lagyna, as is intrinsic cosmological duality, located at the origin of the world. Here the mythical religious story should reveal the same paradigmatic truth, a fertilizing potential within a duality, which triggers the dynamism of fertility, indispensable for the survival of the human communities in Albano and Lagyna. This hierogamic illustration of the phallic monolith together with the anthropomorphic rock constitutes the basic principle

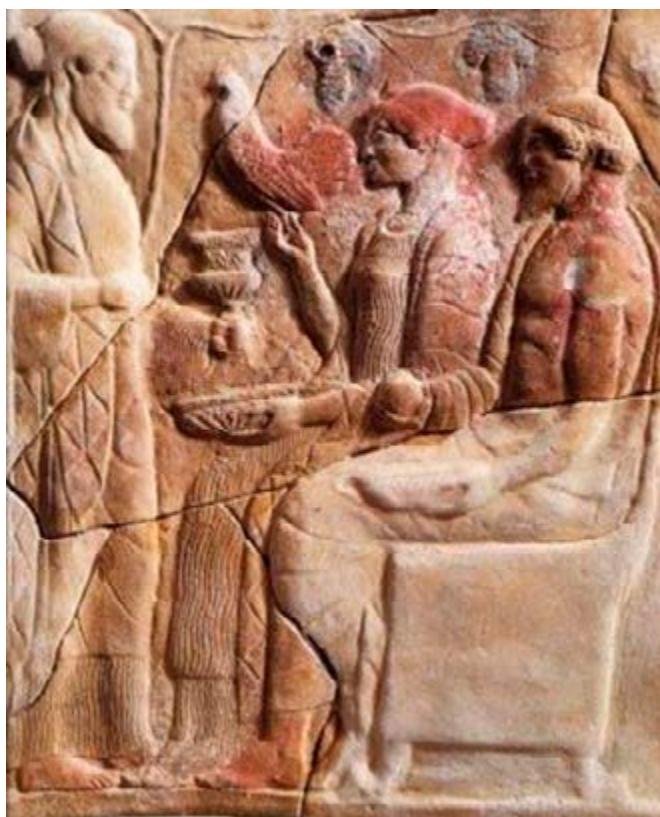


Fig. 8. Dionysus offers gifts to the underworld couple, Kore/Persephone and Hades/Pluto. Clay tablet of the first decades of the 5th century BC, Sanctuary of Persephone, Locri Epizefiri. <https://i.pinimg.com/originals/31/02/57/3102577036d5e21cb4d77da92e72fcf1.jpg> (30-3-2020).



Fig.9. Red-figure krater, attributed to the White Sakkos Painter, Matera, D. Ridola National Museum, about 320 BC. <https://museoarcheologicaNazionaleDiFirenze.files.wordpress.com/2017/02/crateri-a-mascheroni.jpg?w=809> (30-3-2020).



Fig.10. Skyphos from Cabeirion of Thebes, decorated with a bunch of grapes in mushroom forms. Late 5th cent. BC, National Archaeological Museum.

of the sacred landscape in Albano and Lagyna; these are elements that also occur in other landscapes of Thrace. The carved throne or seat (Seggio del Diavolo) in the sacred landscape of Lucania has the same ritual purpose as the rock thrones that we encounter throughout Thrace, at Tatul, Perperek in Bulgaria and Phrygia in Turkey (Kiotsekoglou 2020: 16-32). Thracians believed that these thrones were the mother goddess's welcoming place for the male sun-god, who fertilized it. The illumination of the throne of the solar god by sunlight is the real sacred marriage, the seventh grade of the cosmogonic cycle according to A. Fol's publications on Thracian orphism. The faithful offer sacrifices and gifts to this sitting aniconic deity; after worship, the throne acquires the functions of an altar (Fol 2007: 370; Francovich 1990: 69, note 642). Christian crosses engraved on monoliths, pagan structures or rocks are the work of averting, exorcism, and at the same time the Christian resacralization of places. With the emergence of Christianity, the area of the Rocca del Cappello continued to emanate influences of paganism, like many other pagan places of worship. Therefore, the supporters of the new faith demonized monuments in the area, such as the name Seggio del Diavolo given to the carved throne (Scelzi 1986). This tendency to despise demonizing pagan monuments betrays the collective memory of the ecstatic rites of passage, of which Christianity was always an enemy and wished to abolish them definitively.

Conclusion

The research of V. Fol and A. Fol, which supports the hierogamy as a fundamental element of ancient Thracian rituals, is verified in Lagyna (Aegean Thrace) and Albano di Lucania (southern Italy). The image of the beneficial sunrays of the male deity (sun-god) acts as a phallic equivalent during the insemination act (hierogamy) of the great mother goddess, symbolized by the throne, and which later during the historical period also acquired anthropomorphic characteristics. The presence of the phallic stone mushroom, which erects itself from the body of the great mother earth, represents the triadic idea of the ancient Indo-European religions: the father sun, the mother earth and the phallic son. The hierogamy emphasizes fertility, aimed to urge all physical forces



Fig.11. Red-figure Apulian krater from the necropolis of Larino (Russo 2011: 18, cat. no. 134).

to multiply the production of cereals, fruits, grapes, animals and people; it also decodes the traces of the presence of shamanic rituals.

The theory of polygenetics, that common conditions produce similar ritual effects in different regions without always having direct transmission, is a probable answer to the above. However, another question also arises: might the common beliefs of the intellectual and spiritual expression of the Oenotrians be the result of a common origin with the Thracians? It is hard to find an answer with certainty, even if the historical sources mention Oenotrians with Greek Arcadian origins (Dion. Hal., *Ant. Rom.* 1,13, 1,2,3; Paus. 8,3,5).

References

- Battistini, M.
 2011 Il fenomeno delle “vasche” rupestri in Italia, Indagine multidisciplinare su alcuni manufatti rupestri dell’Alta Valtiberina, in A.M. Lanfredini and G.P. Laurenzi (eds), *Pietralba*, Aboca Museum
 Brandi, G.
 2017 *Il patrimonio arboreo della Basilicata per il Turismo Culturale*, Tesi post-laurea
 Dimitrakou, D.
 1964 Μέγα Λεξικό Ελληνικής Γλώσσας, Athens (s.v. μαγγανεία)
 Eliade, M.
 1981 *Traité d’histoire des religions*, Paris, 1964, Greek transl. E. Tsouti, Πραγματεία πάνω την Ιστορία των Θρησκειών, Chatziniakoli, Athens

- Fol, V.
 2007 Rock Topoi of Faith in the Eastern Mediterranean and Asia Minor During Antiquity, *Studia Thracica* 10, 347-377
 Francovich, G.
 1990 *Santuari e Tombe Rupestri dell’Antica Frigia*, L’Erma, Roma
 Gimbutas, M.
 2001 *The Living Goddesses*, California, 1999, Greek transl. N. Sidere, Επιστροφή της Μεγάλης Θεάς, Archetypo, Thessaloniki
 Kakridis, I.
 1986 (ed.), *Ελληνική Μυθολογία*, vols 2, 3, ed. Ekdotiki Athinon, Athens
 Kiotsekoglou, S.
 2009 Αρχαιολογία του κρασιού, Οι δρόμοι του κρασιού και οι ληνοί στον Ν. Έβρου, *Ελληνική Αγωγή*, December, 89/142, 33-53
 2012 Τα πέτρινα μανιτάρια των θρακικών μεγαλιθικών ιερών της Αιγιακής Θράκης in, S. Kiotsekoglou (eds.), *Proceedings of the Conference, “The Stone Mushrooms of Thrace,”* Alexandropolis, 28-30 October 2011, 124-174
 2012a Stone Mushrooms of Thracian Megalithic Sanctuaries in the Aegean Thrace, in D. Spasova (ed.), *Proceedings of the First International Symposium Ancient Cultures in South-East Europe and the Eastern Mediterranean, “Megalithic Monuments and Cult Practices,”* Blagoevgrad 11-14 October 2012, 232-255
 Kiotsekoglou, S.D.
 2015 Thracian Megalithic Sanctuaries from the Prefecture of Evros Greece, in D. Spasova (ed.), *Megalithic Culture in Ancient Thrace*, Neofit Rilski University Press, Blagoevgrad, 39-64
 2017 The Thracian iconography of the Great Goddess in Aegean Thrace, in *International Scientific Conference “Culture-memory-Identity”* on 11 May 2016, dedicated to the 20th anniversary of the founding of the Department of Cultural Studies, 69-80
 2020 Hieros Gamos ιερός γάμος Symbol of Fertility and Orphism in Thracian Ideology, in T. Meaden and H. Bender (eds), *Anthropomorphic Images in Rock Art Paintings and Rock Carvings*, Archaeopress Archaeology, Oxuniprint, Oxford, 16-32
 Markov, V.
 2008 The Ancient Thracian megalithic Sanctuary “Markov Kamak,” at Tsarev Peak in Rila Mountain: Semantic and Functional Analysis, in R.I. Kostov, B. Gaydarska, M. Gurova (eds), *Geoarchaeology and Archaeomineralogy, Proceedings of the International Conference*, 29-30 October 2008, Sofia, 177-179
 Melas, M.
 2003 Η Αρχαιολογία σήμερα, Κοινωνική – Πολιτισμική Θεωρία, Ανθρωπολογία και Αρχαιολογική Ερμηνεία, Kardamitsa, Athens

- Pipino, D.
 1999 *La rocca del cappello di Albano di Lucania*, Anzi
- Porozhanov, K. and -Portalsky, A.
 2012 A rock-cut object in the Arctonnesos (Apoll.Rhod. Arg. I, 961-1102), in, D.Spasova (ed.), *Proceedings of the First International Symposium Ancient Cultures in South-East Europe and the Eastern Mediterranean "Megalithic Monuments and Cult Practices"*, Blagoevgrad, 11-14 October 2012, 58-61
- Russo, A.
 2011 Il dono di Dioniso nell'Italia antica, in P.Adam-Belene (ed.), *Il dono di Dioniso*, ed. Αρχαιολογικό Μουσείο Θεσσαλονίκης, Thessaloniki, 6-25
- Samorini, G.
 2001 *Funghi allucinogeni, studi etnomicologici*, Telesterion, Bologna
- Samorini, G. and Camilla, G.
 1994 Rappresentazioni fungine nell'arte greca, *Annali dei Musei civici di Rovereto* 10, 307-326
- Scelzi, M.
 1986 Albano di Lucania, storia e cultura popolare, vol.I, Volonino, Lavello
- Wohlberg, J.
 1990 Haoma-Soma in the World of Ancient Greece, *Journal of Psychoactive Drugs* 22, 333-342

THE GEOGLYPHS: OPEN SPACES AND COLLECTIVE CEREMONIES IN THE NASCA WORLD

Giuseppe Orefici

Director of the Centro Italiano Studi e Ricerche Archeologiche Precolombiane (Brescia, Italy-Nasca, Perù)
and director of the Proyecto Nasca (Perù)

The Nasca geoglyphs may not be the sole manifestation of this kind of pictorial representation in the world, or even in Peru (Orefici 1986; 1992; 1993; 2012), but they have been the most studied, both because of their concentration in a geographic area and their impressive dimensions. These figures constitute one of the phenomena that have fed collective fantasy and imagination the most. Analogue manifestations in different locations and belonging to chronological different periods can be found throughout the Americas. For instance, in Ohio (United States) is the serpent-mound, which was made by adding alluvial material to a plain terrain with the purpose of obtaining a figure representing a giant snake. In Wisconsin, also in the United States, three ornithomorphic figures were drawn in relief, and in the north of Chile there is a big concentration of geoglyphs in the proximity of Loa River, as well as in the Atacama Desert. In Asia and Europe the geoglyph technique was also used, although there is no continuity in the presence of these big drawings.

In Peru, the geoglyph activity concentrated on the desert coast where the clayish sandy soil, covered by an alluvial layer, has proved more appropriate for the preservation of the big drawings. In northern Peru, geoglyphs can be viewed in Zaña and Oyotún (Lambayeque) (Alva and Meneses Alva 1984), where the figure of the condor is renowned; there are also geoglyphs in Canto Grande (Lima) (Roselló 1986). In the Andean region, nearby Arequipa, geoglyphs of small dimensions were studied by Eloy Linares (Linares Málaga 1993). In general, these are not figures that are related to each other, either chronologically or functionally, and have been made by human beings who belonged to different cultures.

The Nasca geoglyphs, commonly known as the Nasca Lines, still feed collective fantasies. In most cases, those who have attempted to interpret them have not based their inquiries in historical or archeological data – that is, relating them to the culture that

made them – and have not taken into account that the geoglyphs demanded more than a thousand years of work. This expressive manifestation, which belongs to the Paracas and Nasca cultures, has generated a series of hypotheses that do not have any fundamentals in actual data. More imaginative theories that struggle to produce the most unreal and original publications are also present, for a public which prefers to dream about faraway civilizations instead of contributing with scientific thoughts.

The Nasca Project, by means of the data provided by archeology and related disciplines, has had the purpose of contributing to the knowledge of the Nasca



Fig. 1. Pampa of Nasca: anthropomorphic geoglyph whose popular name is astronaut. It is the most important anthropomorphic divinity, “Oculate Being”, dating to Late Paracas. Its height is 32 m (photo by Giuseppe Orefici).



Fig. 2. Pampa de Nasca: geoglyph depicting a monkey. The spiral forming the tail was possibly added in a successive phase. Overall it measures about 135 m (photo by Giuseppe Orefici).

culture in all its expressive manifestations including, of course, the geoglyphs. This objective was accomplished through a chronological and iconographic study of the figures starting from the very first anthropomorphic designs that were drawn in the Llipata and Ingenio areas on the hillslopes to the large lines on the pampas. A more complex interpretation of the archeological data on the Nasca culture can add new elements to the knowledge of the geoglyphs and their function, in order to complete the registry of the existing figures, including the elements belonging to the Middle Horizon and Late Intermediate periods.

After 550 AD, the political and social systems that were imposed on the Nasca theocracy did not interrupt the custom of making big drawings on the soil. The human groups that settled in the valleys of the region kept on with the tradition of making geoglyphs using other methods of execution, but maintained the Nasca inheritance of drawing figures on the soil for collective ceremonial purposes alive. The area where the majority of the geoglyphs occur is located in a territory that spreads throughout the modern provinces of Ica, Palpa and Nasca, over a surface of more than 400 km².

The biggest geoglyph concentration occurs between Nasca and Palpa. They belong to the Paracas and Nasca cultures (the largest group of figures and lines on Pampa de San José and the Río Grande and Ingenio

River valleys belong to the latter). The drawings were made using a very simple technique. Digging the lithic material out of the surface of desert soil, thus forming lines and piling it on the sides of said lines, gave way to stone reliefs with a height ranging from 20 cm to 60 cm. The gigantic dimensions of some figures is what amazes the most, with certain lines measuring more than 1 km in length, while in the case of the zoomorphic and phytomorphic designs the dimensions reach a maximum side length of 300 m.

Due to the coincidence of concomitant factors, the geoglyphs were preserved in excellent conditions for more than 2,000 years: nocturnal humidity allowed the consolidation of the clayish layer that covers the superficial stones on the pampa, and the ground wind prevented the accumulation of sand on the soil, thus preventing the formation of sand dunes and the covering of the figures. Only the alluvial events that have characterized periods of strong climate changes have partially erased the geoglyphs nearby the Nasca River, for wide zones have completely been invaded by the water flows. Fragments of lineal geoglyphs that show the presence of drawings on the soil can barely be seen in this zone.

Interpretative hypotheses of the Nasca lines

The oldest reference about the geoglyphs is that of one Luis de Monzón who, back in 1586, wrote: “in very



Fig. 3. Pampa of Nasca: arachnid figure relating to fertility and water. It measures 47 m in length (photo by Giuseppe Orefici).

ancient times, before the masters, came to this land a few other people who were called Viracochas and who were followed by the Indians after listening to them ... Roads were built in their honor, which are seen today, so wide as a street and bordered by short walls". The Spaniard chronicler Pedro Cieza de León (1553, 1550), notes in his *Crónica General del Perú* (General Chronicle of Peru): "All around these valleys that have been passed through come along the beautiful and great road of the Incas, and in some parts of the sand-bars are seen signals so that the road can be in sight." The chronicler refers in the first place to the Inca road, a long stretch of which surrounds the Pan-American Highway, from the zone of the Ingenio River towards the city of Nasca, crossing the territory of the geoglyphs, whilst the second part surely refers to the wooden posts that are related to the large drawings. Throughout the last century, many researchers have conducted archeological studies on the geoglyphs, for instance, the analysis on the drawings near Cahuachi made in 1926, during the exploration conducted by Julio C. Tello and carried out by Toribio Mejía Xesspe, who was the first to try to give an explanation of the geoglyphs while observing the "stripes" of Nasca, which he called *seques* or sacred roads and culturally linked them to the Nasca aqueducts and cemeteries (Mejía Xesspe, 1942). In 1941, Dr Paul Kosok from

the University of Long Island (whose scientific articles were translated by a then young Maria Reiche), traveled to Nasca and Palpa, where he was shown the figures. Observing how the sun aligned along with them – it was 21 June 21 – he granted them a calendar function, a theory that he developed in the following years. Maria Reiche tried to deepen this theory, searching for mathematical elements via the measurement of the geoglyphs (Reiche, 1948; 1949;). This researcher devoted all her life to fieldwork and made the astronomical study of the lines and figures drawn on the pampa. Her conclusions reiterated the mathematical function and the calendar use of the geoglyphs, in which she identified the symbols of ancient constellations (Reiche, 1968; 1974). In 1946, Hans Horkheimer (1947) conducted a systematic study of the geoglyph expressions, while the Astrophysical Observatory of the Smithsonian Institution at Cambridge sent in 1967 and 1968 six expeditions to Nasca under the direction of Gerald S. Hawkins (Hawkins, 1969), who concluded that the function of the geoglyphs must not be based on astronomical models or as calendars. Through an informatics program, he was able to reproduce the movement of the stars and to reconstruct the astronomical panorama of the Nasca sky on a time span between 5000 BC and the 20th century. That way, the astrophysicist showed that more than 80%



Fig. 4. Pampa of Nasca: large geometric figure used for large group meetings. It is overlaid on a pre-existing ornithomorphic stylized figure, which is partially erased. It has a length of 200 m and the spiral has a width of 77 m (Photo by Giuseppe Orefici).

of the geoglyphs did not have any relationship to the movements of the 45 most important stars considered in the study: only 39 lines coincided with the solar or lunar trajectory.

In 1977, the analysis conducted by Alberto Rossell Castro (1942; 1977) gave as a result the subdivision of the geoglyphs into four great groups: the first one is related to the existence of old drawings aimed at irrigation projects and agricultural land delimitation; the second one is associated with directional axes connected with mounds; the third one is linked to either the expression of textile art or to choreographic cloth motifs; and the fourth one is astronomical. It also has to be noted that within each group the geoglyphs present different manufacturing techniques, dimensions, stylistic characteristics, and sequential placement.

In 1978, William Isbell considered that the objective of the lines was to invest the labor force in public works with the purpose of maintaining a balance between resources allocation and population, thus preventing demographic growth. This theory does not take into account that the execution of the geoglyphs did not necessarily require a huge investment in labor force or even time. Both Hawkins and the historian Josué Lancho (Schreiber and Lancho R., 2009) showed that in many cases it was a task that was relatively less demanding and of rapid execution. Moreover, it has to be remarked that the execution of the geoglyphs was not made in just one period of time, but in successive moments, as the Paracas and Nasca cultures developed.

Based on the studies Tony Morrison (1978; 1987) conducted in the Altiplano, he proposes a linkage among hills and other sacred places (*huacas*), thus drawing a parallel between the Andean tradition and the Nasca culture. It is likely that there is a linkage among the surrounding hills and the main sacred sites in the area, as is shown by the location of the interior room of the Great Pyramid at Cahuachi right in front of Cerro Blanco, the highest sand dune in the world, which was sacred to the Nasca people. Johan Reinhard agreed with this idea and developed his research accordingly (1985 and 1988), as well as Ralph Cané (1985), who agreed with the theory of water and mountain worshiping. This scientist proposed the likelihood that the lines could have been executed by people under the influence of hallucinogens (based on the iconography of the Chavín and Nasca ceramics). However, it must be considered that the representation of the *sampedro* (*Echinopsis* sp.) (Ostolaza and Piacenza, 2002) in the pottery and the discovery of some samples of this cactus together with curative plants such as the datura (*Datura stramonium*) in the ruins of Cahuachi is not sufficient evidence to show how and when hallucinogens were used; still this does not exclude its consumption during special ceremonies.

Probably, the main problem that the Nasca people faced was determined by water allocation and crop field irrigation. Taking into account the importance that agriculture had, the need of a water supply was a priority. Thus, it is likely that all their rituals and ceremonies were aimed at obtaining soil fertility, abundant harvests, and the favor of their deities. It



Fig. 5. Representation of a hummingbird. The solid line is interrupted by pitches to allow stops along the way. It measures 97 m in length and 66 m maximum width (photo by Giuseppe Orefici).

can be observed in the same iconography the presence of elements related to plants and animals associated with water and fertility, just as occurs in the Andean and Pan-American traditions. On this issue, the ethnohistorian Maria Rostworowski de Diez Canseco (1993), relying on mythical stories reported in colonial written sources, suggests a relationship between the geoglyphs and the cult of the god Kon, linked to the flow of water in the rivers. Kon, principal deity in the Paracas and Nasca pantheon, is described as a winged being and as an anthropomorphic mythical being.

The spiral is another element associated with water, movement, wind, and the ophidian (snake) image. There are more than 100 representations of this sort on the pampa, although they have different dimensions. In many cases, the most recent drawings are superimposed over the most archaic, thus evidencing a linkage between the places where the drawings were made and the iconographic themes they depict. Big spirals of double-sigmoidal shape can be seen on Pampa de Socos; this is a very ancient iconographic theme that is present throughout the Americas and is related to water worshiping. And near the Ingenio River, next to San José, there is a figure of a spiral with small stone mounds in its center, which represent the eyes of an ophidian. The serpent, the water, and the wind are the meanings attributed to this symbology and are common to many cultures (Orefici, 1992; Orefici and Drusini, 1993; 2003).

It is likely that many geoglyphs may be related to sites with urban or ceremonial characteristics. Some *huacas*, no longer existing but which were used during Nasca times, might have been the elements signaled by lines that apparently do not have any directional sense nowadays. Cahuachi and Ingenio were possibly determining elements in the choosing of the direction of the geoglyphs. Back in 1982 we proposed the existence of a connection between the monumental center and San José, where we found destroyed remains of large-sized structures, according to Georg Petersen (1980) and Carlos Williams (1980). Helaine Silverman (1990) proposed that the old road of Leguía, which is superimposed over one of the lines, might have connected Cahuachi with the center of La Ventilla, located in the Ingenio Valley. We believe that this hypothesis is correct and that all the area that nowadays corresponds to San José and Ingenio was the location of important settlements. Likewise, the geoglyphs south towards Cahuachi (Pampa de Atarco), found and studied by Silverman and Pineda in 1985 (Silverman, 1990) and also analyzed by the Nasca Project in order to include them in the topographic and geological plan of the area (Grodzicki *et al.*, 1989; Grodzicki, 1994), had to be related in some way to the ritual activities that were performed inside the ceremonial center.

Anthony Aveni (1986; 1990), Gary Urton (1990), and Tom Zuidema (1964; 1977) grant the geoglyphs their astronomical sense, following the example of the

Inca *ceque* system.

However, the few data we have on possible solstitial and equinoctial orientations of the large drawings made in the desert plain, as well as other directions indicated by the geometric lines, do not allow us to reconstruct a cosmographic and astronomical map comparable with what has been obtained with the Inca (Aveni, 1990; Ziolkowski, 2009).

The majority of these interpretations have common elements. In some cases, there is a complete coincidence, while in others there is a repetition of theories that have already been proposed by other authors, among which one has to recall the hypotheses made by Mejía Xesspe (1942) and Hans Horkeimer (1947). In other cases, the hypotheses are based solely on partial aspects of the Paracas and Nasca cultural characteristics.

The interpretative proposal that we find to be more adequate is related to the concept of sacred roads, due to

the results of the analysis conducted on the materials associated with the research areas where the geoglyphs are located. Cahuachi was the most important ceremonial site of the Nasca culture and functioned as a cohesive element for the people who came as pilgrims from faraway places and shared the same religious and ritual meaning for the buildings. The lines were an alternative spatial and dual element for Cahuachi: more isolated places but visible from the distance, where rituals among different human groups were performed or, in the case of the geoglyphs near housing, rituals related to their own particular territory and population. We believe that this function had several evolving moments. A first moment is related to the most archaic expressions, the Early Horizon Period, which depict the linkage between territory and rituals. During this phase, some sacred valleys were used as ceremonial sites because they offered the possibility of gathering a large number of people performing the rituals simultaneously, as op-



Fig. 6. Ornithomorphic figure located on a relief. Sokos Valley. It measures 52 m in length (photo by Giuseppe Orefici).

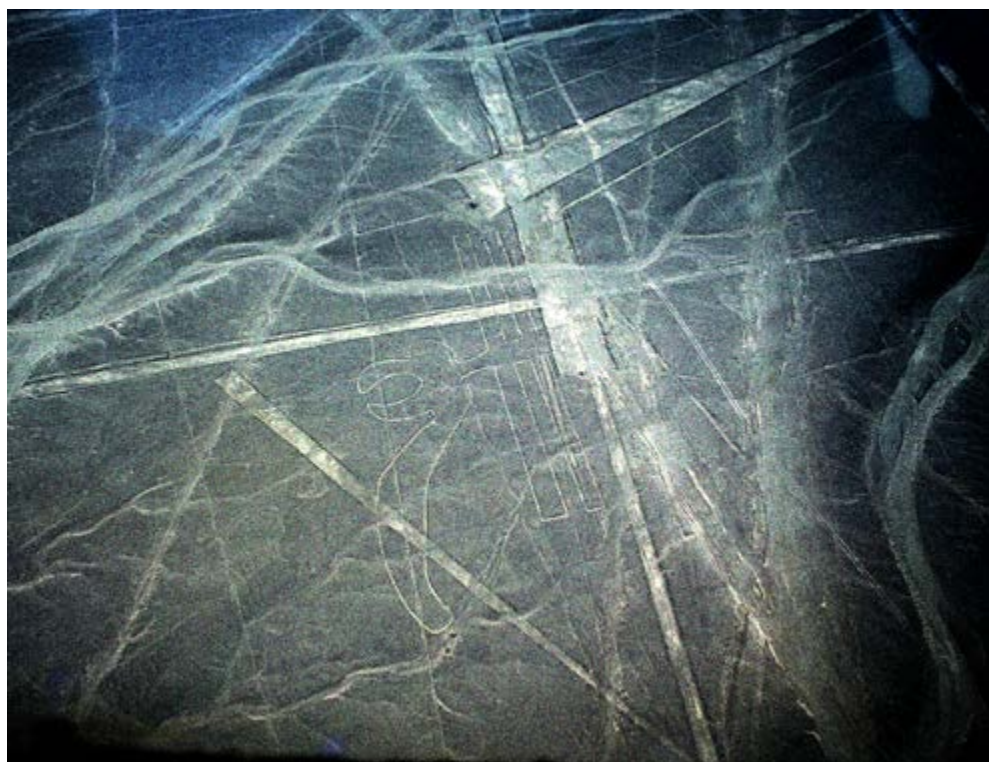


Fig. 7. Ornithomorphic stylized figure known as "the parrot". It measures 220 m in length (photo by Giuseppe Orefici).

posed to small temples. The geoglyphs were conceived as an iconographic contribution of a regular size to the representation of myths, heroes, minor divinities, and ancestors historically linked to the territory.

In the posterior phase, which lasted longer, the cultural identity among the three earlier phases of the ceramics iconography and the geoglyphs is clearly perceived. This is the moment of the ultimate power displayed by Cahuachi and the dual elements of the sacred space on the pampa are the images depicted by the geoglyphs, along with their choral and collective faculties.

The increase in the number of geoglyphs during the last phase, when the biggest lines were drawn, leads their stimulating function on the great collective gatherings to the extreme, for the unity of the peoples who were linked by the same religion but who were already desegregating due to exterior influences from the Andean region was being asserted. At that moment, the pampa represented the most significant spatial element, since it gathered together large numbers of the population who shared the same religious creed.

It is clear that these hypotheses cannot be completely confirmed and that only some aspects can be taken as certain. In many cases, the authors who have encountered that difficulty have opted to refer to recent cul-

tural examples. Such is the case of Urton (1990), who proposes the dual division of the pampa, referring to an Inca pattern. He developed the hypothesis that the Incas were inspired by the political and social organizational patterns of the Río Grande basin, which were influenced by Wari experiences or by the times when Cahuachi and La Ventilla ruled over the territory. This thesis is also partially accepted by Silverman (1992: 41-42).

Another issue related to geoglyphs is the dating system. The radiocarbon dating of the 1950s and 1960s (Strong, 1957; Ravines, 1978; 1982) is not very accurate because it lacks the location of a stratigraphic association. The iconographic comparison between geoglyphs and ceramics has determined a number of interpretation problems, since in many cases they are different, in the same way as the comparison between petroglyphs and ceramics. The association between the ceramics material and the geoglyphs, where fragments and other cultural materials were found, presents a wide variation among different sites. The finding of ceramics older than geoglyphs in the same area does not necessarily mean that such geoglyphs were made in a posterior epoch (Clarkson, 1989-1990; Silverman, 1992). More recent dating, based on the analysis



Fig. 8. Killer whale holding a trophy head. Is the greatest Nasca deity related to the sea. It measures 30 m in length (photo by Giuseppe Orefici).

of rock varnish (Clarkson and Dorn, 1991) has concluded that the geoglyphs were drawn between 193 BC and AD 648, which links this manifestation to the Nasca culture. Although this result may be partial and subject to corrections, the method adopted could contribute to the elaboration of a chronological chart of some broad sectors containing drawings on the soil. The oldest geoglyphs are located in the Palpa area and belong to a first phase of expression. These images were drawn on the hillslopes and can be related to the rock art of the zone, for they resemble some sort of macro-engravings. The iconography of these first geoglyphs has many elements that are common to the Paracas tradition that is present in its textiles. The most frequent representation is that of the anthropomorphic or anthropozoomorphic figures. The execution techniques were different and are replicated in several locations. The negative image system is the most frequent and consisted in the removal of part of the lithic material on the surface, which was subsequently piled on the interior of the figure. Another technique was the relief, which consisted in piling pebbles and lithic fragments on the inside of the line or the figure to make it stand out.

In many cases, both techniques are combined. The sole

anomaly detected in the making of these geoglyphs, possibly associated with the earlier period when this system of expression was used, is found in Monte Sierpe (Pisco River), where there is a row of 16 rectangles presenting deep holes which do not have any content. These geoglyphs were described by Robert Shippee in 1933 and Dwight T. Wallace in 1971, but there is no reference to chronological data.

During this first phase, the geoglyphs were made on the hillslopes and located in sacred areas where collective gatherings occurred, attended by multitudes including the upper social groups. The images correspond to mythical characters, ancestors, major or minor divinities, and scenes portraying numerous sacred characters. The main concentrations of these geoglyphs occur in the Palpa and Llipata zones, although they can also be found in the Nasca Valley and neighbourhood of Cahuachi. Also part of this first group are the images of camelids, birds, felines, and other mythical animals of the Nasca pantheon. The iconographic similitude between the naturalistic geoglyphs and the drawings on ceramics has been analyzed by

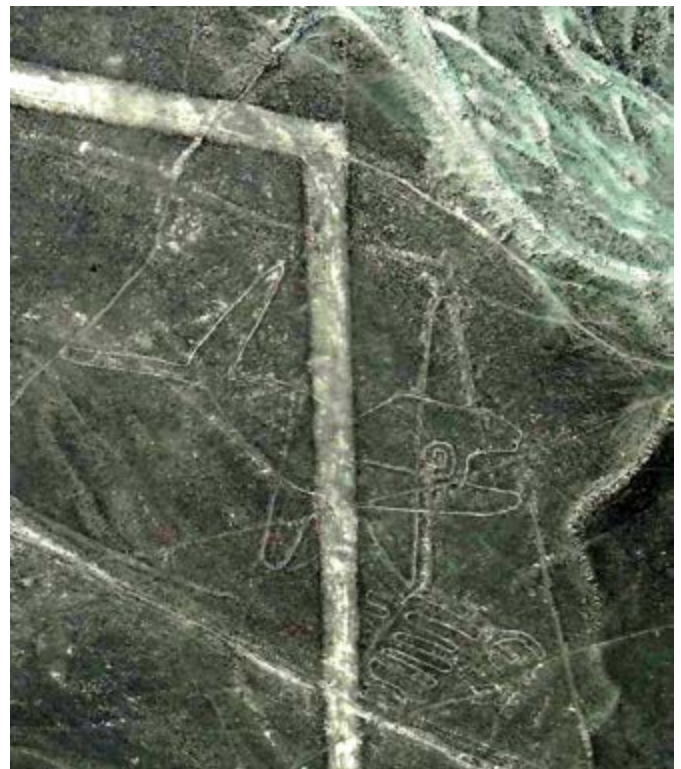


Fig. 9. Cetacean figure related to a scutiform geometric motif, 64 x 76 m (photo by Giuseppe Orefici).

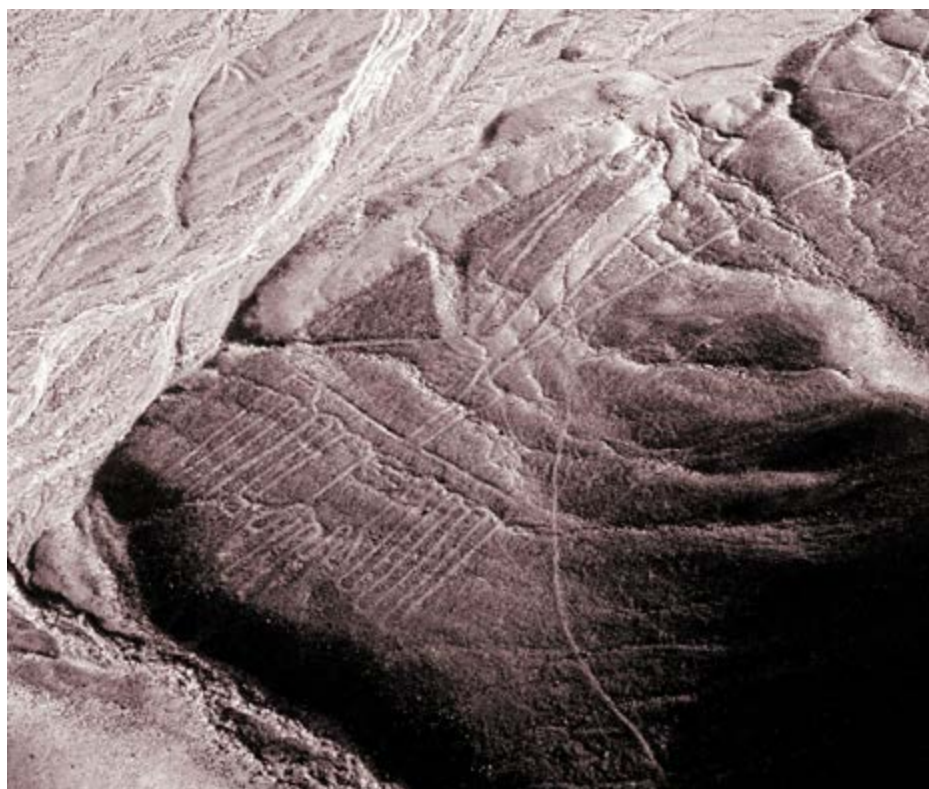


Fig. 10. The rainbird figure located on a hill. We can see the addition of a space for ceremonies near the beak, 125 x 32m (photo by Giuseppe Orefici).

several researchers, including the Nasca Project. On the basis of the analysis of the petroglyphs conducted between 1982 and 1983 (Orefici, 1993; 2013; Orefici and Drusini, 2003), the already known geoglyphs, as well as the figures that were documented in 1984, and the ceramics and textile of the Paracas and Nasca cultures, the Project made a stylistic comparison between the iconographic and iconological elements. The study was only one part of the objective that the Project pursued and included the results of the excavations in the housing and ceremonial sites in the San José area.

The geoglyphs in the southern sector of San José by the Ingenio River and San Pablo constitute the most indicative group of figures belonging to the first stylistic phase. The majority of the drawings represents anthropomorphic and zoomorphic figures made in low relief. Their dimensions are quite small and they were made over a particularly rusty surface. They depict characters isolated or participating in collective scenes, and have evident attributes such as batons, shields or feathered headdresses which were inspired by the textile tradition of the Paracas Caverns and Paracas Necropolis periods. Other characters are depicted in a praying or dancing position and are very similar

to those carved on the petroglyphs that were analyzed in Chichitara (R. 19) and San Marcos (R. 7 and R. 8). The zoomorphic figures include the representation of camelids, felines, and birds (Orefici, 2009; 2013).

One of the most emblematic representations of this phase, which has stylistic elements that are recognizable and comparable, is located on the Pampa de Jumaná, northeast of Nasca. The figure was identified in 1983 by Eduardo Herrán (1985) and was studied in 1994 by the Nasca Project. It is the depiction of a character, possibly female, made in low relief and portraying five ophidian proliferations, a pair of big eyes (one shaped as a spiral) and a headdress with rhomboid elements. A proliferation comes out of the head and is projected upwards; the hands hold a trophy head and another unrecognizable object, which is related to the action that the character is performing. It is accompanied by a smaller anthropomorphic figure on its right side as well as zoomorphic figures with noses and ears that are barely legible. On the same side, there are other geoglyphs of smaller dimensions that have suffered from erosion. The upper cephalic proliferation is superimposed on an ornithomorphic figure made in the same system, presenting more archaic stylistic char-

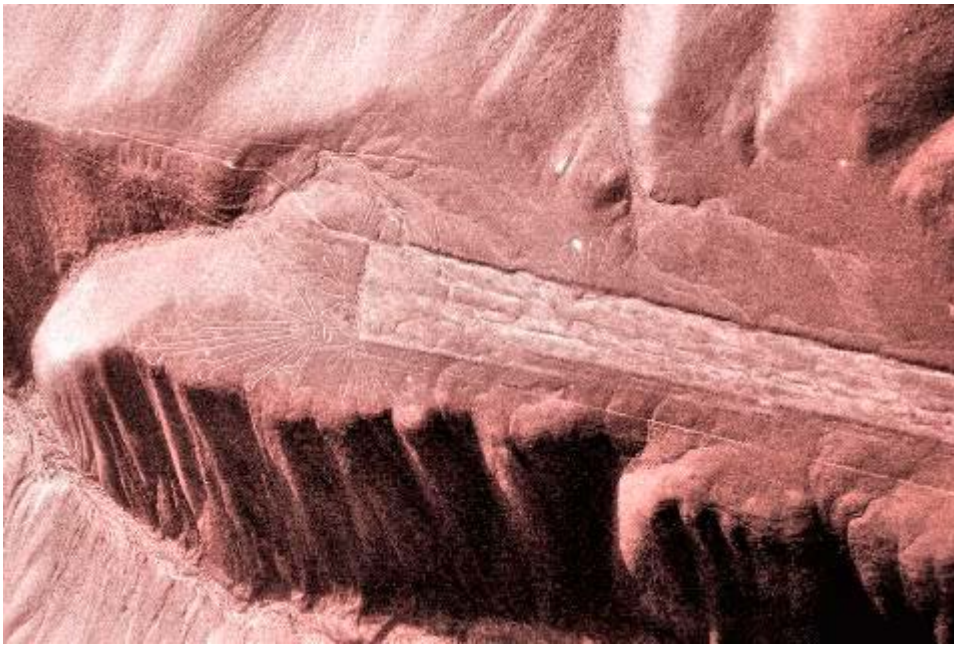


Fig. 11. A great line overlaid on a pre-existing figure of hummingbird (photo by Giuseppe Orefici).

acteristics. The whole composition presents analogies with the Paracas Necropolis iconography and can be compared with the ophidian anthropomorphic being of the calendar-cloth recorded as 290-45 (n. 5), which was described by Tello (1959: Lam. XXL, figure B). The horizontal geoglyphs made with only one line were drawn during the second phase. They present an entrance and an exit that communicate them with other straight lines. The majority of researchers believe that these are symbols related to fertility and water worship: the spider, the lizard, and the rainmaking birds are strictly related to water and soil fertility. Also belonging to this phase are the orca, the uppermost divinity related to the sea, and many other zoomorphic and phytomorphic elements such as the *huarango* (*Prosopis juliflora*) tree, the sargassum and others that present more stylized designs. It is likely that these figures are sacred roads which in specific dates were walked by the population and were related to climate events as well as to agriculture. These geoglyphs are partially located in the same area where the older ones are also located, between the city of Nasca and the Ingenio River: all belong to the phase having the main geoglyph presence and the ornithomorphic figures stand out there, because of their dimension and quality. As happens in the ceramics representations, an evolution is perceived, starting with the figure represented in profile with its wings folded and ending

with the bird flying with its wings spread. The figure portraying the orca also shows the same evolving process seen in the ceramics: from the most archaic representation, associated with the trophy head and the obsidian knife, there is a progressive stylization of its elements until reaching the geometric scheme that is also observed in the ceramics' fifth phase. Several gigantic drawings correspond to those appearing in the ceramics: the hummingbird sucking up a flower, the toad, the spider, the lizard, the monkey, and some vegetables.

The third phase, which groups the highest number of geoglyphs, is that of the long lines and geometric forms. They are the most impressive geoglyphs because they occupy the whole extent of the pampa in different directions and are superimposed over the older drawings. The triangles, trapezoids, and rectangles, as well as the meander-shaped and schematic lines, are characteristic of the evolution during the last phases of the Nasca culture. They were used as large collective spaces for gatherings where religion, dance, ceremonies, music, and social and ritual activities were performed with the participation of a large number of people. It is possible that the function related to water and fertility worshiping was still present during this phase as well as during the whole cultural period corresponding to Paracas and Nasca. Simultaneously to the presence of the large lines, there are



Fig. 12. Large space for collective functions with a long access corridor, 3 500 x 70 m (photo by Giuseppe Orefici).

also lines or figures related to mounds or hills. In this case, several figures, geometric or lineal, have the same place of origin and sometimes have been considered to have been astronomical observatories linked to the solar movement.

In the area where the geoglyphs were made, a continuous reuse of the soil can be observed throughout the entire period of development of the Nasca culture, which probably lasted until the first phases of the Middle Horizon Period. The geoglyphs cannot be schematized into homogeneous groups because they represent a tradition that lasted for more than 1,000 years and, as happened with parallel cultural expressions such as ceramics, textiles, and architecture, were subject to a constant evolving process.

This phase witnesses the abandonment of Cahuachi, due to climatic or environmental causes, successive mudslides, long alluvial periods, and a destructive earthquake that provoked the collapse of the great walls of the ceremonial center as it was shown in the excavations performed in the last ten years. During



Fig. 13. Large space for collective functions oriented east to west, 1,850 x 61m. Highlights a long access path (photo by Giuseppe Orefici).



Fig. 14. Large lines partially damaged by floods (photo by Giuseppe Orefici).

this phase, the pampas-ceremonial center duality for the collective events no longer persisted. The large sacred enclosures at Cahuachi were destroyed and only a small part of the temples was used as ceremonial platforms. Thus, it was impossible to concentrate a large number of people inside the millenary walls of Cahuachi. The geoglyphs substituted these collective and ritual events with new sacred spaces of large dimensions, the pampa, which had a function similar on a symbolic level, but alternative to the ceremonial center. The need to reassert cohesion among the different human groups that made their pilgrimage to Cahuachi moves out to the pampa, where ritual and sacred gathering had been performed before.

Towards the end of the development of the Nasca culture, the geoglyphs were kept as the emblematic traditional space of the collective rituals that were diffused all around the territory, as well as the cultural element of the posterior settlements, in both respects to the Wari and the Ica-Chincha expansions. For the last five years, the Nasca Project has been identifying geoglyphs that belong to posterior cultural moments such as the Middle Horizon and the Late Intermediate periods. Such figures were made with the alignment of stones that in most cases form eccentric circles with stripes coming out of the center. The main concentration of these geoglyphs is located in areas such as



Fig. 15. Large trapezoidal figure, 400 m, that extends with three divergent lines that stretch more than 5 km. Known as the "Cahuachi Observatory", assuming that the lines represent the solstices (photo by Giuseppe Orefici).



Fig. 16. Spiral observable from the ground at Cantalloc (photo by Giuseppe Orefici).

the confluence of the Rio Grande and Nasca River, Sacramento, and Llipata.

Other interesting data were provided by M. Reindel, J. Isla Cuadrado, and K. Koshmieder (1999) of the German Nasca-Palpa Project, who have identified a considerable number of Nasca sites of different eras in the Palpa area, located in places also used for the realization of drawings on the ground. They hypothesized a possible relationship between groups of figures and places used as residential centers and that, possibly, the macro-incisions in the ground could be made by the inhabitants of these urban settlements (Ibid. 374-376). They also elaborated a relative chronology referring to the groups of geoglyphs connected to the sites, trying to obtain a global sequence of Palpa with archaeometric techniques (Reindel *et al.*, 2006; Reindel and Wagner, 2009).

A further interesting study has been conducted by M. Sakai of the University of Yamagata, who has been working on Nasca geoglyphs since 2005, main-

ly examining the associated archeological materials *in situ* and relying on a large number of satellite photos. Sakai speculates that the straight lines were made to indicate relationships between the different population centers of the region. He asserts that the nearly 1,000 lines of this type were used to reinforce the links between the different settlements and their populations. According to the chronology indicated by the Japanese Mission, the presence of geoglyphs dates back to 400 BC and that tradition would have remained in use for at least 2,000 years (Sakai *et al.*, 2014).

Despite the investigations conducted by previous archeological projects, in addition to those of the Nasca Project and the studies mentioned above, it is necessary to complete systematic research, based on a detailed spatial and typological analysis of these geoglyphs. Thanks to the collaboration between the Nasca Project and the ITACA-CNR mission, a survey project was launched in 2011 aimed at documenting, mapping,



Fig. 17. Large geometric geoglyph observable from the ground in the Valley of Santa Cruz (photo by Giuseppe Orefici).



Fig. 18. Geoglyph related to Late Intermediary Period traced above a pre-existing figure from the Nasca era. Located at San Javier, Changuillo (photo by Giuseppe Orefici).

and analyzing the morphology of the remaining lines, near the monumental center of Cahuachi (Masini *et al.*, 2012; Lasaponara *et al.*, 2016).

Conclusions

On the basis of current knowledge, it can be said that already during the final Early Horizon (400-200 BC), in the Paracas-Nasca transition phase, geoglyphic emblems appear that represent almost exclusively anthropomorphic figures or images linked to the cult of water or fertility, mostly referable to the veneration of mythical heroes or ancestors. Frequently, the geoglyphs were traced on the sloping walls of the reliefs facing the valleys and are thought to have been part of collective liturgies and rituals celebrated by different local groups. In this first phase, the iconography is inspired by the repertoire of the oldest textile production. This expressive form had a persistent development over time and can be considered as the beginning of a tradition that was subsequently consolidated with iconographic, typological, and technical variations and evolutions. The initial model has its roots in the ancestral practice of elaborating cultural and mythical scenes witnessed by the rock art of the area.

There follows a phase related to images represented on the flat surface of the desert areas and on the top of the hills: also there are numerous figures belonging to this group in the area where Cahuachi is located. Frequently, these are geoglyphs that have a bearing on the cult of water and fertility, which in the case of the proximity to the ceremonial center possibly had considerable importance during events associated with agriculture and the agricultural calendar. Mostly, these geoglyphs present an iconography with characteristics similar to those of Nasca ceramics and fabrics, with depictions of zoomorphs, phytomorphs or complex scenes in which the images of the main divinities of the Paracas-Nasca religious and spiritual world stand out, with the recurrent presence of sea and land birds, the spider, a symbol of fertility, in addition to the most important ones such as the killer whale or the feline. This moment, which expands along much of the Early Intermediate Period (200 BC-AD 600) is completed with the development of geometric representations with various morphologies and dimensions, which are the most numerous and which constitute an important transitional phase for

understanding the typological changes in progress.

The next one is certainly the most spectacular stage due to the gigantic size of the traced geometric figures, which often overlap the previous drawings. The presence of triangular, trapezoidal, rectangular shapes, of varying size up to some enormous examples of kilometers long lines indicate radical changes in the very structure of Nasca society, largely due to the decay and abandonment of Cahuachi, around AD 400, due also to the destruction deriving from violent flood phenomena and from an earthquake that shook the entire Valle del Rio Nasca. The final phase of the decline of the ceremonial center and the political-social transition towards a new expression of secular power with the presence of local chiefdoms are therefore determined. It is possible that in this phase the choral activities that previously were also carried out in Cahuachi were intensified in the figures of the geoglyphs, in order to give continuity to the collective functions of religious expression until the time of the Wari conquest, which begins the Middle Horizon (AD 600-1000).

Probably the geoglyphic tradition continued even in the times following both the Nasca supremacy and the Wari occupation. Since this is a well-rooted tradition in the societies that developed in the territory of the Rio Grande di Nasca Basin, testimonies have been found that indicate a continuous activity also in settlements belonging to the Recent Intermediate Period (AD 1000-1476), as these are typologically very different motifs from those of previous eras.

References

- Alva, W.; Meneses Alva, S.
1984 Geoglifos del Formativo en el valle de Saña. Lundero. Suplemento cultural del diario La Industria. Chiclayo, 24 de junio.
Aveni, A.F.
1986 The Nazca Lines: Patterns in the Desert, *Archaeology*, vol. 39, n. 4, pp. 32-39, AIA, Boston, MA.
Aveni, A.F. (ed.)
1990 *The Lines of Nazca*, American Philosophical Society, Philadelphia, PA.
Cané, R. E.
1985 Problemas Arqueológicos e Iconográficos. Enfoques nuevos, *Boletín de Lima*, n. 37, año 7, pp. 38-44, Los Pinos, Lima.
Cieza De Leon, P. de
1986a (1553) *Crónica del Perú. Primera Parte*, Pontificia

- Universidad Católica del Perú, Academia Nacional de la Historia, Lima.
- 1986b (1550) *Crónica del Perú. Segunda Parte*, Pontificia Universidad Católica del Perú, Academia Nacional de la Historia, Lima.
- 1987 (1550) *Crónica del Perú. Tercera Parte*, Pontificia Universidad Católica del Perú, Academia Nacional de la Historia, Lima.
- Clarkson, P.B.
- 1989-90 El contexto cultural de los geoglifos de Nazca. Un reconocimiento arqueológico entre los valles de Palpa e Ingenio, Perú. Informe final presentado al Instituto Nacional de Cultura, Lima.
- Clarkson, P.; Dorn, R.
- 1991 Nuevos datos relativos a la antigüedad de los geoglifos y puquios de Nazca, Perú, *Boletín de Lima*, 78, pp. 33-47, Los Pinos, Lima.
- Grodzicki, J.
- 1994 *Nasca: los síntomas geológicos del fenómeno El Niño y sus aspectos arqueológicos*, Estudios y memorias 12, CESLA, University of Warsaw, Warsaw.
- Grodzicki, J.; Grodzicka, A.; Szaran, J.
- 1989 Los procesos geodinámicos de la Región de Cahuachi (Nasca-Perú) y el desarrollo y la caída de la Cultura Nasca. Informe de las investigaciones realizadas en 1989, in Proyecto Nasca 1984-1988. Informe Final de la Campaña 1988 (G. Orefici, 1989), vol. 1, pp. 507-550, ms. presentado al INC de Lima.
- Hawkins, G.
- 1969 *Ancient Lines in the Peruvian Desert, Final Scientific Report for the National Geographic Society Expedition. Special Report*, n. 906-4, Smithsonian Institution, Astrophysical observatory, Cambridge, MA.
- Herrán Gomez De La Torre, E.
- 1985 *Geoglifos de Nazca, nuevos diseños, nuevos enigmas*, Eduardo Herrán Productores, Lima.
- Horkheimer, H.
- 1947 Las Plazoletas, Rayas y Figuras Prehispánicas en las pampas y las Crestas de la Hoya del Río Grande, *Revista de la Universidad Nacional de Trujillo* (Época II), n. 1, pp. 47-63.
- Isbell, W.H.
- 1978 I disegni preistorici tracciati sul terreno in Perú, *Le Scienze*, XII, n. 124, pp. 84-94.
- Kosok, P.
- 1947 Pre-Inca Markings in Peru, *Life* 23 (28 July), pp. 75-76.
- 1965 *Life, Land and Water in Ancient Peru*, Long Island University Press, New York.
- Kosok, P.; Reiche, M.
- 1947 The mysterious markings of Nazca, *Natural History de Mayo*, LVI, pp. 200-207, 237-238.
- 1949 Ancient Drawings in the desert of Peru, *Archaeology*, vol. 2, n.4 (8), pp. 207-215, Andover Hall, Cambridge, MA.
- Lasaponara R.; Masini, N.; Orefici, G. (eds)
- 2016 *The Ancient Nasca World*, Springer Ed.
- Linares Málaga, E.
- 1993 The largest site in the world: Toro Muerto, Arequipa (Peru), *International Newsletter on Rock Art*, 6, Foix, France, pp. 25-27.
- Masini, N. et al.
- 2012 Integrated Remote Sensing Approach in Cahuachi (Peru): Studies and Results of the ITACA Mission (2007-2010). In Rosa Lasaponara and Nicola Masini (eds), *Satellite Remote Sensing - A New Tool for Archaeology*, pp. 307-344, Springer Ed.
- Mejia Xesspe, T.
- 1942 Acueductos y Caminos Antiguos de la Hoya del Río Grande de Nasca, *Actas y Trabajos científicos del XXVII Congreso Internacional de Americanistas*, Lima, 1939, Tomo 1, pp. 559-569, Librería e Imprenta GIL, Lima.
- Monzón, L. de
- 1586 Descripción de la tierra del repartimiento de los Rucanas antamarcas de la corona real, jurisdicción de la ciudad de Guamanga, año de 1586. In M. Jiménez de la Espada (ed.), *Relaciones geográficas de Indias, Perú, t.I*, 1965, Madrid: Atlas (BAE).
- Morrison, T.
- 1978 *Pathways to the Gods*, Harper & Row, New York.
- 1987 *The Mystery of the Nasca Lines*, Nonesuch Expeditions, Suffolk, UK.
- Orefici, G.
- 1986 I Geoglifi di Nasca, in *Atti del VII Convegno Internazionale di Americanistica, Circolo Amerindiano*, Perugia.
- 1992 *Nasca: Archeologia per una ricostruzione storica*, Jaca Book, Milano.
- 1993 *Nasca: arte e società del popolo dei geoglifi*, Jaca Book, Milano.
- 2012 *Cahuachi. Capital Teocrática Nasca*, 2 Tomos, Fondo Editorial Universidad SMP, Lima.
- 2013 *Petroglifos de Nasca y Palpa*, Inteligo, Apus Graph ediciones, Lima.
- Orefici G. et al.
- 2009 *Nasca, el desierto de los dioses de Cahuachi*, Graph Ediciones, Lima.
- Orefici, G.; Drusini, A.
- 1993 *Síntesis de las investigaciones arqueológicas y antropológicas del "Proyecto Nasca" (Perú) 1982-1992*, Comunicación XIII Congreso Internacional de Ciencias Antropológicas y Etnológicas, Ciudad de México, 29 julio-4 agosto 1993 (abstract, p. 114).
- 2003 *Nasca, Hipótesis y evidencias de su desarrollo cultural*, Centro Italiano Studi e Ricerche Archeologiche Precolombiane, Brescia-Lima.
- Ostolaza, C.; Piacenza, L.

- 2002 Cahuachi y la Cultura Nasca, *Quepo*. Sociedad Peruana de Cactus y Suculentas, Vol.16, Ed. Carlos Ostolaza Nano, Lima.
- Petersen, G.
- 1980 *Evolución y desaparición de las altas culturas Paracas-Cahuachi (Nasca)*, Universidad Nacional Federico Villareal, Lima.
- Ravines, R.H. (ed.)
- 1978 *Tecnología Andina*, Instituto de Estudios Peruanos, Instituto de Investigación Tecnológica, Industrial y de Normas Técnicas, Lima.
- Ravines, R.H.
- 1982 *Panorama de la Arqueología Andina*, Instituto de Estudios Peruanos, Lima.
- Reiche, M.
- 1948 *Los Dibujos Gigantescos en el suelo de las Pampas de Nasca y Palpa. Descripción y ensayo de interpretación*, Editora Médica, Jirón Azángaro 906, Lima.
- 1949 *Los dibujos gigantescos en el suelo de las pampas de Nazca y Palpa*, Letras, N. 30, Lima.
- 1968 *Secreto de la Pampa*, Selbstverlag Maria Reiche, Stuttgart.
- 1974 Las Gigantescas Huellas de Nasca y Palpa, *Imagen*, n. 3, Lima.
- 1993 *Contribuciones a la Geometría y Astronomía en el Antiguo Perú*, Asociación María Reiche para las Líneas de Nasca, Epígrafe S.A., Lima.
- Reindel M.; Cuadrado, J.I.; Koshmieder, K.
- 1999 Vorspanische Siedlungen und Bodenzeichnungen in Palpa, Süd-Peru/Asentamientos Prehispánicos y Geoglifos en Palpa, Costa Sur del Perú. In *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 19, 313-381.
- Reindel, M.; Cuadrado, J.I.; Lambers, K.
- 2006 Los geoglifos de Palpa: documentación, análisis y perspectivas, in *Boletín de Lima* 143, 73-111. Lima.
- Reindel, M.; Wagner, G. (eds.)
- 2009 *New Technologies for Archaeology: Multidisciplinary Investigations in Palpa and Nasca, Peru*, Springer, Heidelberg, Berlin, New York.
- Reinhard, J.
- 1985 *The Nazca Lines, a new perspective on their origin and meaning*, Editorial Los Pinos, Lima.
- 1988 *Las Líneas de Nazca, un nuevo enfoque sobre su Origen y Significado*, (Segunda edición en castellano), Editorial Los Pinos, Lima.
- Rossell Castro, A.
- 1942 Sistema de irrigación antigua del Río Grande de Nasca, *Revista del Museo Nacional*, Tomo XI, n. 2, Lima.
- 1977 *Arqueología Sur del Perú*, Editorial Universo, Lima.
- Rossello Truel, L.
- 1986 *Función y significado de las líneas de Nasca*, Lima.
- Rostworowski De Diez Canseco, M.
- 1993 Origen religioso de los dibujos y rayas de Nasca, in *Journal de la Société des Américanistes*, T. LXXIX, pp. 189-202, Paris.
- Sakai, M., Olano, J.; Matsumoto, Y.; Takahashi, H.
- 2014 *Centro de Líneas y Cerámica en las Pampas de Nasca, Perú, 2010*, Yamagata University Press, Yamagata, Japón.
- Shippee, R.
- 1933 Air Adventures in Peru, *National Geographic*, 63(1), 81-120.
- Silverman, H.
- 1990 Beyond the Pampa: the Geoglyphs in the Valley of Nazca, *National Geographic Research*, vol. 6 (4), pp. 435-456, Washington, DC.
- 1992 Estudio de los patrones de asentamiento y reconstrucción de la antigua sociedad Nasca, in *Boletín de Lima*, n. 82, pp. 33-44, Los Pinos, Lima.
- Strong, W.D.
- 1957 *Paracas, Nazca and Tiahuanacoid Cultural Relationships in South Coastal Peru*, *American Antiquity*, Vol. 22, n. 4, part 2, Memoirs 13, Society for American Archaeology, Salt Lake City, UT.
- Tello, J.C.
- 1959 *Paracas. Primera Parte*, Publicación del Proyecto 8b del Programa 1941-42, Institute of Andean Research of New York, Empresa Gráfica T. Scheuch S.A., Lima.
- Urton, G.
- 1990 Andean Social Organization and the Maintenance of the Nazca Lines. In Anthony Aveni (ed.), *The Nazca Lines*, pp. 175-206, American Philosophical Society, Philadelphia, PA.
- Wallace, D.T.
- 1971 Sitios Arqueológicos del Perú (segunda entrega). Valles de Chíncha y Pisco, *Arqueológicas*, M.N.A.A., Lima.
- Williams Leon, C.
- 1980 Arquitectura y Urbanismo en el antiguo Perú, *Historia del Perú*, vol. 8, pp. 369-585, Ed. Juan Mejía Baca, Lima.
- Ziolkowski, M.
- 2009 En busca de la astronomía de los Nasca. In G.Orefici (ed.), *Nasca, el desierto de los dioses de Cahuachi*, pp. 232-249, Graph Ediciones., Lima.
- Zuidema, R.T.
- 1964 *The Ceque System of Cuzco: The Social organization of the Capital of the Inca*, Ed. J. Brill, Leiden.
- 1977 The Inca kinship system: a new theoretical view. In Ralph Bolton and Enrique Mayer (eds), *Andean Kinship and Marriage*, pp. 240-281, Special Publication of the American Anthropological Association, n. 7, Washington, DC.

PREHISTORIC COLONIZATION OF THE CENTRAL SAHARA: HUNTERS VERSUS HERDERS AND THE EVIDENCE FROM THE ROCK ART

Jitka Soukopova

PhD, Honorary research associate at the University of Bristol (UK); teacher, Brno (Czech Republic)

Introduction

The humid Early Holocene period of the Central Sahara is archeologically quite well documented. A human presence is abundantly attested from around 10,000 BP with fishing, hunting and gathering being practiced in the whole Sahara (figs. 1, 2, 3). Excavations undertaken in the Tassili mountains in Algeria and in the Acacus mountains in Libya document groups of hunter-gatherers with exploitation of wild mammals and the use of pottery as early as 10,000 BP (Aumassip 1980-81; Barich 1987; Cremaschi *et al.* 1998).

After a short arid phase around 7,000 BP, stratigraphical evidence demonstrates a change in the subsistence pattern, which becomes dominated by domestic cattle. Pastoralism spread in the Middle Holocene throughout the whole territory of the Central Sahara. Faunal remains from securely dated contexts indicate that domesticated animals were present in the Central

Sahara from the early 8th millennium BP and also direct chemical evidence for early dairying dates from around 7,000 BP (Dunne *et al.* 2012). Who were these early pastoralists? Were they local hunters who adopted domestication or were they new groups of people who moved into the Central Sahara? Although in some cases there seems to be a continuity of settlement between the hunters and the first herders, pastoral ceramics and lithic tools are stylistically different from previous hunting material (Di Lernia 1999; Smith 2005).

The question of where and when people first started domesticating cattle in Africa is still unresolved. Neolithic sites along the Nile river in Nubia have yielded remains of domestic cattle with an associated date of c. 9,000 BP and secure dates for domestic Bos in the Nabta Playa-Bir Kiseiba area in Egypt are c. 7,750 BP, which suggests that domestic cattle may have ap-



Fig. 1. Map of the Sahara evidencing locations mentioned in the text (Google maps).



Fig. 2. Extended white crust on the sandy floor indicates a large ancient water body. Lakes and rivers were present in the Sahara from about 10,000 years BP (Algerian Tadrart).

peared first in the grassy hinterlands of the Nile region and spread from there toward the western Sahara (Gifford-Gonzalez *et al.* 2011).

Ancient colonization

The hypothesis that new populations arrived into the Central Sahara is supported by the finding of a large cemetery in the Gobero plain near the Chad basin in Niger (Sereni *et al.* 2008). Here there are approximately 200 human burials; the oldest date to around 10,000 BP and belonged to sedentary hunter-fisher-gatherers who abandoned the area for 1,000 years during the arid climatic event at around 8,500 BP. After this hiatus other human groups arrived to live and to bury their dead in the same place until around 4,500 BP.

The examination of the Gobero skeletons revealed significant differences between the two chronological groups. The first group occupying the site in the Early Holocene until 8,500 BP were tall and robust, whilst the later group, which arrived after the arid phase, were smaller and tiny. This second group who inhabited the site in the Middle Holocene between 7,200 BP and 4,500 BP utilized domesticated cattle, even though hunting and fishing were still largely used. The

Gobero site revealed the arrival of a new population and the same pattern is attested in the Tassili and Acacus, a pastoral population appeared at around 7,500 BP, replacing an earlier hunting-gatherer occupation. The two different typologies of skeletons, namely a robust and a tiny one, were also identified in the Central Saharan mountains (Aumassip 2004; Mori 2000). What happened to the hunters living in the Central Sahara when new groups of people with their domesticated cattle arrived? Did they fight? Did they mix or interact? The introduction of new groups and herds to the territory occupied by local hunter-gatherers may have caused a variety of reactions or relationships. Certainly, not all the hunters became pastoralists, which is confirmed by the ancient literature: Herodotus describes how Garamantes slaughtered hunters whom they found living in the Libyan desert. The Garamantes were powerful Saharan people of Berber origin who lived in Fezzan near the Acacus between 2,500 BP and 1,500 BP (Hachid 2000). Hunter-gatherers thus still lived in the Central Sahara after the pastoral phase, namely during the successive Caballine period when the region was already very arid and the population was concentrated in the oasis.



Fig. 3. Even today the Sahara is not completely dry. In some wadis there is permanent vegetation due to the underground water (Wadi Imirhou, Tassili).

Evidence from the rock art

The hunter-gatherers living in the Central Sahara from about 10,000 BP produced a corpus of rock paintings (and rarely also petroglyphs) called Round Head (Sansoni 1994; Soleilhavoup 2007; Soukopova 2012). Their images represent mostly human figures, sometimes with bows and often with body decorations and masks, and wild animals such as mouflons, antelopes, elephants or giraffes (figs. 6, 7, 8). The newly arrived pastoral populations also produced rock art. However, their art is diametrically different from the older Round Head art, both in the themes and the technique (figs. 9, 10, 11). They depicted mainly herds of domesticated cattle and everyday life scenes, unknown in the imagery of the hunters, which testifies that we are dealing with two distinct cultural groups (Jelínek 2004; Muzzolini 1995).

Does the rock art also reveal different ethnicity? From the recognizable images, two main groups of facial shapes are evident: one with rounded nose, big lips and dominant mandible typical for negroid anatomy, the other with pointed nose and thin lips typical for europoid anatomy. The rock art thus corresponds with the study of the skeletons but who was who? The paintings of the Round Head style present facial features only in the final phase showing clearly negroid traits (figs. 12, 13), whereas europoid traits in this style are absent. As for the images representing the pastoralists, both features – negroid and europoid – are present, which indicates that herders were a mix of different ethnic groups (figs. 14, 15, 16).

Regarding evidence for any relationship between the hunters and the herders, there is no scene of violence or fighting between individuals or groups visible in



Fig. 4. Uan Bender shelters are hidden inside rocks on a high hill (Tassili mountains).

the Round Head rock art, which may indicate that the hunters tolerated newly arrived populations in their territory. The relationship of the herders toward the hunters is also perceptible from their art. Pastoral paintings are found in a much larger geographical area, exceeding the borders of the Round Head territory, due to their transhumance settlement pattern and the seasonal search for fresh pastures. In the territory originally occupied only by hunters, the pastoralists painted in empty shelters, but they also painted in shelters which were already adorned with the Round Head images. However, only in rare cases were the images of domestic animals placed over the Round Head figures. Pastoral paintings were usually placed around, on the borders, filling the empty spaces on the wall (figs. 17, 18). Round Head figures never appear dam-

aged by later paintings or intentionally destroyed; on the contrary, a considerable respect for the previous art is evident.

The fact that the pastoralists used the walls with existing Round Head paintings shows how important these sites were. The consideration and attention of herders toward previous paintings may also indicate that these walls were still actively used by hunters. Indeed, in some cases there is clear evidence of the shared use of the same site by both cultural groups.

Coexistence and identity

In the Tassili mountains where most of the Round Head images are concentrated, there are some panels showing shared activity of hunters and herders. In the sites of Uan Bender and Uan Mata paintings of



Fig. 5. With the onset of an arid climate at around 3,500 BP, Saharan mountains became a pole of attraction for people and animals (Algerian Tadrart).

horned animals in the Round Head style were painted over images of domesticated cows in the pastoral style (figs. 19, 20). In another shelter at the Uan Bender site the central part of a long wall is covered with Round Head figures, whereas the lateral parts present numerous cattle (fig. 21). The position of the two different styles indicates that the Round Heads were painted first and the pastoral figures were consequently located in remaining free spaces. However, some pastoral paintings were also placed in the central part of the wall. Round Head human figures with masks and body decoration were later painted over these pastoral figures (figs. 22, 23). These examples not only confirm the presence of hunters during the pastoral phase, but they also indicate that during the “colonization” of the Central Sahara by new populations hunters maintained and manifested their cultural identity. Furthermore, these sites show that places which were considered sacred for the hunters were considered sacred also by the herders. The Uan Bender shelter is hidden inside rocks on a high hill (fig. 4), so that

pastoralists could have only come here without their animals, and they would have only done so if they considered the place important. Newly arrived herders adopted some of the shelters used long before by hunters because they acknowledged the spiritual power of such places.

We know from Herodotus that the hunters continued to live in the Central Sahara long after the arrival of the pastoralists and examples from the rock art confirm that hunters preserved their cultural identity during their coexistence with herders in the same region. However, this coexistence lasted several generations and it is therefore plausible to suppose that at least some of the hunters also adopted the productive economy based on domesticated cattle and later goats. Can an adoption of domesticates be observed in the Round Head art? Although there are no clear scenes of domestication in this artistic complex, some indicators may suggest a possible change.

At the Uan Mata site there is a painting of a single domesticated cow (fig. 24). Its horns are large and



Fig. 6a, b. Whole panel and detail. Round Head paintings representing human figures with body decorations and wild animals, mainly mouflons (Tan Zoumaitak, Tassili).



Fig. 7. A Round Head painting of a male figure holding a bow and an arrow. He is adorned with other body attributes such as horns, bracelet and a kind of a belt (Tin Tazarift site, Tassili). Photo enhanced with DStretch.



Fig. 8. Round Head paintings of antelopes. The biggest animal in the centre has only one horn and inclined head, an unusual position which may indicate a non-ordinary animal (Tin Mzghigaouin, Tassili). Photo enhanced with DStretch.

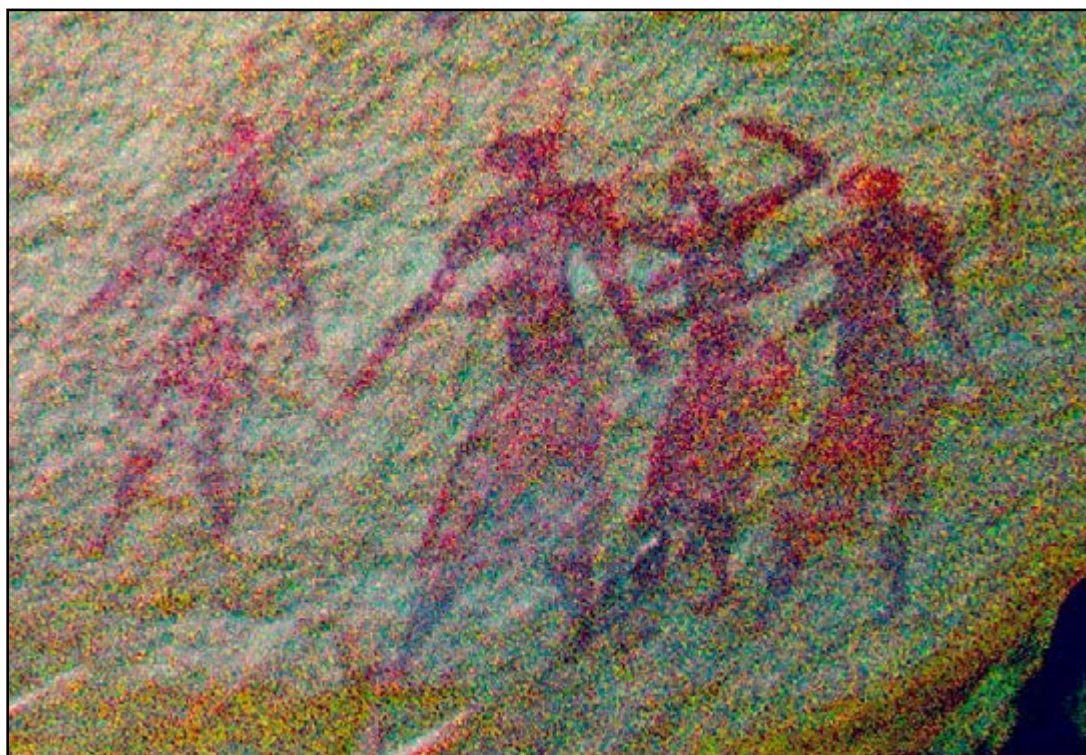
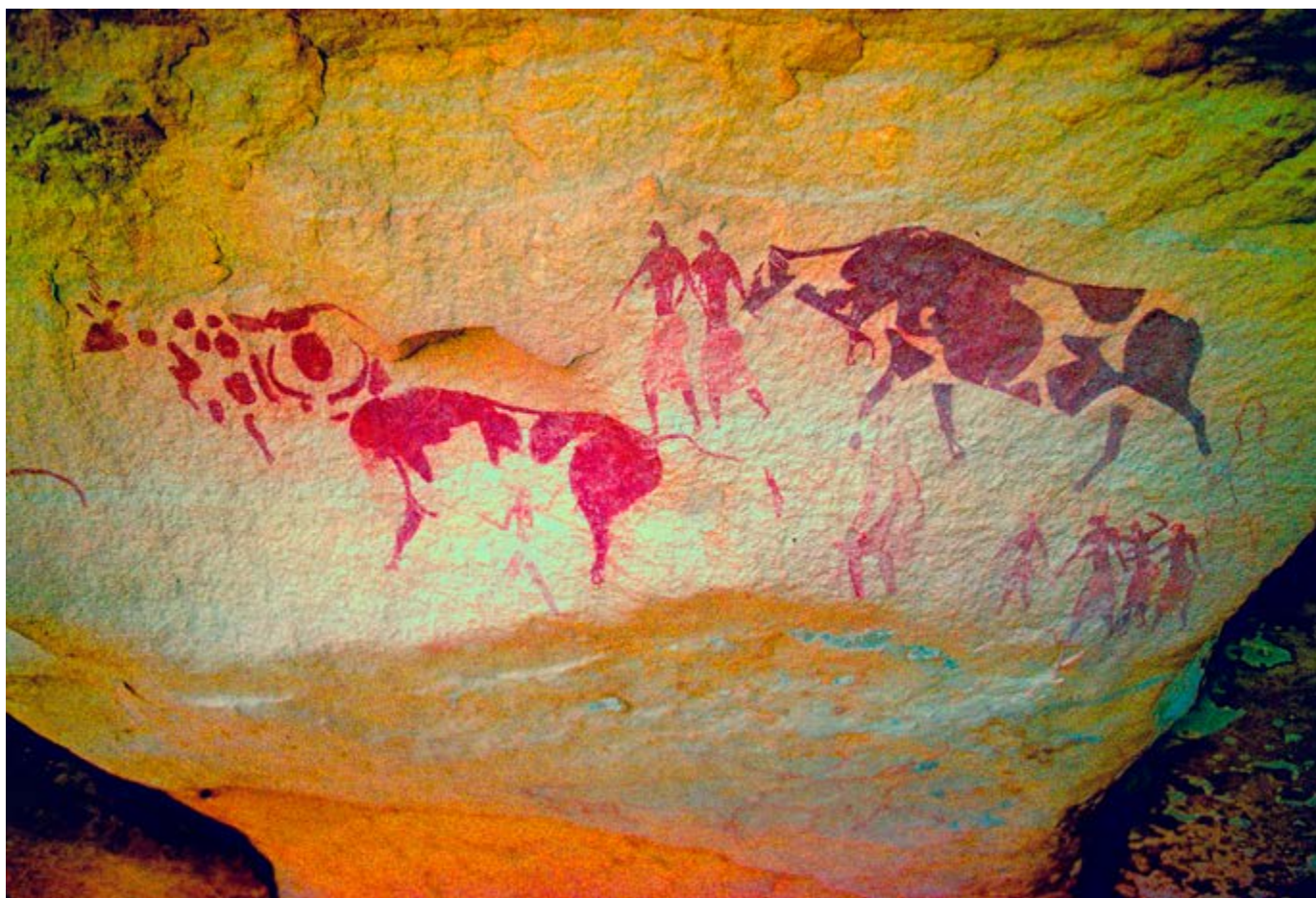


Fig. 9a, b. Whole panel and detail. Pastoral paintings representing women with domesticated cattle (Jabbaren, Tassili). Photo enhanced with DStretch.



Fig. 10. The main theme of pastoral paintings is domesticated cattle. Human figures and smaller animals on the left side of the panel are of the later Caballine period (Teshuinat, Acacus). Photo enhanced with DStretch.

curved in the shape of a lyre and between its back legs a probable udder is depicted. The typical thick red border of the painting and rounded shapes of the animal indicate the Round Head style. As this cow is isolated, it may represent the starting phase of domesticates entering into the economy of the hunters. This example is rather exceptional, so why are there not more cases of domesticated animals in the Round Head style? The answer may be in a complete change of lifestyle. If some groups of hunters became pastoralists, they would socialize with other pastoral groups, mix with them, entering into their culture and possibly adopting their habits and rituals.

The hypothesis of a fusion of Central Saharan hunters with the herders is plausible especially in the later phases of the pastoral period at around 4,000 BP (Barich 2002). In this phase the Saharan lowlands were progressively abandoned because of the increasing

aridity and life became concentrated in the mountains (fig. 5). Hunters and pastoralists must have shared a restricted territory and this was likely to have had a definitive impact on the disintegration of most of the hunting society.

Conclusion

Whereas some hunters merged with the herders and other hunters may have remained and survived in the Saharan mountains, other groups of hunters abandoned the Central Sahara in the arid period altogether. The most probable route of this migration was to the south toward the Chad basin, following rivers which still had some water even during increasing aridity (Maley 2010). Their culture continued in sub-Saharan Africa where we find impressive similarities in masks that are still used today and those represented in the Round Head art.

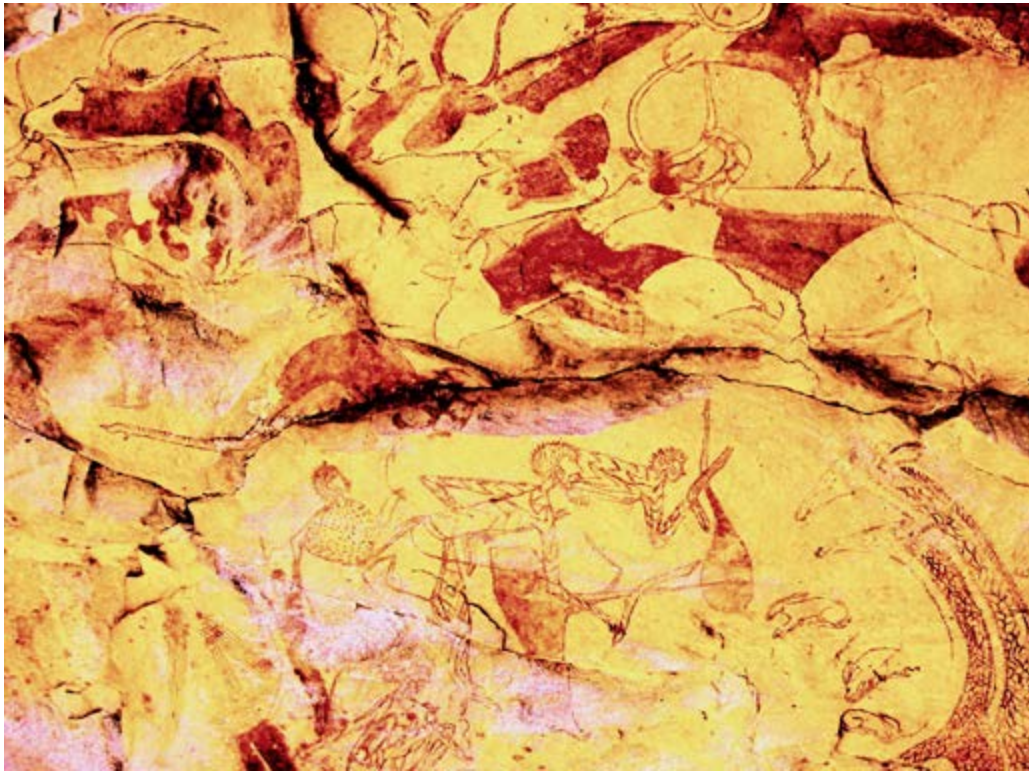


Fig. 11a, b. Whole panel and detail. A pastoral scene representing a herd of cows and a group of men cutting a killed antelope in pieces (Tikadiouine, Tassili). Photo enhanced with DStretch.



Fig. 12. A masked man of the Round Head style with a rounded nose, big lips and a dominant mandible typical for negroid anatomy. The upper part of the man's mask is superimposed by an image of a dromedary from the Camelline period (Techakelaouen, Tassili). Photo enhanced with DStretch.



Fig. 13. A masked male figure showing facial traits typical for a negroid population. Round Head style (Uan Mata, Tassili). Photo enhanced with DStretch.



Fig. 14. A pastoral painting of a man showing facial traits typical for a negroid population (Tin Aboteka, Tassili). Photo enhanced with DStretch.



Fig. 15. A pastoral painting of a man showing facial traits typical for a europoid population (Jabbaren, Tassili). Photo enhanced with DStretch.

Fig. 16. A pastoral painting of a domestic goat tied to a man showing tiny facial traits such as a pointed nose and chin (In Ferdan, Acacus). Photo enhanced with DStretch.

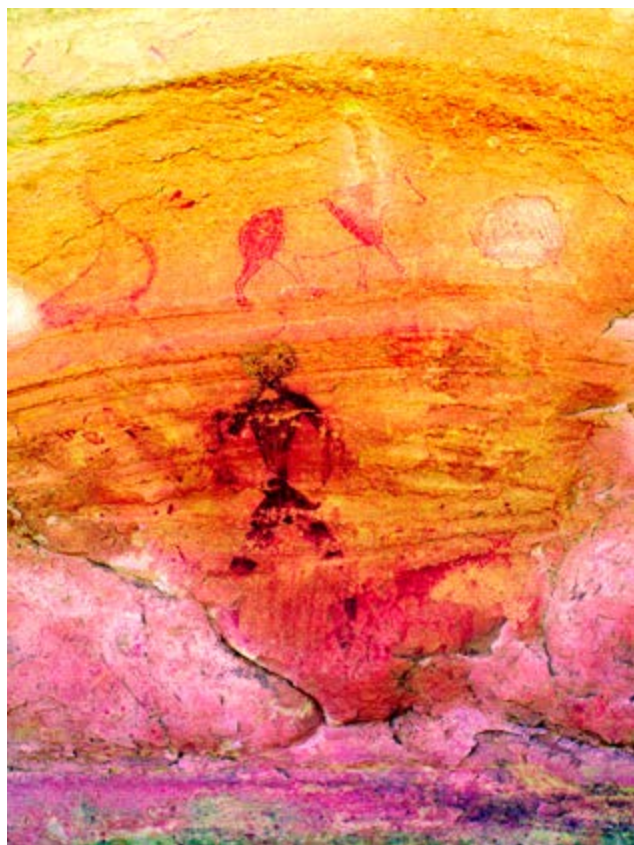


Fig. 17. Large Round Head paintings of an antelope and a wild bovid occupy the central part of the wall. Later images of domesticated cattle and dromedary were painted mainly around them, filling the empty spaces of the rock wall (Adjefou, Tassili). Photo enhanced with DStretch.

Fig. 18. A male figure of the Round Head style occupies the central part of the wall. The pastoral images were painted around this figure without affecting it (Ozaneharé, Tassili). Photo enhanced with DStretch.

Fig. 19. A detail of a horned animal in Round Head style covering partly domestic cows of pastoral style. This demonstrates that the hunter-gatherers did not stop producing paintings after the arrival of the herders (Uan Bender, Tassili). Photo enhanced with DStretch.

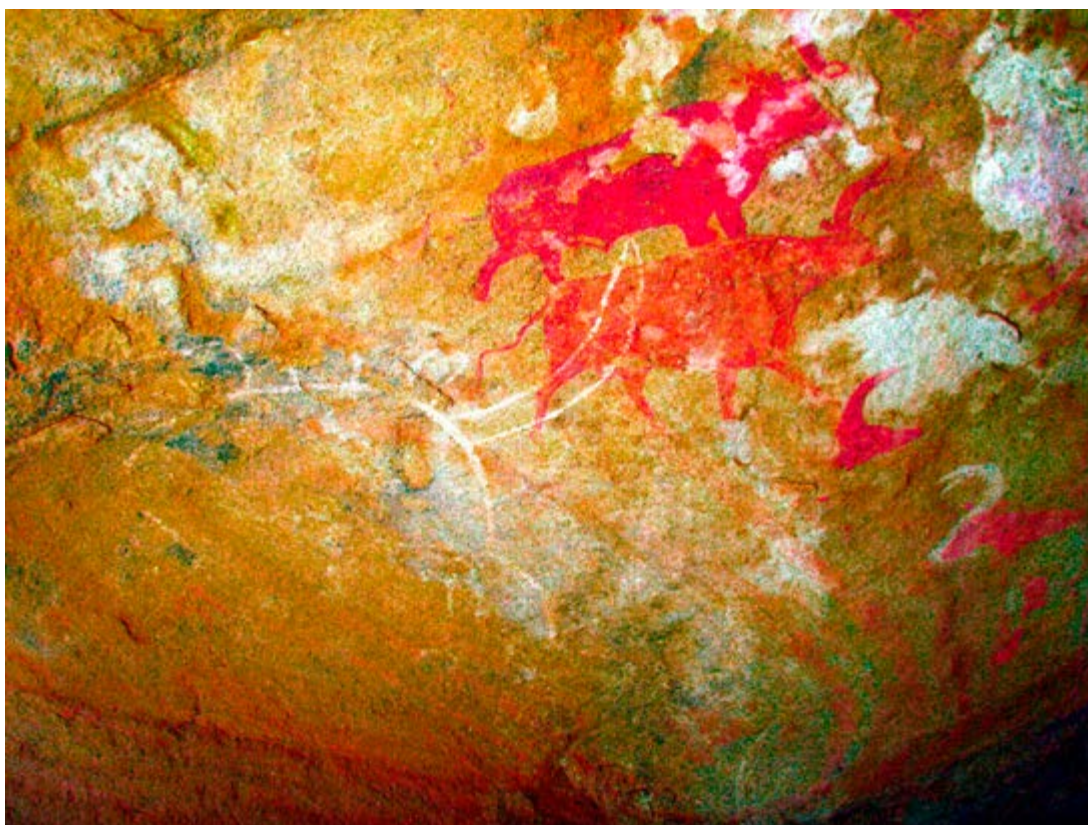


Fig. 20. A large horned animal of the Round Head style painted over pastoral cattle (Uan Mata, Tassili). Photo enhanced with DStretch.



Fig. 21. Pastoral cattle painted on lateral parts of a large shelter. Round Head figures are visible in the lower right corner of the photo (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 22. Round Head figures with masks and body decorations painted over pastoral cattle. This example demonstrates that hunter-gatherers continued to produce paintings after the arrival of the herders in their territory (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 23. A detail of the previous image. The Round Head figure painted over the pastoral cow testifies a shared use of this shelter by two different cultures (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 24. Domesticated cow painted in the Round Head style may indicate that some of the hunter-gatherers adopted domestication (Uan Mata, Tassili). Photo enhanced with DStretch.

And what happened with the pastoral populations from around 3,500 BP, when the Sahara slowly turned into desert? Like the hunters, some groups with their cattle abandoned the territory toward sub-Saharan Africa, with the Sahelian biome being most suitable for their herds. Others decided to stay in the Sahara, but they had to adopt different economic strategies based on the husbandry of goats which are better adapted to dry conditions (Tafari *et al.* 2006). It is during this phase that we start to see a shift toward an oasis-based lifestyle and a more sedentary way of life.

Acknowledgements

I thank Prof. Jeremy Keenan, Dr Alistair Pike and Dr George Nash for their help with my early research. The University of Bristol, the AHRC and CompuNet S.r.o. are thanked for the funding. I would like to express my deepest gratitude to Brigitte and Ulrich Hallier and to Bernard Fouilleux who shared with me their knowledge and photographic documentation.

References

- Aumassip, G.
1980-1 Ti-n-Hanakaten, Tassili n'Ajjer, Algérie. Bilan de 6 campagnes de fouilles, *Libyca* 28-9, 115-27.
- 2004 *Préhistoire du Sahara et de ses abords* (Paris: Maisonneuve and Larose).
- Barich, B. E., 1987. *Archaeology and Environment in the Libyan Sahara – Excavations of Tadrart Acacus 1978–83* (Oxford: BAR. Series 368).
- Barich, B. E.
2002 Cultural responses to climatic changes in North Africa. In F. A. Hassan (ed.), *Droughts, Food and Culture. Ecological change and food security in Africa's Later prehistory* (New York/ Boston/ Dordrecht/London/Moscow, Kluwer Academic/Plenum Publishers), 200-23.
- Cremaschi, M., and Di Lernia, S.
1998 The geoarchaeological survey in central Tadrart Acacus and surroundings (Libyan Sahara). Environment and Cultures. In M. Cremaschi and S. Di Lernia (eds), *Wadi Teshuinat. Palaeoenvironment and Prehistory in South-Western Fezzan (Libyan Sahara)* (Milano: All'Insegna del Giglio/CNR), 243-95.
- Di Lernia, S.
1999 *The Uan Afuda Cave. Hunter-Gatherer Societies of Central Sahara* (Milano: All'Insegna del Giglio).
- Dunne, J., *et al.*
2012 First dairying in 'green' Saharan Africa in the 5th millennium BC. *Nature* 486, 390–94.
- Gifford-Gonzalez, D., *et al.*
2011 Domesticating Animals in Africa: Implications of Genetic and Archaeological Findings, *Journal of World Prehistory* 24, 1–23.
- Hachid, M.
2000 *Les Premiers Berbères. Entre Méditerranée, Tassili et Nil* (Alger/Aix-en-Provence: Ina-Yas,Edisud).
- Jelínek, J.
2004 *Sahara. Histoire de l'art rupestre libyen* (Grenoble: Editions Jérôme Millon).
- Maley, J.
2010 Climate and palaeoenvironment evolution in north tropical Africa from the end of the tertiary to the upper quaternary, *Palaeoecology of Africa* 30, 227-78.
- Mori, F.
2000 *Le grandi civiltà del Sahara antico* (Torino: Bollati Borin-gieri editore).
- Muzzolini, A.
1995 *Les images rupestres du Sahara* (Toulouse: author's edition).
- Sansoni, U.
1994 *Le più antiche pitture del Sahara. L'arte delle Teste Rotonde* (Milano: Jaca Book).
- Soukopova, J.
2012 *Round Heads: The Earliest Rock Paintings in the Sahara* (Newcastle upon Tyne: Cambridge Scholars Publishing).
- Soleilhavoup, F.
2007 *L'Art mystérieux des Têtes Rondes au Sahara* (Dijon: Editions Faton).
- Sereno, P. C, Garcea E. A. A., Jousse, H., Stojanowski, C. M., Saliege, J. F. *et al.*
2008 Lakeside Cemeteries in the Sahara: 5000 Years of Holocene Population and Environmental Change. *PloS ONE* 3(8): e2995. doi 10.1371/journal.pone.0002995.
- Smith, A. B.
2005 *Creating a Landscape for Saharan Pastoral Archaeology* (Oxford: BAR International Series).
- Tafari M. A. *et al.*
2006 Mobility and kinship in the prehistoric Sahara: Strontium isotope analysis of Holocene human skeletons from the Acacus Mts. (southwestern Libya), *Journal of Anthropological Archaeology* 25, 390-402.

NOTES AND NEWS

ATELIER, RESEARCH CENTER FOR CONCEPTUAL ANTHROPOLOGY

Director: Prof. Emmanuel Anati

Capodiponte 25044, BS, Italy

< atelier.etno@gmail.com >

FORTHCOMING CONGRESS: PAPERS ON INTELLECTUAL AND SPIRITUAL EXPRESSIONS

XIX UISPP WORLD CONGRESS, Meknes, Morocco,
2–7 September 2021

Archeologists and anthropologists intend to meet in Meknes, 2–7 September 2021, at the Congress of the UISPP (Union International des Sciences Préhistoriques et Protohistoriques). The Congress is planned to include general lectures, scientific sessions, visits to archeological sites, social events, official dinners, press conferences, and open debates. The scientific session on: “The Intellectual and Spiritual Expressions of Non-Literate Peoples” (CISENP session 20-2021) welcomes potential participants, inviting them to confirm their intention to attend the CISENP SESSION, CONGRESS 2021, by email: <atelier.etno@gmail.com>. Preliminary registration for the CISENP session is free of charge. Registration fees are mandatory for attending the congress. The session will include the presentation of papers, debates and encounters on arts, beliefs, rituals, myths, traditions, and customs, and whatever else inspires the human imagination and creativity. Participants may have one of three possible statuses:

Active member presenting a paper (the title of the proposed paper and a short abstract should be included).

Student and/or voluntary member to help at the event (a commitment to attend and actively help during the entire duration of the Congress should be included).

Observer, coming to listen, including people accompanying active members, (reservations are required to get seats during the lectures and other events).

Each accepted paper will be published in an issue of **EXPRESSION** journal, according to when presented, from now till five months before the opening of the Congress (1 April 2021). The resulting book, collecting all the papers, is intended to be presented at the Congress. The texts will be available to all participants of the session at the Congress; each paper will be allowed up to 20 minutes, followed by

five minutes of questions and debate. Potential participants are asked not to leave it to the last minute, and submit their papers so that they may be published and distributed in forthcoming issues of **EXPRESSION**. Pre-congress publication is important to awaken interest, grant participation in debates and ensure a large distribution for the article.

Colleagues, students, and friends wishing to participate are invited to submit a preliminary registration, indicating the status desired, adding the relevant statements, providing name, postal address, and email, along with a copy of an identity document, to CISENP SESSION CONGRESS 2021, email <atelier.etno@gmail.com>. The oral presentation of this session may be in any language accepted by the organizers of the congress. Texts should be in English (American spelling) in order to be published in **EXPRESSION** and the planned book.

Papers are submitted for the evaluation of reviewers. Our engagement to publish accepted papers is confirmed even if, for unexpected reasons, the congress should be delayed or canceled. Texts may conform to one of three categories:

1. Short notes and posters, up to 1,500 words.
2. Papers, between 1,500 and 4,000 words.
3. Leading lectures (concerning major themes of world relevance), up to 6,000 words.

Texts should be in Word; illustrations, separate from the text, should have a definition of 300 dpi. Each illustration should have a caption and be pertinent to the text. All the material presented, text and illustration, should be free from copyright and from any other limitation or cost. The authors are responsible for what they submit. Each paper should have a short title, preferably no longer than one line. A summary of up to 200-300 words should introduce the text as an abstract, which will be submitted to be published in the general book of abstracts of the Congress.

Please try to present your proposals before 22 December 2020. The deadline for submitting any item to be published, that is, proposals of titles and summary, before 30 January 2021. Final complete papers should be submitted before 1 April 2021.

WHAT IS ATELIER?

Atelier Research Center for Conceptual Anthropology is a workshop for research, experiment, and debates on intellectual and spiritual expressions: traditions, art, religion, and other social and conceptual aspects.

It is a meeting place for the humanist sciences, where artists, philosophers, anthropologists, semioticians, psychologists, and students of other disciplines can find a common language. Atelier organizes meetings, seminars, and exhibitions, and has a publishing department, a space for exhibitions, and a laboratory and meeting place in Valcamonica in the Italian Alps. It is open to all those wishing to participate and share knowledge, ideas, and debates.

WHAT IS CONCEPTUAL ANTHROPOLOGY?

In a previous issue of *EXPRESSION* (29) a detailed description was presented of conceptual anthropology, which interested readers may consult. Here a short summary is presented.

Conceptual anthropology is the discipline that looks at the meaning, motivations, and effects of human expressions. It analyzes the bases and drives of social and intellectual manifestations, behavioral habits, beliefs, rituals, and artistic creativity. The target is to acquire a broader consciousness of human behavior, actions and reactions, cultural processes, their roots, their potential progress or regression, and the outcomes. Initiated in order to be applied to archeological matters, to prehistoric and tribal art and to religious behavioral patterns, conceptual anthropology is fast expanding to other social issues.

Every human expression has its connotations that contain hints of its roots, motivations, and potential consequences. Arts, behavioral traditions, social ethics, and rituals and beliefs are cultural sources of information on behavioral trends. Rituals and beliefs derive from memory and influence behavior; arts reveal immaterial and emotional trends. Intellectual and spiritual expressions define the identity of cultures and the many traits of social and conceptual orientations.

The objective of conceptual anthropology is cultural consciousness, increasing the capacity for the perception of human behavior, social trends, and the ability to appraise them. Evaluations are concerned with potential ranges of evolution and change, not only in their social, economic, and technological aspects, but also in ethical, psychological, esthetic, and spiritual conditioning and consequential effects.

Faced with the fashion of extreme specialization, which risks reducing scholars to technicians and operators to ro-

bots, conceptual anthropology goes against the current. It relies on a broad cultural humanistic outlook and wide overviews. Technicians are useful and necessary, but conceptual anthropology proposes a new, albeit ancient, intellectual disposition, based on panoramic humanist and social perception and broad-minded overviews, backed by dynamic and practical analytical methods.

The multidisciplinary approach is a source for stimulating awareness, a beneficial enrichment of the intellect for young people of all ages.

Each discipline has its memory as a basis for the advancement of research and of the discipline itself. The free use of a combination of disciplines accumulates knowledge and balances concepts, in order to make a healthy and broader base of enquiry and thought. Every social, economic or political issue may be analyzed following the methods of conceptual anthropology.

Today, the media accumulate technical and historical memory and indoctrination. Artificial intelligence is a valuable consulting source. But the insights and associations of the human mind, uniting memory with emotions and intuitions, are still irreplaceable. Our being and our actions are rooted in memory, which is an immense multi-millenary accumulation of stored experiences, not necessarily conscious, but nevertheless active and reactive in our minds.

Human behavior is based on memory. When mistakes are made, they often derive from memory fogging. On the other hand, positive results come from the good use of logic dictated by intuition deriving from memory, may it be conscious or subconscious. Electronic memory is a useful tool, but we consider that the type of memory that turns into intuition and rediscovery, coming from the deep well of human minds, is a fundamental element for decision-making which is still an irreplaceable individual resource.

Conceptual behavior derives from the emotions of the moment, ages ago, in which the first man-shaped tools were produced to enhance the abilities of human hands. The same emotion recurs in the mind of a baby when his/her hand succeeds in holding an object for the first time. Human actions are caused and accompanied by premeditations based on evaluations of ability, the challenges of trials, and emotions of achievement. This applies both to individual beings and to individual societies.

By using the concepts and traditions of various disciplines and analytical systems, conceptual anthropology facilitates broad ranges of decision-making. Let the technicians and conceptual anthropologists be aware of their different roles, let them do their jobs and then enrich each other through the results of their commitment.

Research has a real social function and full gratification, when it produces culture. When culture is creative and in-

novative, it promotes intellectual growth and stimulates new thought. Conceptual anthropology, by its wide-ranging orientation, opens up the mind to broad ways of thinking. This new discipline took shape during a congress of the International Union of Prehistoric Sciences in Florianopolis, Brazil, in 2011, in the meeting of a session planned and chaired by Professor Anati. It was first named New Archeology and then Conceptual Anthropology. Atelier Research Center, based in Valcamonica, Italy, is its world center. Further development led to the creation of an editorial sector dedicated to conceptual anthropology, producing in six years over 50 books in Italian and English, and the quarterly journal **EXPRESSION**, in English, which reaches researchers, institutions, and other motivated readers in 80 countries. The over 200 authors are located in 42 countries of five continents.

Our world today, searching for its uncertain tomorrow, has a profound need for this kind of humanist orientation. Atelier Publications present studies and research on conceptual anthropology which are pleasant to read and help learning without the feel of studying.

For further information, consult the [Catalog of Atelier Books](#) and a complementary issue (29) of [Expression journal](#).

APPRENTICESHIP IN CONCEPTUAL ANTHROPOLOGY

Atelier Research Center for Conceptual Anthropology is accepting apprentices in conceptual anthropology from among graduate students and other seriously motivated candidates. The apprenticeship consists of the acquisition of practical operational abilities. Each candidate will receive individual attention, aimed at producing culture with the hands and mind, learning to do by doing. Applications or further information: <atelier.etno@gmail.com>.

WHAT IS CISENP?

CISENP is the International Scientific Commission on Research into the Intellectual and Spiritual Expression of Non-literate Peoples, an organ of UISPP, the Union Internationale des Sciences Préhistoriques et Protohistoriques. For additional information see the Notes and News of **EXPRESSION** 28. For contacts: <atelier.etno@gmail.com>. CISENP is a free association, and is free also from bureaucratic procedures. You become a member if you so decide, and ask <atelier.etno@gmail.com> to be included in the list of members. For the present year membership is free. Members receive the complimentary **EXPRESSION** quarterly journal free. Membership ceases if inactive for two years.

MEMBERSHIP OF THE UISPP

EXPRESSION quarterly e-journal was founded and is directed by Professor Emmanuel Anati. It is produced by Atelier Research Center for Conceptual Anthropology, and has the cooperation of UISPP-CISENP, an organ of the UISPP. UISPP also offers other facilities, including participation in its World Congress. For membership application contact the office of the General Secretary at: <loost@ipt.pt>.

HOW TO GET THE LAST ISSUE OF **EXPRESSION** FREE

Just send the following message to <atelier.etno@gmail.com>: "I wish to receive the last issue of **EXPRESSION** quarterly journal free of charge", and include your name, postal address, and country. Free issues are offered to individual readers, not to institutions. It may be easier to subscribe, but the last issue of the magazine is offered free to any individual person asking for it.

HOW TO SUBSCRIBE TO **EXPRESSION**

EXPRESSION is a quarterly e-journal in conceptual anthropology. The annual subscription includes the four annual issues: for 2020, issues 27–30. The current annual subscription for 2020 is €20.00 (c. US\$22.00) for individual subscribers and €40.00 (c. US\$44.00) for institutions. The cost of each back issue is €10.00 (c. US\$11.00).

Institutional subscribers for 2020 have the option of receiving the entire series of 26 back issues at the cost of €80.00. Until 22 December 2020, subscribers for 2020 get a 50% discount for their subscription for 2021 (4 issues, 31–34) at a cost of only €20.00.

Individual subscribers for 2020 have the option of receiving the entire series of 26 back issues at a cost of €40.00. Until 22 December 2020, subscribers for 2020 get a 50% discount for paying their subscription for 2021 (4 issues, 31–34) at a cost of only €10.00.

Your request should be addressed to <atelier.etno@gmail.com>, adding a note of your payment. Specify your full name and full mailing address, including country.

Payments in Euro: PayPal (atelier.etno@gmail.com); or bank transfer: Atelier, UBI Bank.

IBAN: IT84A0311154200000000000284,

BIC: BLOPIT22

HOW TO SUBMIT YOUR PAPER FOR EXPRESSION JOURNAL

Colleagues and readers are welcome to become authors of EXPRESSION quarterly journal. If planning to submit an article for publication, please consider that this journal is concerned with a broad horizon in the human and social sciences. Your paper will reach readers in 80 countries on five continents who are involved in various humanist disciplines, and your text should appeal to all of them, also to people who may not be specialists in the same field as yours. If you wish them to enjoy your writing you should be the first to enjoy what you are writing. Be simple and express clear ideas. Be stimulating and awaken queries. Authors are recommended to present papers which are both innovative and pleasant to read, avoiding dry technical reports or inventories. The journal does not publish purely descriptive chronicles and tries to avoid theoretical general

disquisitions. Make sure your material is supported by reliable documentation. Articles should have a specific topic, understandable from the title. The publishing language is English (American spelling). Articles are submitted for the evaluation of reviewers.

The recommended average length of each paper is 1,500–4,000 words. Articles counting less than 1,500 words may be considered for the *Notes and News* or for the “Discussion Forum”. Illustrations should be pertinent to the content. They should be calibrated to the resolution of 300 dpi, with a base of 14 cm. Each illustration should have an explanatory caption, including its source when relevant. Illustrations should be presented separately from the text. All the material presented, text and illustrations, should be free from copyright and any other obligation, and preferably not yet published elsewhere. Authors are fully responsible for the submitted text and illustrations.

EXPRESSION

GENERAL INDEX OF AUTHORS:

VOLUMES 1 TO 30

Acevedo Agustín

Vol.8, pp. 63-68, *Hunter-Gatherer Rock Art in Two Regions of Central-Southern Patagonia: Contrasting Visual Themes, Techniques and Landscapes* (with Dánae Fiore)

Al-Malabeh Ahmad

Vol.18, pp. 33-41, *Cult Sites and Art* (with Stephan F.J. Kempe)

Alves Da Mota Leidiana

Vol.14, pp. 54-64, *First Americans: Changes of Places, Changes of Theories* (with Santiago Wolnei Ferreira Guimaraes)

Amâncio Martinelli Suely

Vol.21, pp. 33-39, *the Dominant Morphological Rock Art Theme in 47 Archaeological Sites in the National Park of the Serra da Capivara, Pauí, Brazil: a Case Study* (with Michel Justamand, Gabriel Frechiani De Oliveira)

Anati Emmanuel

Vol.6, pp. 3-24, *Decoding Prehistoric Art: the Messages behind the Images*

Vol.14, pp. 7-10, *Travel and Migrations Tales in European Paleolithic Art*

Vol.15, pp. 7-13, *Decoding Prehistoric Art: Meaningful Examples of Gender Relations*

Vol.16, pp. 9-23, *Decoding Paleolithic Engravings on Bone*

Vol.18, pp. 8-20, *Forgotten Myths and Memories: the Art of Early Gatherers from Tanzania to a World Pattern*

Vol.20, pp. 4-8, *Menhir-Statues: What Was their Function?* (Discussion Forum)

Vol.21, pp. 7-9, *Dominant Themes in the Rock Art of Azerbaijan*

Vol.22, pp. 9-20, *Changing Themes in Valcamonica Rock Art*

Vol.23, pp. 7-23, *The Typology of Rock Art*

Vol.25, pp. 8-19, *Religions in Prehistoric Valcamonica*

Vol.26, pp. 8-18, *Male and Female Variability in the Rock Art of Azerbaijan*

Vol.27, pp. 13-19, *Reconsidering the Vulvar Stones of La Ferrassie (Dordogne)*

Vol.28, pp. 10-31, *Cultural Diffusion and Cultural Introversion in the Alps. Rock Art as a Source of History*

Vol.29, pp. 12-15, *Decoding Paleolithic Art and the Origins of Writing*

Vol.30, pp. 10-19, *Rethinking Jericho and the Birth of the World Earliest Town*

Anderson Shenandoah

Vol.21, pp. 16-22, *Understanding the Art of Rock Writing*

Arsenault Daniel

Vol.4, pp. 3-4, *Canadian Shield Rock Art and its Spiritual Dimension: an Informed Approach to the Tangible and Intangible Dimensions of Rock Art Sites in the Canadian Shield*

Vol.7, pp. 5-13, *The Canadian Shield Rock Art and Its Spiritual Dimension: Finding Some Tangible and Intangible Aspects of Rock Art Sites in the Canadian Shield through a Contextual Approach*

Arzarelo Marta

Vol.14, pp. 11-15, *The Bifacial Phenomenon across Time, Space and Variability*

Baghdasaryan Vard

Vol.21, pp. 40-48, *Linguistic Data on Old Armenian and Norse*

Intercultural Communication and the House of Being (with Vahan Vahan, Gregori Vahanyan)

Banerjee Ruman

Vol.26, pp. 42-50, *The Women of Central Indian Rock Art: Discovery, Documentation and Interpretation* (with Somnath Chakraverty, David W. Robinson)

Basile Mara

Vol.8, pp. 8-14, *Images in Time: an Overview of Rock Art Manifestations in the Fiambalà Region, Catamarca, Northwestern Argentina* (with Norma Ratto)

Bednarik Robert G.

Vol.14, pp. 16-21, *Pleistocene Maritime Colonizations*

Vol.12, pp. 8-10, *Questions and Answers about Art and Rock Art*

Vol.16, pp. 24-29, *Reading Messages into Palaeoart*

Vol.24, pp. 7-8, *No Greener Grass in the Arctic*

Belarmino, da Silva Vanessa

Vol.26, pp. 28-34, *Female Representations in Rock Art Scenes, São Raimundo Nonato-PI, Brazil* (with Gabriel Frechiani de Oliveira, Antoniel dos Santos Gomes Filho, Michel Justamand, Pedro Paulo Funar)

Belfer-Cohen Ana

Vol.5, p. 20, *A Natufian Mask Face Figurine: an Insight into the Nature of the Supernatural Being*

Bender Herman

Vol.28, pp. 32-45, *Sacred Numbers in Plains and Woodland Indian Cultures and Cosmologies*

Ben Nasr Jaâfar

Vol.8, pp. 15-20, *The Rock Art of Tunisia: When, Why and to Whom?*

Vol.10, pp. 7-9, *Sandal Engravings in the Village of Guermessa (South-east of Tunisia): a Graphic Memorizing of a Forgotten Berber Ritual?*

Benavente Martha E.

Vol.5, pp. 16-17, *The Set of El Arroyo de las Flechas Rock Art Engravings: Symbolic Associations in the Sierra El Alamo; Caborca in Sonora, Mexico*

Vol.6, pp. 109-120, *The Set of El Arroyo de las Flechas Rock Art Engravings: Symbolic Associations in the Sierra El Alamo; Caborca in Sonora, Mexico*

Berriet Margalit

Vol.5, p. 6, *Arts and Cultures are a Journey in the World of Mankind*

Vol.6, pp. 24-29, *Intellectual and Spiritual Expressions of Non-Literate Societies: Art and Culture, a Journey through the World of Mankind*

Vol.11, pp. 7-12, *Male + Female: Humanity: Male and Female in Prehistoric and Tribal Art*

Vol.13, pp. 16-21, *Abstract Signs and Symbols in Prehistoric to Modern Art*

Vol.18, pp. 21-28, *Memories: Grounds for Myth*

Vol.22, pp. 21-23, *The Arts and Society*

Berrocal Emilio G.

Vol.16, pp. 30-33, *The Forgotten Perception*

Bertilsson Ulf

Vol.4, p. 4, *Carved Footprints and Prehistoric Beliefs: Examples of Symbol and Myth - Practice and Ideology*

- Vol.6, pp. 9-46, *Carved Footprints and Prehistoric Beliefs: Examples of Symbol and Myth - Practice and Ideology*
- Bettencourt Ana M. S.**
Vol.5, p. 7, *Grid Patterns in the New Iberia Rock Art Iconography, Context and Interpretations*
- Binant Pascale**
Vol.4, p. 5, *Sexual Human Representations of the Paintings of Serra da Capivara, Brazil: Relations in Action, Narrative Relations?*
Vol.11, pp. 17-20, *Men, Women, Children, Anthropomorphs and Animals*
Vol.13, 9, Discussion Forum
- Bjork Carl**
Vol.11, pp. 13-16, *Not Always the Male*
- Bo Cao**
Vol.5, p. 8, *Research and Study on the Guizhou Rock Art Heritage*
- Bo Xiao**
Vol.5, pp. 26-27, *Discussion of Reproduction Worship in Chinese Rock Art* (with Zhang Jiaxin and Wang Zhaohui)
- Bonanno Anthony**
Vol.14, pp. 22-30, *The First Inhabitants of Malta*
Vol.28, pp. 46-55, *Hiatus or Continuity in Prehistoric Malta? From Early Neolithic to Temple Period*
- Bonnet-Balazut Amélie**
Vol.22, pp. 24-32, *Understanding the Art of Rock Writing*
Vol.30, pp. 20-29, *Paleolithic Art: the Animal Beginnings of History*
- Boro Luigi J.**
Vol.8, pp. 21-24, *Lluta Valley, Atacama Desert, Chile*
- Bouissac Paul**
Vol.4, p. 6, *Patterns and the Dawn of Cosmological Knowledge*
- Braun Ingmar M.**
Vol.10, pp. 10-14, *Interdisciplinary Interpretations of Anthropomorphic Composite Beings in European Upper Palaeolithic Cave Art: an Approach*
- Britten Brian**
Vol.11, pp. 21-25, *Bedford Barrens Petroglyphs*
- Burley Paul D.**
Vol.4, p. 7, *The Stonehenge Sacred Landscape, Pathway to the Stars*
Vol.7, pp. 14-25, *As Above, So Below: Unveiling the Truth about Stonehenge's Sacred Landscape*
- Bury Rick**
Vol.13, p. 8, Discussion Forum
- Chakravarty Kalyan Kumar**
Vol.12, pp. 11-15, *Is Art Necessary for Human Survival?*
- Chakravarty Somnath**
Vol.5, pp. 8-9, *Preliterate Art in India: a Source of Indigenous Knowledge, Ethno-history and Collective Wisdom*
Vol.7, pp. 26-39, *Pre-literate Art in India: a Source of Indigenous Knowledge, Ethnohistory and Collective Wisdom*
Vol.26, pp. 42-50, *The Women of Central Indian Rock Art: Discovery, Documentation and Interpretation* (with Ruman Banerjee, David W. Robinson)
- Chies Monia**
Vol.9, pp. 13-17, *Celebrating Three Hundred Years of Mani Stone Carving at the Tibetan Buddhist Site of Gyanak Mani, Yushu TA P(PRC)*
- Chippindale Christopher**
Vol.8, pp. 25-28, *Meaning in the Axe-Carvings on Stonehenge*
- Christie Jessica Joyce**
Vol.8, pp. 29-33, *Layered Messages Through Time: a Case Study of Blue Bull Cave, Canyon De Chelly, AZ, United States*
Vol.11, pp. 26-32, *Gendered Stone Cults in Pre-contact O'ahu, Hawaii*
- Coimbra Fernando**
Vol.4, pp. 7-8, *Archaeology, Rock Art, Archeoacoustics and Neuroscience: What Kind of Relation?*
Vol.8, pp. 34-36, *Semiotics in the Rock of the Signs (Barcelos, Portugal)*
Vol.13, p. 8, Discussion Forum
Vol.23, pp. 24-28, *Rock Art as a Mnemonic Process among Non-literate Societies*
- Clottes Jean**
Vol.13, pp. 22-24, *The Lascaux Shaft*
Vol.13, p. 8, Discussion Forum
Vol.25, pp. 20-26, *The Mythic Theme of the Fawn With Bird in the Pyrenean Magdalenian*
- Da Fonseca Azizo**
Vol.13, p. 9, Discussion Forum
- Dahl Ivar**
Vol.8, pp. 37-38, *Danish Viking Marks on Stone?*
- Dash Jagannath**
Vol.13, pp. 25-32, *Text, Context and Symbolism in Saora Art: an Anthropological Analysis*
- De Bie Marc**
Vol.21, pp. 49-55, *Settlement Spatiality Reflecting Spirituality: Searching for High-order Cultural Expressions of Final Palaeolithic Communities in Northwestern Europe* (with Jessie Van Cauter)
- De Figueiredo Sofia Soares**
Vol.8, pp. 39-43, *Paintings from Northeast Portugal: beyond Script and Art*
- Delnoy David**
Vol.9, pp. 18-20, *The Petroglyphs of Huancor, Peru: Form and Meaning* (with Marcel Otte)
- Devage Dinesh**
Vol.25, pp. 70-85, *A Review of Rock Art Studies in Sri Lanka* (with Raj Somadeva, Anusha Wanninayake, Resta Fernando)
- Devage Nandadeva Bilinda**
Vol.9, pp. 67-71, *Rock Art of the Vedda People of Sri Lanka: When, Why and to Whom?*
- Devlet Ekaterina**
Vol.16, pp. 34-44, *The Skull Motif in Rock Art of Far East: Symbol of Death, Rebirth and the Link Between the Generations*
Vol.19, pp. 18-24, *X-Ray Style Anthropomorphs in Rock Art: the Challenge of Interpretation*
- Dieter Maurer**
Vol.13, pp. 33-41, *In Picture Genesis, the "Abstract" Precedes and Enables Depiction and Coding—Some Arguments and Speculations Based on the Investigation of Early Pictures in Ontogeny*
Vol.19, pp. 33-47, *Why Our Understanding of the Emergence and Early Development of Pictures in Ontogeny Must Undergo a Revision, and What This Revision May Offer for the Understanding of Early Prehistoric Pictures*
- Domingo Sanz Inés**
Vol.8, pp. 44-49, *LRA? (Levantine Rock Art)*
- Drabsch Bernadette**
Vol.8, pp. 50-57, *The Wall Art of Teleilat Ghassul, Jordan: When, Where, Why, to Whom and by Whom?*
- Dubey-Pathak Meenakshi**
Vol.27, pp. 20-37, *Women in Indian Rock Art*
Vol.29, pp. 16-25, *Ancient Myths Narrated by the Rock Art of Chhattisgarh State in India*
- Dubal Léo**
Vol.4, p. 8, *Heralding the Sun; 15, 5, the Art of Representation of Sexual Intercourse*
Vol.23, p. 29-31, *Tracing Back the Ages of Myths behind Calendar Eras*
- Farruja De La Rosa José**
Vol.14, pp. 31-37, *Neighbouring Lands ... Neighbouring Cultures? The North African (Amazigh) Roots of the Canary Islands*
Vol.16, pp. 45-53, *Reading the Message? The Problem within the Interpretations of Rock "Art" in the Canary Islands*
- Felding Louise**
Vol.8, pp. 58-62, *Rock Art: When, Why and to Whom? Two Danish Examples*
- Fernando Resta**
Vol.25, pp. 70-85, *A Review of Rock Art Studies in Sri Lanka* (with Raj Somadeva, Anusha Wanninayake, Dinesh Devage)

Ferraro Lorena

Vol.11, pp. 82-88, *Engraving Gender in Talampaya Rock Art, Argentina* (with Aixa Vidal and Maria Teresa Pagni)

Filho, dos Santos Gomes Antoniel

Vol.26, pp. 28-34, *Female Representations in Rock Art Scenes, São Raiumundo Nonato-PI, Brazil* (with Gabriel Frechiani de Oliveira, Michel Justamand, Vanessa Belarmino da Silva, Pedro Paulo Funar)

Fiore Dánae

Vol.8, pp. 63-68, *Hunter-Gatherer Rock Art in Two Regions of Central-Southern Patagonia: Contrasting Visual Themes, Techniques and Landscapes* (with Agustín Acevedo)

Fradkin Ariela

Vol.6, pp. 3-24, *Decoding Prehistoric Art: the Messages Behind the Images*

Fradzhev Arsen

Vol.4, p. 9, *The Treasures of the Third Millennium from the Russian City of Zvenigorod*

Franklin Natalie R.

Vol.8, pp. 69-73, *The Venus of Hohle Fels and Mobiliary Art from Southwest Germany* (with Phillip Habgood J.)

Frechiani De Oliveira Gabriel

Vol.21, pp. 33-39, *The Dominant Morphological Rock Art Theme in 47 Archaeological Sites in the National Park of the Serra da Capivara, Piauí, Brazil: a Case Study* (With Michel Justamand, Sueli Amâncio Martinelli)

Vol.24, pp. 18-25, *The Climate Change Occurring in the National Park Serra Da Capivara -Pi, Brazil, Seen Through the Rock Art of Pre-Colonial Human Societies: a Case Study* (with Michel Justamand, Pedro Paulo Funari)

Vol.26, pp. 28-34, *Female Representations in Rock Art Scenes, São Raiumundo Nonato-PI, Brazil* (with Michel Justamand, Antoniel dos Santos Gomes Filho, Vanessa Belarmino da Silva, Pedro Paulo Funar)

Funari Pedro Paulo A.

Vol.15, pp. 26-35, *Sexual Scenes in Serra Da Capivara Rock Art, Brazil* (with Michel Justamand)

Vol.24, pp. 18-25, *The Climate Change Occurring in the National Park Serra Da Capivara -Pi, Brazil, Seen Through the Rock Art of Pre-Colonial Human Societies: a Case Study* (with Michel Justamand, Gabriel Frechiani de Oliveira)

Vol.26, pp. 28-34, *Female Representations in Rock Art Scenes, São Raiumundo Nonato-PI, Brazil* (with Gabriel Frechiani de Oliveira, Antoniel dos Santos Gomes Filho, Vanessa Belarmino da Silva, Michel Justamand)

Forster Edmond

Vol.9, pp. 21-25, *Göbekli Tepe, Between Rock Art and Art*

Vol.10, pp. 15-21, *Art is Structural Magic, Not Illustration*

Vol.13, pp. 42-53, *Abstract Signs in Art are Shorthand for Cultural Structure*

Vol.14, pp. 38-47, *Colonial Artists Re-style the Same Characters*

Vol.15, pp. 19-24, *Pregnant is the Most Consistent Typological Gender*

Vol.16, pp. 54-62, *Recurrent Characters in Rock Art Reveal Objective Meaning*

Garcês Sara

Vol.21, pp. 22-32, *We, the Deer!?: Assessing a Nonlinear Visual System in the Tagus Basin, Portugal* (with Luiz Oosterbeek)

Garfinkel Alan P.

Vol.13, pp. 54-70, *Patterned Body Anthropomorphs of the Cosos: How Might Concentric Circle Psychograms Function in Ethnographic Schemes* (with Tirtha Prasad Mukhopadhyay)

Vol.16, pp. 126-144, *Neuro-ethological Messages from Rock Pictures* (with Tirtha Prasad Mukhopadhyay and Merchan Villalba Luis Ramon)

Gassowski Jerzy

Vol.18, pp. 28-32, *Early Medieval Slavs in their Myths and Archaeology*

Ghilotti Francesco

Vol.4, pp. 9-10, *Earth and Subterraneity in Early Sumerian Sources*

Giorgi Marisa Dawn

Vol.8, pp. 74-78, *Chalawong: a Forgotten Site*

Habgood Phillip J.

Vol.8, pp. 69-73, *The Venus of Hohle Fels and Mobiliary Art From Southwest Germany* (with Nathalie R. Franklin)

Hayden, Brian

Vol.24, pp. 8-18, *Why Ideologies and Values Changed: the Role of Aggrandizer Strategies and Secret Societies*

Hameau Philippe

Vol.8, pp. 79-82, *A Commemorative Schematic Iconography in the Neolithic Period*

He Biao

Vol.5, pp. 13-14, *Survey of the Status and Protection Strategy for the Ancient Rock Paintings in Guizhou*

Hegg Chris

Vol.9, pp. 26-28, *My First Petroglyph Language Symbols Deciphered in West Central Nevada*

Hermann Luc

Vol.25, pp. 27-42, *Music and Dance in Rock Art from Southeastern Kazakhstan and Kyrgyzstan*

Vol.27, pp. 38-55, *Sexuality in Rock Art from Southeastern Kazakhstan and Kyrgyzstan*

Vol.28, pp. 56-78, *Depictions of Felidae in the Rock Art of Kyrgyzstan and Southeastern Kazakhstan* (with Annik Schnitzler)

Hodgson Derek

Vol.12, pp. 26-47, *Why is Rock Art so Evocative? Affective Depiction of Animals from Coso Range Petroglyphs, Southwest California, and Isco, Hazaribagh, India* (with Tirtha Prasad Mukhopadhyay)

Hochroth Lysa

Vol.4, pp. 10-11, *From Survival to Conatus: Comparative Axiology from Engraving to Painting*

Holt Deb

Vol.11, pp. 39-46, *Sex and Gender in Wanjinia Rock Art, Kimberley, Australia*

Honoré Emmanuelle

Vol.9, pp. 29-33, *Pastoralists' Paintings of Wg35, Gilf El-Kebir: Anchoring a Moving Herd in Space and Time*

Hua Qiao

Vol.4, p. 15, *Research on File Construction System of Rock Art* (with Hui Liu and Li Bin Gong)

Huang Yaqi

Vol.5, p. 27, *Agricultural Worship in the Rock Art of Jiangjunya, Lianyungang City, East China* (with Zhang Jiaxin)

Imam Bulu

Vol.4, pp. 11-12, *Changing Intellectual and Spiritual Expressions of the Nomadic Birhor in Jharkhand*

Vol.7, pp. 40-44, *The Intellectual and Spiritual Expressions of a Nomadic Tribe, the Birhor (of Hazaribagh, Jharkhand, Eastern India)*

Vol.9, pp. 34-38, *What Kind of Society Produced the Rock Art of My Region (Hazaribagh, Jharkhand, East India)? Why Was It Produced, and to Whom Was the Rock Art Addressed?*

Vol.19, pp. 12-17, *Changing Intellectual and Spiritual Expressions of the Nomadic Birhor in Jharkhand*

Vol.22, pp. 33-38, *The Dominant Theme in Prehistoric and Tribal Art in Jharkhand, India*

Jin Yanqing

Vol.5, p. 21, *Research of Classification and Staging of Rock Art on Lusen Mountain in Qinghai* (with Zeming Shi)

Vol.7, pp. 101-108, *Research of Classification and Stages of the Rock Art on Lusen Mountain in Qinghai*

Justamand Michel

Vol.15, pp. 26-35, *Sexual Scenes in Serra da Capivara Rock Art, Brazil* (with Pedro Paulo A. Funari)

Vol.21, pp. 33-39, *The Dominant Morphological Rock Art Theme in 47 Archaeological Sites in the National Park of the Serra da Capi-*

vara, Piauí, Brazil: a Case Study (with Gabriel Frechiani De Oliveira, Suely Amâncio Martinelli)
Vol.24, pp. 18-25, *The Climate Change Occurring in the National Park Serra Da Capivara -Pi, Brazil, Seen Through the Rock Art of Pre-Colonial Human Societies: a Case Study* (with Gabriel Frechiani de Oliveira, Pedro Paulo Funari)
Vol.26, pp. 28-34, *Female Representations in Rock Art Scenes, São Raiumundo Nonato-PI, Brazil* (with Gabriel Frechiani de Oliveira, Antoniel dos Santos Gomes Filho, Vanessa Belarmino da Silva, Pedro Paulo Funari)
Kempe Stephan F.J.
Vol.18, pp. 33-41, *Cult Sites and Art* (with Ahmad al-Malabeh)
Khan, Majeed
Vol.24, pp. 25-35, *Deities and Gods: a Perspective on Prehistoric Religions in Arabia*
Vol.26, pp. 35-41, *Women in Prehistoric and Tribal Societies of Arabia*
Kiotsekoglou Stavros D.
Vol.30, pp. 30-40, *Parallel Lives of Two Districts' Cultural Landscapes: Albano di Lucania (Italy) and Lagyna (Greece)*
Kolber Jane
Vol.13, p. 10, Discussion Forum
Lambert Arnaud F.
Vol.8, pp. 83-85, *The Olmec-Style Rock Paintings of Oxtotitlán Cave: New Insights and Interpretations*
Vol.10, pp. 22-28, *Sorcerer-Kings in the Olmec Rock Art of Preclassic Mesoamerica*
Vol.11, pp. 47-52, *Exploring the Symbolic Expression of Gender Fluidity among the Potbelly Sculptures of Southeastern Mesoamerica: a Sociological Approach*
Vol.13, p. 13, Discussion Forum
Lambert Georges-N. (Joel)
Vol.9, pp. 124-129, *Elements to Approach the Magdalenians' Motivations, Who Lived in the Fontalès' Rockshelter* (with Anne-Catherine Welté)
Lbova Liudmila
Vol.12, pp. 16-25, *Anthropomorphic Figurines of Ice Age Art in Siberia: New Data and Perspectives on the Function of Prehistoric Mobile Art (Tarn-et-Garonne, France)*
Vol.23, pp. 35-44, *Ornamental Artefacts as a Way to Transfer and Store Information in the Upper Palaeolithic: the Mal'ta Collection (Siberia)* (with Tatyana Rostyazhenko)
Lenoir Michel
Vol.15, pp. 43-51, *Roc-de-Marcamps (France-Gironde): Sexual Human Representations* (with Anne-Catherine Welté and Marc Martinez)
Leone Maria Laura
Vol.10, pp. 29-35, *Meanings of the Deer Cave (Porto Badisco, Italy): Neolithic Art*
Vol.27, pp. 56-66, *The Woman in Ancient Daunian (Apulia, Italy): Considerations Inferred from Steles, Sources and Ceramics*
Lewis-Williams J. D.
Vol.8, pp. 91-96, *San Rock Art*
Vol.10, pp. 36-40, *Art, Religion and Myth: Were They Interrelated in Upper Palaeolithic Times?*
Li An
Vol.5, pp. 3-4, *Primitive Religious Information Embodied in Human-face Images of Rock Art of Zhuozishan Mountain, Wuhai, Inner Mongolia* (with Wu Junsheng)
Li Gang
Vol.4, p. 13, *Several Understandings on the Cave Paintings on the Turtle Stone in Anshan* (with Ni Xifeng)
Vol.5, p. 13, *Discovery and Pilot Study of the Jinsha River Chiselled Rock Art in Shangri-La*
Li Hao
Vol.5, pp. 13-14, *Survey of the Status and Protection Strategy for the Ancient Rock Paintings in Guizhou*
Vol.5, p. 25-26, *Research on the Development and Utilization of the Guizhou Ancient Petrography Research* (with Wu Xiaoping)

Lødøen Trond
Vol.9, pp. 43-47, *Rock Art as Mortuary Practice in the Late Mesolithic of Western Norway*
Lopes Cristina
Vol.9, pp. 48-51, *The Rock Art for Art's Sake; an Aesthetic Approach*
Vol.16, pp. 73-78, *Symbolism in Navajo Rock Art*
Vol.19, pp. 25-32, *Ataegina: a Peninsular Deity*
Lu Xiaohong
Vol.5, pp. 28-29, *Image Classification and the Symbolic Structure of the Rock Art at the Zuojiang River, Guangxi* (with Zhang Yasha and Wang Mingshui)
Luo Xiaoming
Vol.5, pp. 23-24, *Manipulation Tactics: Cultural Interpretations of Rock Art Images Massed in South-west China* (with Wang Liangfan)
Lymer Kenneth
Vol.8, pp. 97-101, *The Prehistoric Petroglyphs of Terekty Aulie in Central Kazakhstan*
Magnotta Angelina
Vol.9, pp. 52-54, *Rock Art in High Lunigiana (Ms, Italy) Rock Art Park of Lunigiana*
Vol.10, pp. 41-47, *The Myth of Cycnus and Ancient Carvings of the Archaic Apuan Ligurian People Near Pontremoli (MS, Italy)*
Vol.11, pp. 53-57, *Moon Worshipping in Prehistory: Fertility God or Goddess?*
Vol.15, pp. 40-42, *Male and Female in Symbolic Depiction in High Lunigiana*
Mailland Federico
Vol.5, pp. 14-15, *Lifestyle of Human Groups during Palaeolithic at Har Karkom*
Vol.9, pp. 54-56, *Rock Art and Pebble Drawings: Different Ways to Communicate the Same Message?*
Vol.10, pp. 48-52, *Ibex, Crescent and Swastika as Symbols of a Lunar God in the Rock Art of the Ancient Near East and Central Asia*
Vol.11, pp. 53-57, *Moon Worshipping in Prehistory: Fertility God or Goddess?*
Vol.20, pp. 11-23, *The Har Karkom Rock Art from the Hellenistic to Late Byzantine Period: Man as the Centre of the Universe*
Marler Joan
Vol.20, pp. 24-33, *Iconography and Orality: Mnemonic Patterns of Meaning in the Neolithic Societies of Southeastern Europe*
Martin Michel
Vol.9, pp. 62-64, *Comparative Study Megaceros-Rennes*
Martinez Marc
Vol.15, pp. 43-51, *Roc-de-Marcamps (France-Gironde): Sexual Human Representations* (with Anne-Catherine Welté and Michel Lenoir)
Meaden Terence
Vol.4, p. 14, *Aspects of the Nature and Purpose of Specific Symbols and Images in Non-literate Neolithic and Bronze Age Britain and Ireland*
Vol.6, pp. -108, *Aspects of the Nature and Purpose of Specific Symbols and Images in the Non-literate World of Neolithic and Bronze Age Britain and Ireland, including Stonehenge*
Vol.15, pp. 52-57, *Phallic and Vulvar Petroglyphs at Drombeg Stone Circle, Ireland, together with a Proposed Explanation Involving the Hieros Gamos*
Vol.16, pp. 79-91, *Shadows of Stone, Shadows of Ancestors - Studies Unveiling the Planned Sexual Drama of the Hieros Gamos, the Sacred Marriage*
Vol.18, pp. 42-47, *Paired Megaliths with Sculpted Images Facing Sunset at the Summer and Winter Solstices and the Implication of Paradisiacal Belief*
Vol.29, pp. 26-41, *The Sunrise Planning of 50 Irish Stone Circles and Comments on the Summer Solstice at Avebury and Stonehenge*
Menardi Noguera Alessandro
Vol.29, pp. 42-58, *Anoa-1 and The Body Proportions of the Niola Doa Corpulent Figures (Ennedi, Chad)*

Menéndez Beatriz

Vol.5, pp. 5-6, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Ramon Vinas, César Quijada, Albert Rubio and Neemias Santos)

Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Caborca, Sonora, Mexico* (with Ramon Vinas, César Quijada, Albert Rubio and Neemias Santos)

Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Caborca, Sonora, Mexico*

Merchan Villalba Luis Ramon

Vol.16, pp. 126-144, *Neuro-ethological Messages from Rock Pictures* (with Tirtha Prasad Mukhopadhyay and Alan P. Garfinkel)

Monamy Elisabeth

Vol.9, pp. 65-66, *Rock Art: When, Why and to Whom? The 'King' from Jubba (Saudi Arabia): a New Interpretation*

Mooketsi Cynthia Ontiretse

Vol.16, pp. 92-97, *"This Is a Butterfly and It Identifies a Water Container": the Relevance of Indigenous Knowledge in Archaeological Interpretations*

Moulton Susan

Vol.19, pp. 48-62, *Unbridling the Past: the Visual Language of Animacy in Palaeolithic Cave Painting at Chauvet*

Munoz Fernandez Emilio

Vol.7, pp. 45-56, *Colonization of the Upper Miera and Asón Valleys (Cantabria, Spain) in the Late Pleistocene and the Early Holocene* (with Mercedes Perez Bartolomé)

Mykhailova Nataliia

Vol.10, pp. 53-58, *Deer Offerings in the Archaeology and Art of Prehistoric Eurasia*

Vol.15, pp. 58-68, *Sex as Transition Between Worlds in Deer Hunting Society (Mythology and Rock Art)*

Vol.20, pp. 34-41, *"Celestial Deer" – the Flight from the Stone Age to the Middle Ages*

Nankela Alma

Vol.9, pp. 72-77, *Rock Art: When, Why and to Whom? Rock Art of Omandumba Farm on Erongo Mountain, Namibia*

Nash George

Vol.9, pp. 8-81, *Secret Signs: Mechanisms behind the Construction of Later Prehistoric Rock Art in Western Britain*

Navarro Alexandre Guida

Vol.16, pp. 63-72, *The Feast of Animals: Art and Images on Prehistoric Eastern Amazonian Stilt Houses*

Neumayer Erwin

Vol.13, p. 10, Discussion Forum

Nhamo Ancila

Vol.9, pp. 82-85, *Encoding Identity: Spatial Motif Variation as an Answer to When, Why and for Whom Rock Art was Produced in Zimbabwe*

Vol.12, pp. 48-56, *Male Versus Female: Variation in Representations of Males and Females in the Hunter Gatherer Rock Art of Southern Africa*

Ni Xifeng

Vol.4, p. 13, *Several Understandings on the Cave Paintings on the Turtle Stone in Anshan* (with Li Gang)

Nykonenko Dmytro

Vol.24, pp. 49-62, *Rock Art from the Western Edge of the Steppe: Engravings Inside the Bull Grotto at the Kamyana Mohyla Site* (with Simon Radchenko)

Ogawa Masaru

Vol.9, pp. 86-87, *Rock Art: When, Why and to Whom? Rock Art from Temiya and Fugoppe Caves*

Oosterbeek Louiz

Vol.4, p. 15, *Symbols as Persona in the Dawn of Food Production in the Alto Ribatejo, Portugal*

Vol.21, pp. 22-32, *We, the Deer!? Assessing a Nonlinear Visual System in the Tagus Basin, Portugal* (with Sara Garcês)

Orefici Giuseppe

Vol. 30, pp. 41-57, *The Geoglyphs: Open Spaces and Collective Ceremonies in the Nasca World*

Otte Marcel

Vol.4, p. 16, *The Prehistory of the Portrait*

Vol.7, pp. 57-60, *The Portrait in Prehistory*

Vol.9, pp. 18-20, *The Petroglyphs of Huancor, Peru: Form and Meaning* (with David Delnoy)

Vol.12, pp. 57-60, *Duality in Arts*

Vol.14, pp. 48-53, *The Chauvet Masks*

Pagni Maria Teresa

Vol.11, pp. 82-88, *Engraving Gender in Talampaya Rock Art, Argentina* (with Aixa Vidal and Lorena Ferraro)

Palma Dias Jacinto

Vol.16, pp. 98-111, *Circular Architectures and Cyclical Eternities in Archaic Portugal*

Palonka Radoslaw

Vol.16, pp. 112-125, *Shamans, Spirals and Warriors - Rock Art in Castle Rock Pueblo Community, Colorado, USA through Native American Oral Traditions and Archaeological Interpretations*

Patterson Carol

Vol.22, pp. 39-49, *Cultural Affiliations of the Western Basketmaker II Style Petroglyphs of American Southwest: Keres*

Vol.25, pp. 43-69, *Cultural Affiliations of the Western Basketmaker II-PIII Style: Petroglyphs of the American Southwest: Zuni*

Vol.27, pp. 67-82, *Mythical Women in the Prehistoric Art of Southeast Utah*

Vol.29, pp. 59-71, *Katsina Runners in the Prehistoric Art of the American Southwest, 1000 BCE-CE 1300*

Pérez Crespo Armando

Vol.24, pp. 35-49, *The Tlaloc Prototype: Depictive Practices in Rain-Praying Cultures of del Bajío, the Southern Fringe of Aridoamerica* (with Tirtha Prasad Mukhopadhyay)

Pérez Bartolomé Mercedes

Vol.7, pp. 45-56, *Colonization of the Upper Miera and Asón Valleys (Cantabria, Spain) in the Late Pleistocene and the Early Holocene* (with Fernandez Emilio Munoz)

Prasad Awadh Kishore

Vol.9, pp. 88-96, *Rock Art of Southern Bihar and Adjoining Jharkhand in Eastern India: When, Why and to Whom?*

Vol.20, pp. 42-51, *Predominant Ritual and Ceremonial Trends in the Rock Art of Eastern India, with Special Reference to Southern Bihar and Adjoining Jharkhand*

Qian Sheng You

Vol.5, p. 26, *Using the Montage Technique to Read Various Cave Painting Sites in Guizhou Plateau*

Quijada César

Vol.5, pp. 5-6, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, Neemias Santos, Albert Rubio and Ramon Vinas)

Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, Neemias Santos, Albert Rubio and Ramon Vinas)

Radchenko Simon

Vol.24, pp. 49-62, *Rock Art from the Western Edge of the Steppe: Engravings Inside the Bull Grotto at the Kamyana Mohyla Site* (with Dmytro Nykonenko)

Radhakant Varma

Vol.9, pp. 120-122, *Rock Art: When, Why and to Whom?*

Ratto Norma

Vol.8, pp. 8-14, *Images in Time: an Overview of Rock Art Manifestations in the Fiambalá Region, Catamarca, Northwestern Argentina* (with Mara Basile)

Rebay-Salisbury Katharina

Vol.11, pp. 58-62, *Male, Female and Sexless Figs of the Hallstatt Culture: Indicators of Social Order and Reproductive Control?*

Rifkin Riaan F.

Vol.9, pp. 97-101, *Pleistocene Figurative Portable Art from Apollo 11, Southern Namibia*

Robertson John H.

Vol.16, pp. 5-6, Discussion Forum

Robinson David W.

Vol.26, pp. 42-50, *The Women of Central Indian Rock Art: Discovery, Documentation and Interpretation* (with Somnath Chakraverty, Ruman Banerjee)

Rocchitelli Andrea

Vol.4, pp. 16-17, *The Dynamics of Mental Movements as a Base for the Intellectual and Spiritual Expressions of Non-literate People and the Origin of Development of the Human Being*

Vol.7, pp. 61-63, *The Dynamics of Mental Movements as a Base for the Intellectual and Spiritual Expressions of Non-literate People and the Origin of Development of the Human Being*

Ronen Avraham

Vol.9, p. 102, *Why Art?*

Ross Jane

Vol.11, pp. 39-46, *Sex and Gender in Wanjina Rock Art, Kimberley, Australia*

Rostyazhenko Tatyana

Vol.23, pp. 35-44, *Ornamental Artefacts as a Way to Transfer and Store Information in the Upper Palaeolithic: the Mal'ta Collection (Siberia)* (with Liudmila Lbova)

Rubio Albert

Vol.5, pp. 5-6, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Ramon Vinas and Neemias Santos)

Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Caborca, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Ramon Vinas and Neemias Santos)

Sachin Kr Tiwary

Vol.11, pp. 73-75, *Are Men only Active in the Post War? Truth in Light of the Folklore of the Kaimun Tribes*

Vol.18, pp. 56-63, *Ethno Rock Art: Beliefs, Rituals and Experiences, the Study of Ferocious Depictions inside Khoh in Light of the Beliefs of Kaimur Inhabitants*

Sansoni Umberto

Vol.4, p. 17, *The Rock Art of Indo-European Cultures: Concordances, Logics and Possible Common Values*

Vol.7, pp. 75-89, *The Rock Art of Indo-European Cultures: Concordances, Logics and Possible Common Values*

Santos Estévez Manuel

Vol.9, pp. 103-106, *Rock Art: When, Why and to Whom? Atlantic Rock Art in Galicia and Northern Portugal*

Santos Neemias

Vol.5, pp. 5-6, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Albert Rubio and Ramon Vinas)

Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Albert Rubio and Ramon Vinas)

Schnitzler Annik

Vol.28, pp. 56-78, *Depictions of Felidae in the Rock Art of Kyrgyzstan and Southeastern Kazakhstan* (with Luc Hermann)

Searight-Martinet Susan

Vol.9, pp. 107-108, *Oum La Leg, a Rock Art Site in the Moroccan Anti-Atlas: Who Did the Engravings, When and Why?*

Vol.10, pp. 59-61, *Engravings of Sacred, Ideological or Symbolical Signs in Imaoun, a Prehistoric Tribal Meeting Place in Southern Morocco*

Vol.11, pp. 63-67, *The Representation of Males and Females in the Rock Art of Moroccan High Atlas Mountains*

Shaham Dana

Vol.5, p. 20, *A Natufian Mask Face Figurine: an Insight into the Nature of the Supernatural Being*

Sharpe Kate E.

Vol.9, pp. 109-115, *Connecting the Dots: Cupules and Communication in the English Lake District*

Shems Krasniqi

Vol.4, p. 13, *Some Aspects of the Contemporary Use of Ancient Symbols*

Vol.5, p. 21, *Investigation and Research into Dahongyan Rock Art in Zhenfeng County, Guizhou Province* (with Zhang Xiaoxia)

Vol.5, p. 21, *Research of Classification and Staging of Rock Art on Lusen Mountain in Qinghai* (with Jing Yanqing)

Vol.7, pp. 101-108, *Research of Classification and Stages of the Rock Art on Lusen Mountain in Qinghai* (with Jing Yanqing)

Vol.9, pp. 39-42, *The Reflection of Social Structure through Rock Art: the Case of Zatriq, Kosovo*

Vol.15, pp. 36-39, *Symbols of Fertility and Protection*

Vol.19, pp. 63-67, *The Use of ancient Symbols through the Ages*

Smith Benjamin

Vol.13, p. 9, Discussion Forum

Sognnes Kalle

Vol.12, pp. 61-66, *From Where to Why: Some Examples of Rock Art Locations in Scandinavia*

Vol.18, pp. 48-55, *Rock Art at Bardal in Trøndelag, Norway: Myths and Memories?*

Somadeva, Raj

Vol.25, pp. 70-85, *A Review of Rock Art Studies in Sri Lanka* (with Anusha Wanninayake, Dinesh Devage, Resta Fernando)

Soukpova Jitka

Vol.9, pp. 116-120, *Tassili Paintings: Ancient Roots of Current African Beliefs?*

Vol.11, pp. 68-72, *Leading Role of Male Hunters in Central Saharan Prehistoric Rituals*

Vol.12, pp. 67-72, *Saharan Rock Art Sites as Places for Celebrating Water*

Vol.15, pp. 69-76, *Penis only for Gods? Sexual Imagery in the Earliest Central Saharan Rock Art*

Vol.26, pp. 51-64, *Women and Prehistoric Rituals in the Round Head Rock Art of the Sahara*

Vol.28, pp. 79-90, *Rain and Rock Art in the Sahara: a Possible Interpretation*

Vol.30, pp. 58-73, *Prehistoric Colonization of the Central Sahara: Hunters Versus Herders and the Evidence from the Rock Art*

Steiner George F.

Vol.12, pp. 73-94, *The Goddess and the Copper Snake: Metallurgy, Star-Lore, and Ritual in the Rock Art of Southern Levant*

Subhash Chandra Malik

Vol.9, pp. 57-61, *Rock Art: a Universal Creative Act*

Sun Xiaoyong

Vol.5, p. 22, *Field Survey and Analysis of Mask Worship in the Xiliaohu River Basin* (with Zhang Jiaxin)

Tanda Giuseppe

Vol.7, pp. 90-100, *The Use of Burial Space and Social Relations between the Late Neolithic Age and the Copper Age in Sardinia*

Tirtha Prasad Mukhopadhyay

Vol.12, pp. 26-47, *Why is Rock Art so Evocative? Affective Depiction of Animals from Coso Range Petroglyphs, Southwest California, and Isco, Hazaribagh, India* (with Derek Hodgson)

Vol.13, pp. 54-70, *Patterned Body Anthropomorphs of the Cosos: How Might Concentric Circle Psychograms Function in Ethnographic Schemes* (with Alan P. Garfinkel)

Vol.16, pp. 126-144, *Neuro-ethological Messages from Rock Pictures* (with Alan P. Garfinkel and Luis Ramon Merchan Villalba)

Vol.24, pp. 35-49, *The Tlaloc Prototype: Depictive Practices in Rain-Praying Cultures of del Bajío, the Southern Fringe of Aridoamerica* (with Armando Pérez Crespo)

Tsoni Tsonev

Vol.4, p. 18, *3D Reconstructions of the Sculptured Emotions in the Copper Age Eastern Balkans*

Vol.12, pp. 95-100, *Art and "Primitive" Cultures*

Vol.13, pp. 71-77, *Conceptualizing the Nature of Abstract Representations in Prehistory*

Ulbrich Hans-Joachim
Vol.10, pp. 62-65, *Communicating with the Gods: Superstition on Fuerteventura and Lanzarote*

Vahanyan Gregor
Vol.4, p. 19, *Beginning of Natural Philosophy and Metaphysics in the Rock Arts of Armenia*
Vol.10, pp. 66-68, *The Role of Rock Art Clusters in Mythology, Religion and Magic: the Concept of the Knowledge Spiral*
Vol.16, pp. 145-156, *Frigg, Astghik and the Goddess of Crete Island*
Vol.18, pp. 64-70, *New Perspective on the Theory of the 'Main Myth'*
Vol.19, pp. 68-77, *Sixteen Wonders of World Visual Art*
Vol.21, pp. 40-48, *Linguistic Data on Old Armenian and Norse Intercultural Communication and the House of Being* (with Vahan Vahanyan and Vard Baghdasaryan)

Vahanyan Vahan
Vol.16, pp. 145-156, *Frigg, Astghik and the Goddess of Crete Island*
Vol.21, pp. 40-48, *Linguistic Data on Old Armenian and Norse Intercultural Communication and the House of Being* (with Gregori Vahanyan and Vard Baghdasaryan)

Van Cauter Jessie
Vol.21, pp. 49-55, *Settlement Spatiality Reflecting Spirituality: Searching for High-order Cultural Expressions of Final Palaeolithic Communities in Northwestern Europe* (with Marc De Bie)

Van Gelder Leslie
Vol.13, pp. 78-86, *Finger Flutings, Tectiforms, and the Audacity of Hope*

Van Hoek Marten
Vol.11, pp. 76-81, *It's all about the Head. Morphological Basis for Cephalic Differences in Male and Female Anthropomorphic Imagery in Desert Andes Rock Art*

Vetrov Viktor
Vol.5, p. 23, *A Complex Research of Paleolithic Art in Ukraine*

Vialou Denis
Vol.13, p. 8, *Discussion Forum*

Vidal Aixa
Vol.11, pp. 82-88, *Engraving Gender in Talampaya Rock Art, Argentina* (with Lorena Ferraro and Maria Teresa Pagni)
Vol.23, pp. 45-48, *Memories of the ocean*

Villa Marta and Nisi Domenico
Vol.19, pp. 78-82, *New Interpretative Hypotheses on a Fresh Interpretation of the Venus à La Corne, a Palaeolithic Bas-Relief Figurine*

Vinas Ramon
Vol.5, pp. 5-6, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Albert Rubio and Neemias Santos)
Vol.7, pp. 64-74, *A Ritual Space with Paintings and Engravings in the La Calera Rock Art Set, Caborca, Sonora, Mexico* (with Beatriz Menéndez, César Quijada, Albert Rubio and Neemias Santos)

Waller Steven J.
Vol.9, p. 123, *Communicating with the Spirit Artists Who Pre-dated Sound Wave Theory Selected Echoing and Reverberant Environments to Depict Echo and Thunder Spirits in Attempts to Communicate with These Spirits*
Vol.10, pp. 69-72, *Thunder Gods in Prehistoric Art, Mimicking Thunder for Rainmaking Rituals and the Psychoacoustics of Reverberation*

Wang Liangfan
Vol.5, pp. 23-24, *Manipulation Tactics: a Cultural Interpretations of Rock Art Images Massed in Southwest China* (with Luo Xiaoming)

Wang Mingshui
Vol.5, pp. 28-29, *Image Classification and the Symbolic Structure of the Rock Art at the Zuojiang River, Guangxi* (with Zhang Yasha and Lu Xiaohong)

Wang Xiaokun
Vol.5, pp. 27-28, *Research on Face Rock Carvings in Northern China* (with Zhang Wenjing)

Wang Xu

Vol.5, pp. 30-31, *Petroglyphs on the Pacific Rim: the Rock Art of the Xiliaohe River and the Amur River* (with Zhu Lifeng)

Wang Zhaohui

Vol.5, pp. 26-27, *Discussion of Reproduction Worship in Chinese Rock Art* (with Bo Xiao and Zhang Jiaxin)

Wanninayake Anusha

Vol.25, pp. 70-85, *A Review of Rock Art Studies in Sri Lanka* (with Raj Somadeva, Dinesh Devage, Resta Fernando)

Warland Jacinta

Vol.20, pp. 52-61, *The Answers are Living in the Stones*

Welté Anne-Catherine

Vol.9, pp. 24-129, *Elements to approach the Magdalenians' motivations, Who Lived in the Fontalès Rockshelter, Tarn-Et-Garonne, France* (with Lambert Georges-N. Joel)

Vol.15, pp. 43-51, *Roc-De-Marcamps (France-Gironde): Sexual Human Representations* (with Michel Lenoir and Marc Martinez)

Wolnei Ferreira Guimarães Santiago

Vol.11, pp. 33-38, *Feminine Sexuality in Prehistoric Rock Art: a Path toward Structures of Mind*

Vol.14, pp. 54-64, *First Americans: Changes of Places, Changes of Theories* (with Leidiana Alves Da Mota)

Vol.18, pp. 71-76, *The Neanderthal Construction in Bruniquel Cave, France: the Origin of Myths through a Discussion of Anthropological Structuralism*

Vol.23, pp. 32-34, *Human Memory as Archetype: Implications for Rock Art*

Vol.26, pp. 19-27, *Gender in Prehistoric Rock Art: the Case of Seridó, Brazil*

Wu Jiakai

Vol.5, pp. 24-25, *Discovery and Study of Two Groups of Writing on the Cliff in the Hongshan Culture Area*

Wu Junsheng

Vol.5, pp. 3-4, *Primitive Religious Information Embodied in Human-face Images of Rock Art of Zhuozishan Mountain, Wuhai, Inner Mongolia* (with Li An)

Wu Xiaoping

Vol.5, pp. 25-26, *Research on the Development and Utilization of the Guizhou Ancient Petrography Research* (with Li Hao)

Yu Zhuoran

Vol.4, p. 20, *On the Disciplines of Taking Images in Chinese Rock Art* (with Zhu Yuan)

Yuan Zhu

Vol.4, p. 20, *On the Disciplines of Taking Image in Chinese Rock Art* (with Yu Zhuoran)

Zhang Jiaxin

Vol.5, p. 27, *Agricultural Worship in the Rock Art of Jiangjunya, Lianyungang City, East China* (with Huang Yaqi)

Vol.5, pp. 26-27, *Discussion of Reproduction Worship in Chinese Rock Art* (with Bo Xiao and Wang Zhaohui)

Vol.5, pp. 27-28, *Field Survey and Analysis of Mask Worship in the Xiliaohe River Basin* (with Sun Xiaoyong)

Zhang Li-Na

Vol.5, pp. 17-18, *The Special Characteristics of the Zhenfeng Rock Art in Guizhou*

Zhang Xiaoxia

Vol.5, p. 21, *Investigation and Research into Dahongyan Rock Art in Zhenfeng County, Guizhou Province* (with Shi Zeming)

Zhang Wenjing

Vol.5, pp. 27-28, *Research on Face Rock Carvings in Northern China* (with Wang Xiaokun)

Zhu Houqiu

Vol.5, pp. 29-30, *An Ancient Sacrificial Place: Research into Rock Art in Xianju*

Zhu Lifeng

Vol.5, pp. 30-31, *Petroglyphs on the Pacific Rim: the Rock Art of the Xiliaohe River and the Amur River* (with Wang Xu)

Zhu Qiuping

Vol.5, p. 31, *Significance of the Stabilization Works Which Protect the Rock Art Painting in Ningming District*

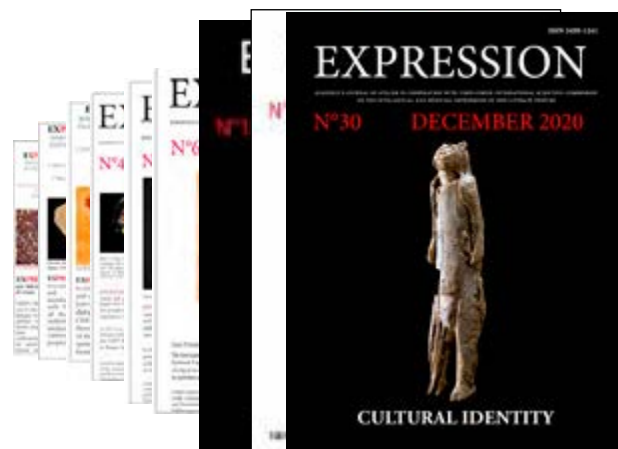
EXPRESSION
NUMBER OF AUTHORS PER COUNTRY
VOLUMES 1 - 30

221 AUTHORS from 44 COUNTRIES

COUNTRY	NUMBER OF AUTHORS	COUNTRY	NUMBER OF AUTHORS
Argentina	7	Kosovo	1
Armenia	3	Malta	1
Australia	9	Mexico	4
Austria	3	Morocco	1
Belgium	6	Namibia	1
Botswana	1	Netherlands	1
Brazil	10	Norway	2
Bulgaria	1	Perù	1
Canada	5	Poland	2
China	29	Portugal	8
Colombia	1	Russia	4
Czech Republic	1	Saudi Arabia	1
Denmark	2	South Africa	4
France	13	Spain	8
Germany	1	Sri Lanka	5
Greece	1	Sweden	1
Hungary	1	Switzerland	4
Israel	3	Tunisia	1
India	11	UK	9
Italy	15	Ukraine	4
Japan	1	USA	17
Jordan	1	Zimbabwe	1

EXPRESSION

N°30 December 2020



General Editor Emmanuel Anati
Secretariat Antonia Mensi
Angelica Zucchi
Elisa Pedretti
Copy Editor Penny Butler
Graphic Editor Stefania Carafa
Editorial Team Alisa Caine
Ariela Fradkin
Alan Garfinkel
Hochroth Lysa
Federico Mailland
John H. Robertson
Roy Strauss

Annual Subscription (4 issues)
Individual subscribers € 20
Institutional subscribers € 40

EXPRESSION is published by Atelier Editions
in cooperation with UISPP - CISENP.
News and texts should be submitted to
atelier.etno@gmail.com

*Atelier Research Centre
Città della Cultura, Via Marconi, 7
25044 Capo di Ponte (BS), Italy*

To subscribe or unsubscribe contact:
<atelier.etno@gmail.com>

TO RECEIVE INFORMATION FROM ATELIER

Dear Reader,

-If you do not wish to continue receiving information from Atelier, please send the following message to:

<atelier.etno@gmail.com>

“Please **cancel** from your mailing list the following address:.....”

Your email will be cancelled.

-If you wish to receive Atelier mail at a different address, please send us the following message:

“Please **change** my mailing address: Previous mailing address:.....; New mailing address:.....”

-If you wish other colleagues or friends to receive Atelier news, please send the following message:

“Please **add** the following email to your mailing list:.....”

Many thanks for your cooperation,

Atelier Secretariat

The editors do not necessarily agree with the ideas of the authors. The authors are the only responsible for the ideas, the texts and the illustrations they present.

ISSUES OF EXPRESSION: CONTENTS



Newspaper Rock, Utah

Expression 1

September 2013

An Introduction to Conceptual Anthropology and topics to be discussed in the following issues of Expression Magazine



Maori chief with moko, Captain Cook expedition.

Expression 2

November 2013

What Caused the Creation of Art?

Conclusions of the XXV Valcamonica Symposium. With papers by Massimo Minini (Italy), Fernando Coimbra (Portugal), Johannes Loubser (USA), Tang Huisheng (China), Claudine Cohen (France), Michael Francis Gibson (Belgium), Robert Bednarik (Australia), Emmanuel Anati (Italy).



San Rock Art (South Africa)

Expression 3

January 2014

Discussion about the Targets of Expression Research Group



Figura 1. Toca de Salto, Serra da Capivara, Piauí, Brazil. Symbolic male character with his acolyte character, a pregnant woman.

Expression 4

April 2014

A Selection of Abstracts for Session a the Uispp World Congress “Atapuerca”,

Burgos, Spain With articles by Emmanuel Anati and Ariela Fradkin (Italy), Daniel Arsenault (Canada), Ulf Bertilsson (Sweden), Pascale Binant (France), Paul Bouissac (France), Paul D. Burley (UK), Fernando Coimbra (Portugal), Léo Dubal (France), Arsen Faradzhev (Russia), Francesco Ghilotti (Italy), Lysa Hochroth (France), Bulu Imam (India), Shemsi Krasniqi (Kosovo), Gang Li and Xifeng Li (China), G. Terence Meaden (UK), Louis Oosterbeeck (Portugal), Hua Qiao/Li Bin Gong and Hui Liu (China), Marcel Otte (Belgium), Andrea Rocchitelli (Italy), Umberto Sansoni (Italy), Tsoni Tsonev (Bulgaria), Gregor Vahanyan (Armenia), Huiling Yang (China), Yuan Zhu and Zhuoran Yu (China).



Expression 5

June 2014

Additional Abstracts for the UISPP World Congress “Atapuerca”, Burgos, Spain

With articles by Li An and Junsheng Wu (China), Aoyungerile and Ying An (China), Beatriz Menéndez/Quijada César/Vinas Ramon/Albert Rubio and Santos Neemias (Mexico, Spain), Margalit Berriet (France), Ana M.S. Bettencourt (Portugal), Bo Cao (China), Chakravarty Somnath (India), Manuel Edo/Ferran Antolín/Pablo Martínez/M^a Jesús Barrio, Elicinia Fierro/Trinidad Castillo/Eva Fornell/Georgina Prats/Remei Bardera and Concepció Castellana (Spain), Pengcheng Hu (China), Yanqing Jin and Xiaoxia Zhang (China), Fei Li (China), Gang Li (China), Hao Li and Biao He (China), Federico Maillad (Switzerland), Xiaomei Mu and Li-Na Zhang (China), Dana Shaham and Anna Belfer-Cohen (Israel), Zeming Shi/Xiaoxia Zhang and Yanqin Jing (China), Xiaoyong Sun and Jiaying Zhang (China), Viktor Vetrov (Ukraine), Liangfan Wang and Xiaoming Luo (China), Jiacao Wu (China), Qiuping Zhu (China), Liefeng Zhu and Xu Wang (China).



Expression 6

August 2014

Summaries of the Session at the UISPP Burgos Congress

With articles by Emmanuel Anati (Italy), Joaquín Arroyo (Mexico), Martha E. Benavente (Mexico), Margalit Berriet (France), Ulf Bertilsson (Sweden), Pascale Binant (France), Paul Bouissac (Canada), Fernando Coimbra (Portugal), Léo Dubal (France), Arsen Faradzhev (Russia), Ariela Fradkin (Italy), Francesco Ghilotti (Italy), Antonio Hernanz (Spain), Mercedes Iriarte (Spain), G. Terence Meaden (UK), Beatriz Menéndez (Spain), Hu Pengcheng (China), César Quijada (Mexico), Albert Rubio (Spain), Neemias Santos (Spain), Alejandro Terrazas (Mexico), Tsoni Tsonev (Bulgaria), Gregor Vahanyan (Armenia), Ramon Viñas (Spain)



Expression 7

March 2015

Spiritual Dimensions of Rock Art

With articles by Daniel Arsenault (Canada), Paul D. Burley (UK), Somnath Chakraverty (India), Bulu Imam (India), Mercedes Pérez Bartolomé and Emilio Muñoz Fernández (Spain), Marcel Otte (Belgium), Andrea Rocchitelli (Italy), Ramon Viñas/Albert Rubio/César Quijada/Joaquín Arroyo/Beatriz Menéndez and Neemias Santos (Mexico, Spain), Umberto Sansoni (Italy), Giuseppa Tanda (Italy), Zeming Shi and Yanqing Jing (China).

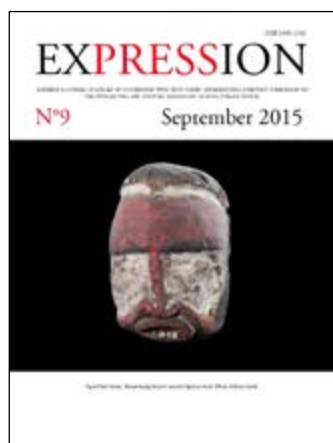


Expression 8

June 2015

Rock Art: When, Why and to Whom?

With articles by Mara Basile and Norma Ratto (Argentina), Jaâfar Ben Nasr (Tunisia), Luigi J. Boro (USA), Christopher Chippindale (UK), Jessica Joyce Christie (USA), Fernando Coimbra (Portugal), Ib Ivar Dahl (DK), Sofia Soares de Figueiredo (Portugal), Inés Domingo Sanz (Spain), Bernadette Drabsch (Australia), Louise Felding (Denmark), Dánae Fiore and Agustín Acevedo (Argentina), Natalie R. Franklin and Phillip J. Habgood (Australia), Marisa Dawn Giorgi (Australia), Philippe Hameau (France), Arnaud F. Lambert (USA), Arnaud F. Lambert (USA), J. David Lewis-Williams (South-Africa) and Kenneth Lymer (UK).

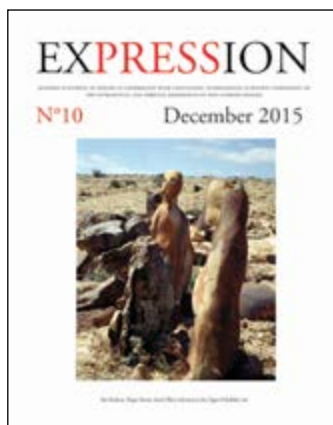


Expression 9 September 2015

Tribal and Prehistoric Art: When, Why and to Whom?

Presenting the WWW Project.

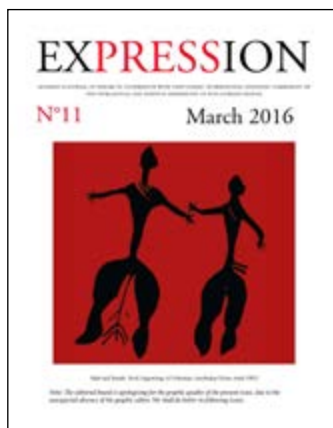
With articles by Monia Chies (Italy), David Delnoy and Marcel Otte (Belgium), Edmond Furter (South Africa), Chris Hegg (USA), Emmanuelle Honoré (UK), Bulu Imam (India), Shemsi Krasniqi (Kosovo), Trond Lødøen (Norway), Cristina Lopes (Portugal), Angelina Magnotta (Italy), Federico Mailland (Switzerland), Subhash Chandra Malik (India), Michel Martin (France), Elisabeth Monamy (France), Bilinda Devage Nandadeva (Sri Lanka), Alma Nankela (Namibia), George Nash (UK), Ancila Nhamo (Zimbabwe), Masaru Ogawa (Japan), Awadh Kishore Prasad (India), Riaan F. Rifkin (South Africa), Avraham Ronen (Israel), Manuel Santos Estévez (Portugal), Susan Searight-Martinet (Morocco), Kate E. Sharpe (UK), Jitka Soukopova (Italy), Radhakant Varma (India), Steven J. Waller (USA), Anne-Catherine Welté and Georges-N (Joel) Lambert (France).



Expression 10 December 2015

The Role of Religion, Magic and Witchcraft in Prehistoric and Tribal Art

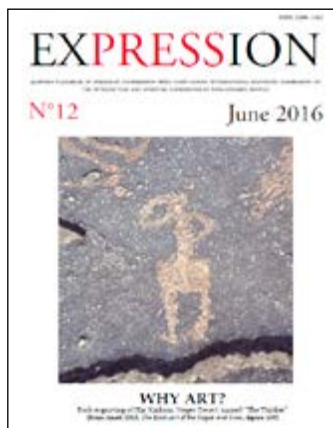
With articles by Jaâfar Ben Nasr (Tunisia), Ingmar M. Braun (Switzerland), Edmond Furter (South Africa), Arnaud F. Lambert (USA), Maria Laura Leone (Italy), J. D. Lewis-Williams (South Africa), Angelina Magnotta (Italy), Federico Mailland (Switzerland), Nataliia Mykhailova (Ukraine), Susan Searight-Martinet (Morocco), Hans-Joachim Ulbrich (Austria), Vahanyan Gregori (Armenia) and Steven J. Waller (USA).



Expression 11 March 2016

Male and Female in Prehistoric and Tribal Art

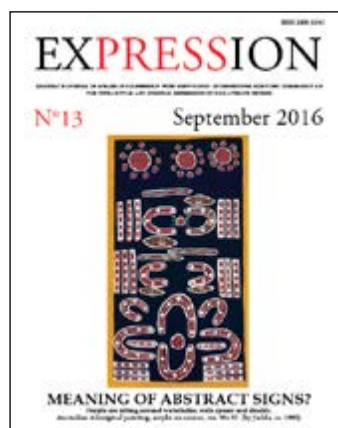
With articles by Margalit Berriet (France), Carl Bjork (USA), Pascale Binant (France), Brian Britten (Canada), Jessica Joyce Christie (USA), Santiago Wolnei Ferreira Guimaraes (Brazil), Deb Holt and Jane Ross (Australia), Arnaud F. Lambert (USA), Federico Mailland and Angelina Magnotta (Italy), Katharina Rebay-Salisbury (Austria), Susan Searight - Martinet (Morocco), Jitka Soukopova (Italy), Sachin Kr Tiwary (India), Maarten Van Hoek (Holland), Aixa Vidal/Lorena Ferraro and Maria Teresa Pagni (Argentina).



Expression 12 June 2016

Why Art?

With articles by Robert G. Bednarik (Australia), Kalyan Kumar Chakravarty (India), Liudmila Lbova (Russia), Tirtha Prasad Mukhopadhyay (Mexico) and Derek Hodgson (UK), Ancila Nhamo (Zimbabwe), Marcel Otte (Belgium), Kalle Sognnes (Norway), Jitka Soukopova (UK), George F. Steiner (Switzerland) and Tsoni Tsonev (Bulgaria).

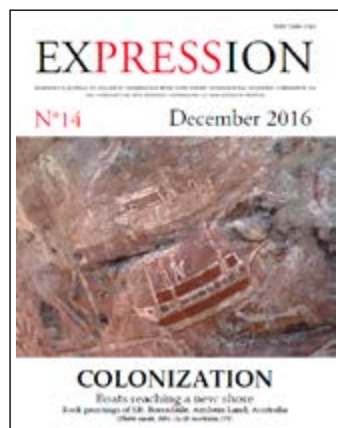


Expression 13

September 2016

Abstract Signs in Prehistoric and Tribal Art: Meaning and Problems of Interpretation

With articles by Margalit Berriet (France), Jean Clottes (France), Jagannath Dash (India), Maurer Dieter (Switzerland), Edmund Furter (South Africa), Thirtha Prasad Mukhopadhyay and Alan P. Garfinkel (Usa), Tsoni Tsonev (Bulgaria) and Leslie Van Gelder (Usa).

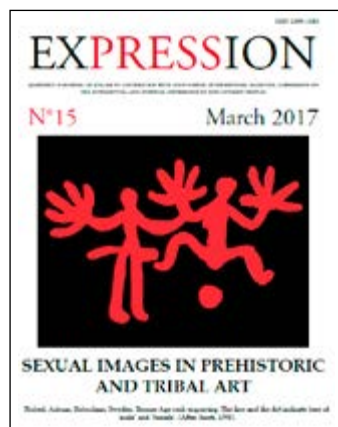


Expression 14

December 2016

Colonization: How Did Humans Reach All the Lands of the Planet?

With articles by Emmanuel Anati (Italy), Marta Arzarello (Italy), Robert G. Bednarik (Australia), Anthony Bonanno (Malta), José Farruja de la Rosa (Spain), Edmund Furter (South Africa), Marcel Otte (Belgium), Santiago Wolnei Ferreira Guimaraes and Leidiana Alves de Mota (Brazil).



Expression 15

March 2017

Sexual Images in Prehistoric and Tribal Art

With articles by Emmanuel Anati (Italy), Leo Dubal (France), Edmond Furter (South Africa), Michel Justamand and Pedro Paulo A. Funari (Brazil), Shemsi Krasniqi (Kosovo), Angelina Magnotta (Italy), Marc Martinez/Michel Lenoir and Anne-Catherine Welté (France), Terence Meaden (UK), Nataliia Mykhailova (Ukraine) and Jitka Soukopova (UK).

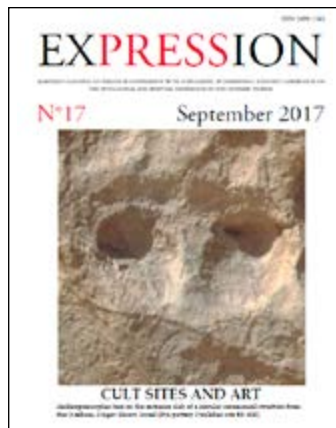


Expression 16

June 2017

The Message Behind the Images in Prehistoric and Tribal Art

With articles by Emmanuel Anati (Italy), Robert G. Bednarik (Australia), Emilio G. Berrocal (Italy), Ekaterina Devlet (Russia), A. José Farruja de la Rosa (Spain), Edmond Furter (South Africa), Alexandre Guida Navarro (Brazil), Cristina Lopes (Portugal), Terence Meaden (Uk), Cynthia Ontiretse Mooketsi (Botswana), Jacinto Palma Dias (Portugal), Radoslaw Palonka (Poland), Tirtha Prasad Mukhopadhyay (Mexico), Alan Garfinkel (Usa), Luis Ramon Merchan Villalba (Colombia), Vahan Vahanyan and Gregori Vahanyan (Armenia).

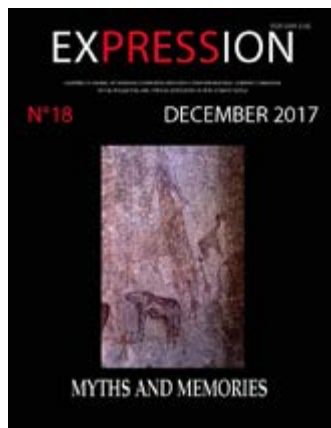


Expression 17

September 2017

Cult Sites and Art

With articles by Emmanuel Anati (Italy), Margalit Berriet (France), Jerzy Gassowski (Poland), Kempe Stephan F.J. and Al-Malabeh Ahmad (Germany, Jordan), Terence Meaden (UK), Kalle Sognnes (Norway), Sachin Tiwary (India), Gregori Vahanyan (Armenia), Wolnei Ferreira Guimarães Santiago (Brazil).

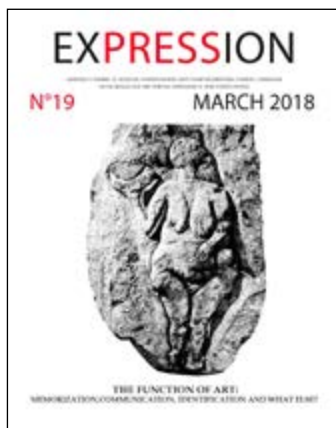


Expression 18

December 2017

Myths and Memories: Stories Told by Pictures

With articles by Emmanuel Anati (Italy), Margalit Berriet (France), Gassowski Jerzy (Poland), Kempe Stephan F.J. and Al-Malabeh Ahmad (Germany, Jordan), Terence Meaden (UK), Tiwary Sachin (India), Kalle Sognnes (Norway), Gregor Vahanyan (Armenia) and Wolnei Ferreira Guimarães Santiago (Brazil).



Expression 19

March 2018

The Function of Art: Memorization, Communication and What Else?

With articles by Bulu Imam (India), Devlet Ekaterina (Russia), Kraniqi Shemsi (Kosovo), Lopes Cristina (Portugal), Maurer Dieter (Switzerland), Moulton Susan (USA), Vahanyan Vahan (Armenia), Villa Marta and Nisi Domenico (Italy).



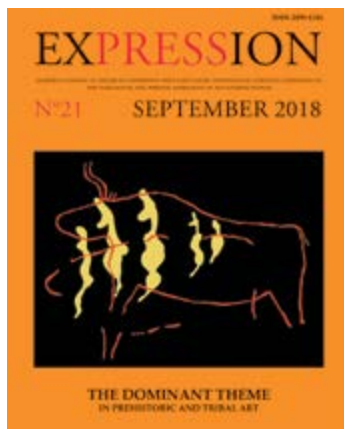
Expression 20

June 2018

The Function of Art: Memorization, Communication and What Else?

Part II

With articles by Mailland Federico (Switzerland), Marler Joan (USA), Mykhailova Nataliia (Ukraine), Prasad Awadh Kishore (India), Warland Jacinta (Australia).

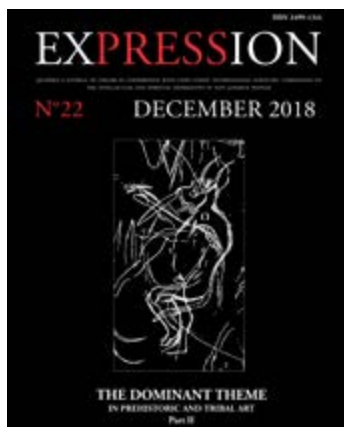


Expression 21

September 2018

The Dominant Theme in Prehistoric and Tribal Art

With articles by: Emmanuel Anati (Italy), Shanandoah Anderson (USA), Sara Garcês, Luiz Oosterbeek (Portugal), Michel Justamand, Gabriel Frechiani de Oliveira, Suely Amâncio Martinelli (Brazil), Gregori Vahanyan, Vahanyan Vahan, Baghdasaryan Vard (Armenia), Jessie Van Cauter, Marc De Bie (Belgium).

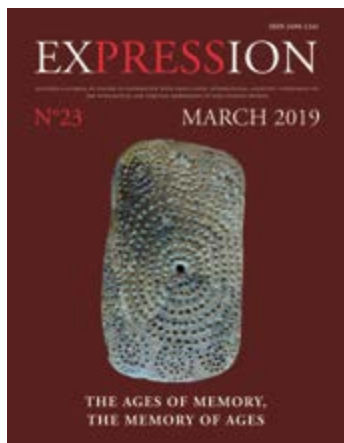


Expression 22

December 2018

The Dominant Theme in Prehistoric and Tribal Art - Part II

With articles by: Emmanuel Anati (Italy), Margalit Berriet (France), Amélie Bonnet-Balazut (France), Bulu Imam (India), Carol Patterson (USA).

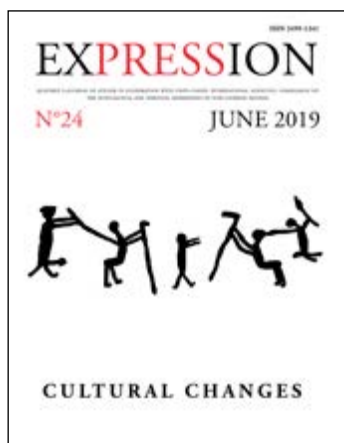


Expression 23

March 2019

The Age of Memory, the Memory of Ages

With articles by: Emmanuel Anati (Italy), Fernando A.Coimbra (Portugal), Leo Dubal (France), Santiago Wolnei Ferreira Guimarães (Brazil), Liudmila Lbova, Tatyana Rostyazhenko (Siberian Federal District, Russia), Aixa Vidal (Argentina)



Expression 24

June 2019

Cultural Changes

With articles by: Robert G. Bednarik (Australia), Brian Hayden (Canada), Michel Justamand, Gabriel Frechiani de Oliveira, Pedro Paulo Funari (Brazil), Majeed Khan (Saudi Arabia), Tirtha Prasad Mukhopadhyay, Armando Pérez Crespo (Mexico), Simon Radchenko, Dmytro Nykonenko (Ukraine)

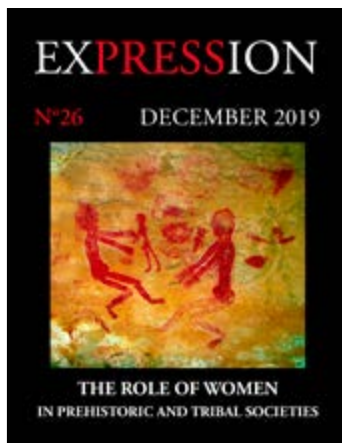


Expression 25

September 2019

Cultural Changes - Part II

With articles by: Emmanuel Anati (Italy), Jean Clottes (France), Luc Hermann (Belgium), Carol Patterson (USA), Raj Somadeva, Anusha Wanninayake, Dinesh Devage, Resta Fernando(Sri Lanka)

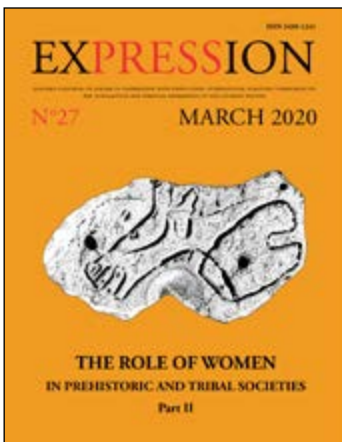


Expression 26

December 2019

The Role of Women in Prehistoric and Tribal Societies

With articles by: Emmanuel Anati (Italy), JSantiago Wolnei Ferreira Guimarães (Brazil), Michel Justamand, Gabriel Frechiani de Oliveira, Antoniel dos Santos Gomes Filho, Vanessa Belarmino da Silva, Pedro Paulo Funar (Brazil), Majeed Khan (Saudi Arabia), Ruman Banerjee (India), Somnath Chakraverty (India), David W. Robinson (UK), Jitka Soukopova (UK)

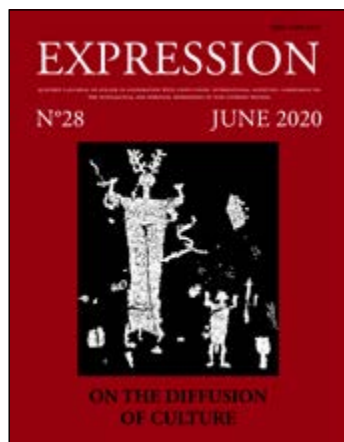


Expression 27

March 2020

The Role of Women in Prehistoric and Tribal Societies - Part II

With articles by: Emmanuel Anati (Italy), Meenakshi Dubey-Pathak (India), Luc Hermann (Belgium), Maria Laura Leone (Italy), Carol Patterson (USA)

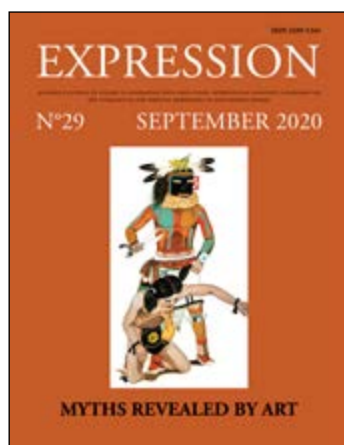


Expression 28

June 2020

On the Diffusion of Culture

With articles by: Emmanuel Anati (Italy), Herman Bender (USA), Anthony Bonanno (Malta), Luc Hermann (Belgium), Annik Schnitzler (France), Jitka Soukopova (UK)

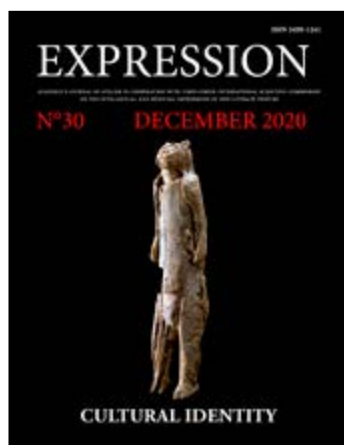


Expression 29

September 2020

Myths Revealed by Art

With articles by: Emmanuel Anati (Italy), Meenakshi Dubey-Pathak (India), Terence Meaden (UK), Alessandro Menardi Noguera (Italy), Carol Patterson (USA)



Expression 30

December 2020

Cultural Identity

With articles by: Emmanuel Anati (Italy), Amélie Bonnet Balazut (France), Stavros D. Kiotsekoglou (Greece), Giuseppe Orefici (Perù), Jitka Soukopova (Czech Republic)

NEW BOOKS 2020

Atelier



Origini delle religioni

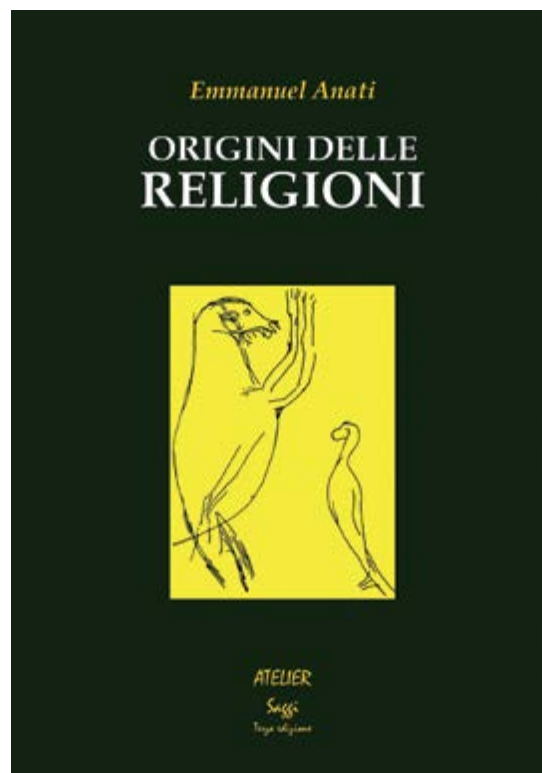
Saggi VI (in italian)

Anati, E.

2020, *Origini delle religioni*, terza edizione

Capo di Ponte (Atelier), 87 pp. 58 pls. € 20

How and when did religions originate? The study of prehistoric art is bringing a revolution on our knowledge of the origins of religious thought. The rock sites have held the function of places of worship and tribal identity for millennia, serving as archives of myths, beliefs, rites. Visual art, however, is not the oldest evidence of the presence of religion. We try to go back even further in time.



INDICE

1. Il dibattito sulle origini
2. Spiritualità e religione
3. Religione e avventure intellettuali Le più antiche testimonianze
4. Cosa è l'animismo
5. Gli archivi dell'arte rupestre
6. Religione, arte e linguaggio
7. La memoria delle immagini
8. Santuari naturali e santuari artificiali
9. Il più antico santuario
10. Testimonianze e contenuti
11. Lo sciamanismo
12. Evoluzione del pensiero religioso
13. Mutamenti economici, sociali e concettuali
14. Conclusioni
15. Bibliografia

For orders and informations: atelier.etno@gmail.com

Methods of payment: Paypal (atelier.etno@gmail.com)

Bank transfert: Atelier, Banca UBI, IBAN: IT84A031115420000000000284, BIC: BLOPIT22

Atelier

Reserch Center on Conceptual Anthropology

Via G. Marconi 7 - Città della Cultura, 25044 Capo di Ponte (BS) tel. 0364/42392

The Origins of Religion

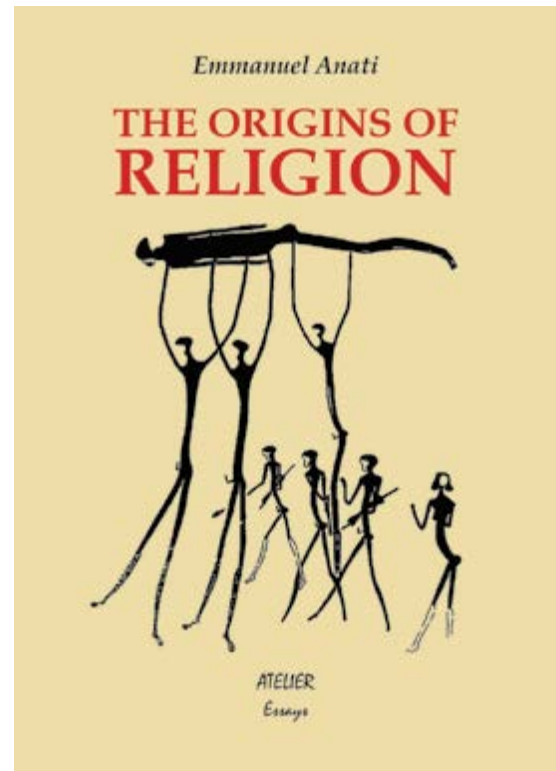
Essays VI

Anati, E.

2020, *The Origins of Religion*, English Edition

Capo di Ponte (Atelier), 222 pp. 54 pls. € 20

How and when did religions originate? The study of prehistoric art is revolutionizing our knowledge of prehistoric religions. The rock art sites have been places of worship and tribal identity for millennia, serving as archives of myths, beliefs and rites, all of which evolved, diversified and acquired regional and ethnic features. Visual art, however, is not the earliest evidence of the presence of religion. Archeological discoveries of burial customs and burial goods accompanying the dead in their journey to the other world, and newly discovered prehistoric shrines, reveal concepts and beliefs going back even before the origins of art. When and how were the first religious concepts and rituals conceived? And how did religions acquire their present shape?



CONTENTS

1. The Debate on the Origins
2. Spirituality and Religion
3. Religion and Other Intellectual Expressions
4. The Oldest Evidence
5. What Is Animism?
6. Shamanism
7. The Rock Art Archives
8. Religion, Art and Language
9. Memories of the Image
10. Natural and Artificial Sanctuaries
11. The Oldest Sanctuary
12. Testimonies, Attestations and Contents
13. The Evolution of Religious Thought
14. Economic, Social and Conceptual Changes
15. Conclusions
16. Bibliography and References

For orders and informations: atelier.etno@gmail.com

Methods of payment: Paypal (atelier.etno@gmail.com)

Bank transfert: Atelier, Banca UBI, IBAN: IT84A031115420000000000284, BIC: BLOPIT22

Atelier

Research Center on Conceptual Anthropology

Via G. Marconi 7 - Città della Cultura, 25044 Capo di Ponte (BS) tel. 0364/42392

La typologie de l'art rupestre

Essai XIV (in French)

Anati, E.

2020, *La typologie de l'art rupestre*

Capo di Ponte (Atelier), 98 pp. 34 pls. € 20

Rock art is a human expression, produced over the millennia, on five continents. In the frame of the UNESCO "World Report on Rock Art: the state of the art" (2008), the author presented a typological structure of rock art, which has since been updated and revised. This text presents an updated version considering the following problems: elementary concepts of typology; definition of rock art site; the grammar of rock art: typology of signs and figures; categories of rock art according to the way of life of their creators: archaic hunter-gatherers, hunters who use bow and arrows, shepherds and animal breeders, complex economy including agriculture, others; syntax: the systems of associations of graphemes, associations, compositions, sequences, scenes, etc.; archetypes and variants; purpose, results and purpose of the typology; conclusions.

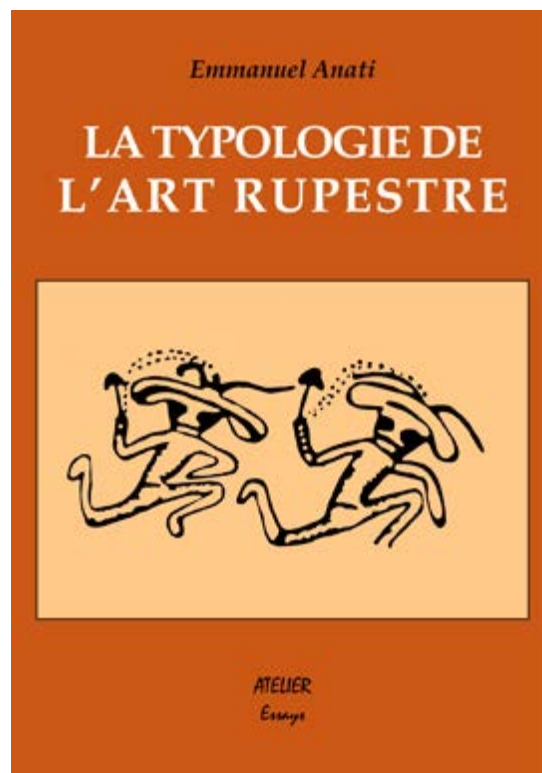


TABLE DE MATIÈRES

1. Préambule
2. Concepts élémentaires de la typologie
3. Définition de «Site» d'art rupestre
4. Éléments essentiels de la typologie
5. Catégories de contexte économique et social
6. La classification typologique
7. Pictogrammes, idéogrammes et psychogrammes
8. Prototypes et archétypes
9. Séquences et syntaxe associative
10. Conclusions
11. Références

For orders and informations: atelier.etno@gmail.com

Methods of payment: Paypal (atelier.etno@gmail.com)

Bank transfert: Atelier, Banca UBI, IBAN: IT84A031115420000000000284, BIC: BLOPIT22

Atelier

Reserch Center on Conceptual Anthropology

Via G. Marconi 7 - Città della Cultura, 25044 Capo di Ponte (BS) tel. 0364/42392

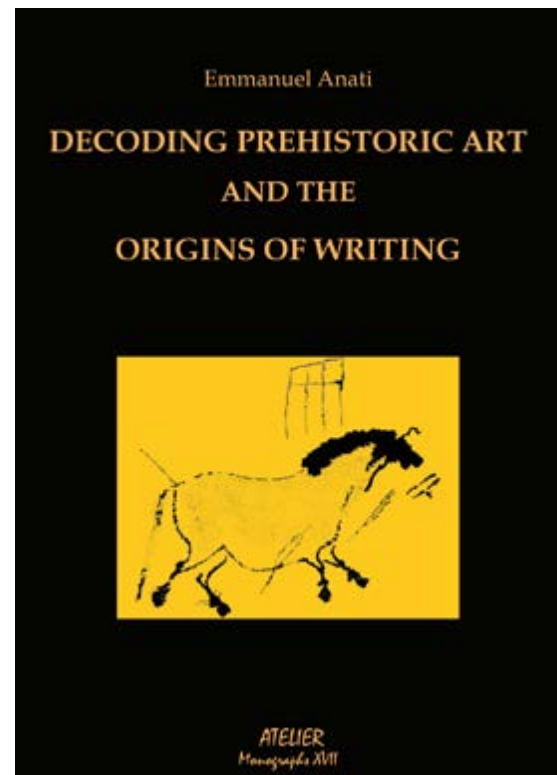
Decoding Prehistoric Art and the Origins of Writing

Monograph XVII

Anati, E.

2020, *Decoding Prehistoric Art and the Origin of Writing*
Second Edition, Capo di Ponte (Atelier), 109 pp. 33 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 give a new vision for the beginning of writing.



CONTENTS

- | | | | |
|-----|---|-----|--|
| 1. | Preface | 16. | A predecessor of Aesop? |
| 2. | The challenge | 17. | A voyage tale written on bone from La Madeleine |
| 3. | Before formal writing | 18. | A record of Homo sapiens reaching western Europe |
| 4. | Signs and symbols | 19. | from the east |
| 5. | Phonetic writing and ideographic writing | 20. | A journey for men only? |
| 6. | Elementary functions | 21. | The union between male and female of the Horse Totem |
| 7. | The logic of points and lines | 22. | The meaning |
| 8. | The grammar of primary art | 23. | Bibliography |
| 9. | The syntax or associative process | | |
| 10. | Defining the codes | | |
| 11. | Trials and errors in decoding | | |
| 12. | The bird-man and the bison of Lascaux | | |
| 13. | The Fat Lady of Laussel | | |
| 14. | An agreement written on bone from La Vache cave | | |
| 15. | Paleolithic acts of marriage | | |

For orders and informations: atelier.etno@gmail.com

Methods of payment: Paypal (atelier.etno@gmail.com)

Bank transfert: Atelier, Banca UBI, IBAN: IT84A031115420000000000284, BIC: BLOPIT22

Atelier

Research Center on Conceptual Anthropology

Via G. Marconi 7 - Città della Cultura, 25044 Capo di Ponte (BS) tel. 0364/42392

Il santuario paleolitico di Har Karkom

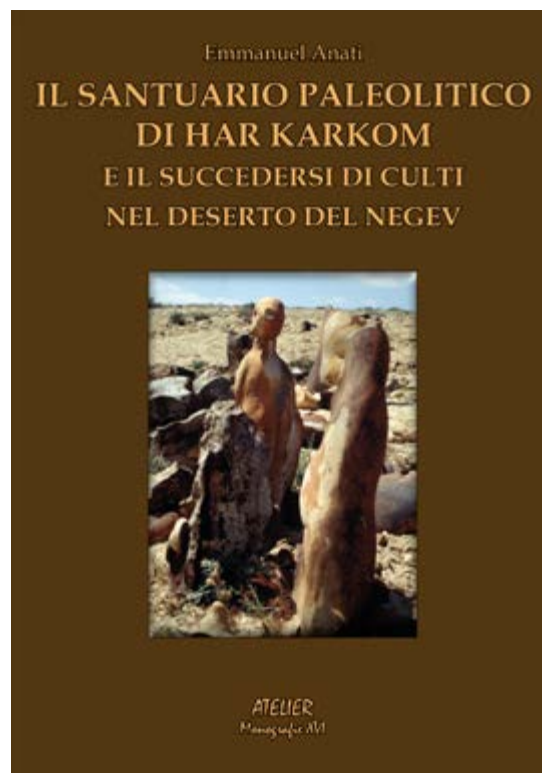
E il succedersi di culti nel deserto del Negev
Monografie XVI (in Italian)

Anati, E.

2020, *Il santuario paleolitico di Har Karkom*

Capo di Ponte (Atelier), 102 pp. 54 pls. € 20

The discovery of a Paleolithic sanctuary, the oldest known, in the middle of the desert, and right in the desert of the biblical Exodus and the perennial exodus, along the great migratory route between Africa and Asia, awakens questions about the spiritual and conceptual world of the origins of religion. The surprise of this volume is that it reveals how and why. Concepts and beliefs emerge that gave rise to one of the oldest religious expressions in the world: it adds a new chapter in the history of religions.



INDICE

1. Introduzione
2. Il sito
3. Il contesto archeologico
4. Carattere delle strutture e delle culture
5. Le strutture di culto post-paleolitiche
6. La fine delle tradizioni di culto
7. Testimonianze dell'arte rupestre
8. Resti di culto paleolitici
9. Il più antico santuario
10. La funzione concettuale
11. Conclusioni

For orders and informations: atelier.etno@gmail.com

Methods of payment: Paypal (atelier.etno@gmail.com)

Bank transfert: Atelier, Banca UBI, IBAN: IT84A031115420000000000284, BIC: BLOPIT22

Atelier

Reserch Center on Conceptual Anthropology

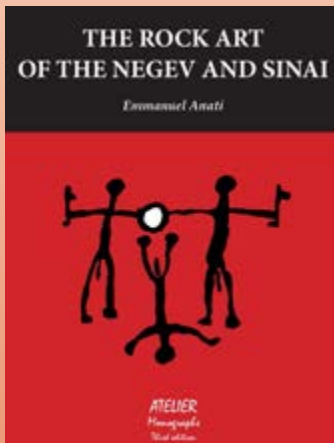
Via G. Marconi 7 - Città della Cultura, 25044 Capo di Ponte (BS) tel. 0364/42392

ARCHAEOLOGY AND THE BIBLE

Atelier is pleased to present

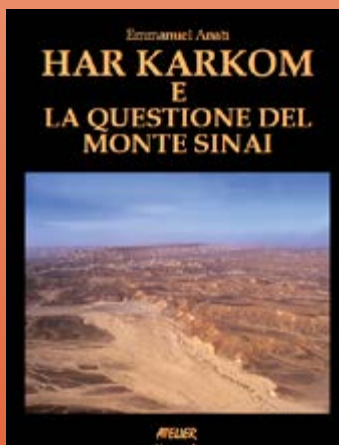
ARCHAEOLOGY IN THE DESERT EXODUS: NEW DISCOVERIES RELATED TO BIBLICAL ARCHEOLOGY

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 the following volumes. Richly illustrated books bring new light on the events that inspired the Biblical narrative.



Anati, E., 2015, *The Rock Art of the Negev and Sinai*, Third English edition
Capo di Ponte (Atelier), 248 pp. 248; 196 ill., €20,00

The book deals with a new theme of Neareastern archeology: the rock art of the Negev and Sinai. It presents new discoveries and reconsiders contents 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.



Anati, E., 2016: *Har Karkom e la questione del Monte Sinai* (*Har Karkom and the Question of Mount Sinai*), Italian edition

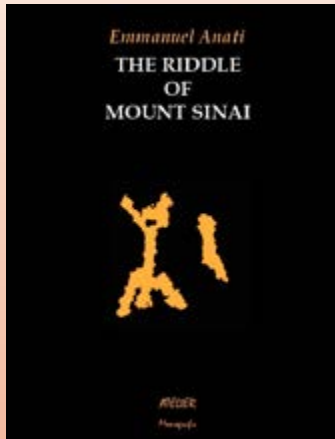
Capo di Ponte (Atelier), pp 220; 138 ill., €30,00

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.

Payment: PayPal (atelier.etno@gmail.com);

Bank transfer: Atelier, Banca UBI, IBAN: IT84A0311154200000000000284, BIC: BLOPIT22

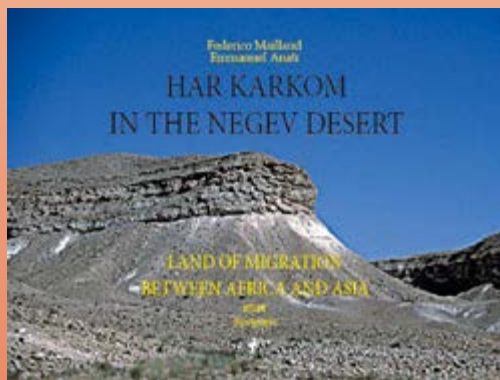
Information or orders: [<atelier.etno@gmail.com>](mailto:atelier.etno@gmail.com)



Anati, E. 2017, *The Riddle of Mount Sinai*, Second English Edition

Capo di Ponte (Atelier), 260 pp. 141 pls. € 40

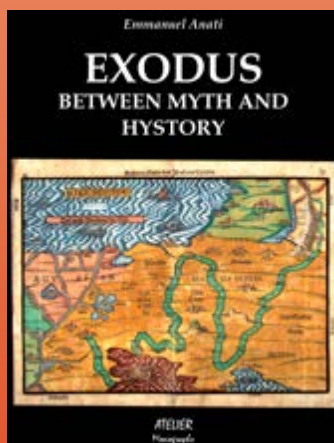
What is the true story behind the biblical narration of Exodus? The discoveries of the Italian archaeological expedition at Har Karkom, in the Negev Desert, tell the hitherto unknown story of the sacred mountain in the heart of the desert of Exodus, reflecting surprising similarities to the events and conditions described to us, albeit in mythicised form, in the Old Testament. The mountain was a paramount cult site and the archaeological discoveries go far beyond the expectations. This well documented volume also helps to clarify a major question: to what extent may we consider the biblical narration as a source of historical documentation.



Anati, E.; Maillard F., 2018, *Har Karkom in the Negev Desert. Raw Material for a Museum on Two Million Years of Human Presence*

Capo di Ponte (Atelier), 130 pp., 534 pls., € 110, English Edition

A mountain located in the land-bridge between Africa and the rest of the world yielded traces of ages of human presence ever since the first steps of the human ancestors out of Africa. The archeological discoveries tell us of two million years, from the earliest stations of archaic Pebble Culture, to recent Bedouin camping sites. The site became a holy mountain with shrines and other cult structures already in the Paleolithic; it developed into an immense cult site in the Bronze Age, likely to be the biblical Mount Sinai. The present book is displaying the results of over 30 years of fieldwork, the raw material of the sequence of ages, for a museum on Har Karkom in the Negev Desert, presenting the story of humankind as concentrated in a mountain of a few square miles in the middle of one of the most arid and nowadays most inhospitable spots in the Near East.



Anati, E., 2018: *Exodus Between Myth and History*, English edition

Capodiponte (Atelier) pp. 388; 138 pls., Analytical Appendix., € 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.

Payment: PayPal (atelier.etno@gmail.com);

Bank transfer: Atelier, Banca UBI, IBAN: IT84A0311154200000000000284, BIC: BLOPIT22

Information or orders: [<atelier.etno@gmail.com>](mailto:atelier.etno@gmail.com)

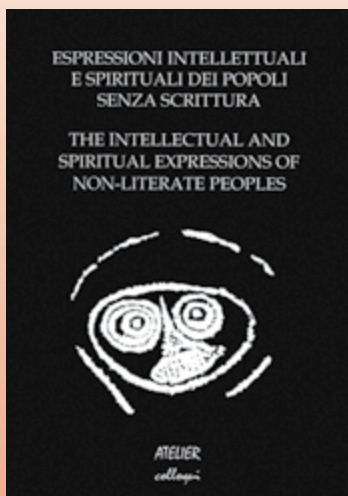
ATELIER' PUBLICATIONS

colloqui



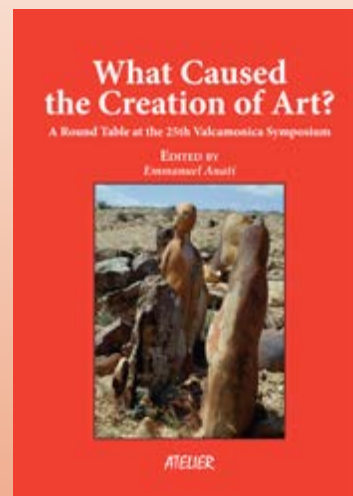
Il segni originari dell'arte (In Italian)

Proceedings of the Colloquium held at the University of Urbino in 2010. Essays by nine authors who deal with the theme seen from various disciplines: Anthropology, Archaeology, Art History, Semiotics, Psychology, Psychoanalysis, Sociology.



Espressioni intellettuali dei popoli senza scrittura (In Italian, English, French)

Proceedings of the Colloquium organized in Valcamonica by the International Union of Prehistoric Sciences in 2012. Essays by 30 authors from 11 countries on the intellectual expressions of the primary societies.



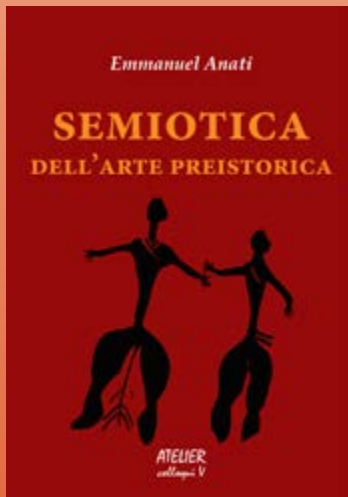
What Caused the Creation of art? A Round Table at the 25th Valcamonica Symposium

'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.



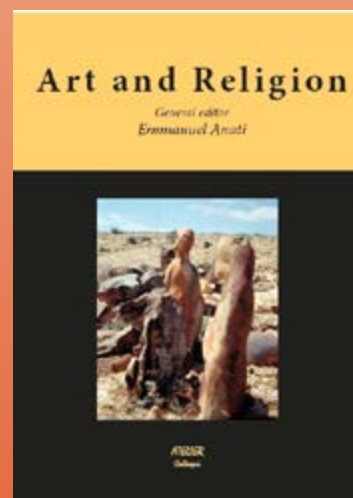
Sogno e memoria: Per una psicoanalisi della Preistoria (In Italian)

A series of papers presented at Congresses of Sociology, Psychology and Psychoanalysis concern. The analysis of human behavior and of graphic art externalizations is opening new perspectives to the social sciences and multidisciplinary cooperation.



Semiotica dell'arte preistorica (In Italian)

The conceptual meaning of the forms, the metamorphosis of shapes into sounds, sounds in forms, ideas into images, thoughts in words, it is the very basis of identity of the intellectual being, of 'Homo intellectualis'. This mechanism stimulated, over the years, some of the author's papers and lectures in congresses and conferences of semiotics, sociology and psychology.



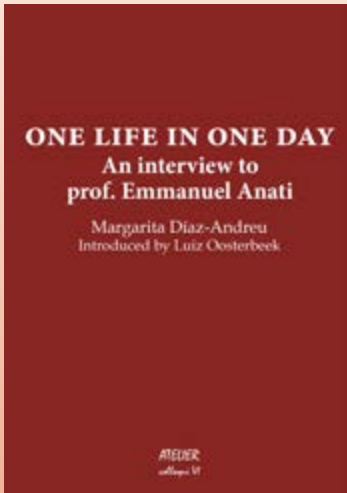
Art and Religion

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, present examples of specific aspects, providing first-hand data.

Information or orders: <atelier.etno@gmail.com>

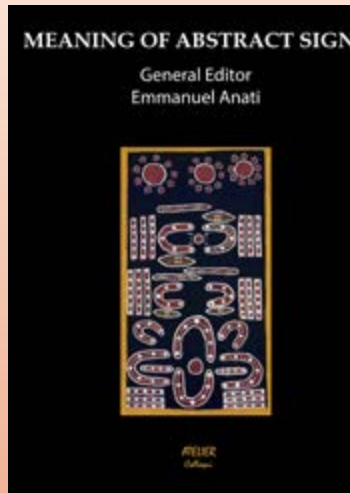
ATELIER' PUBLICATIONS

colloqui



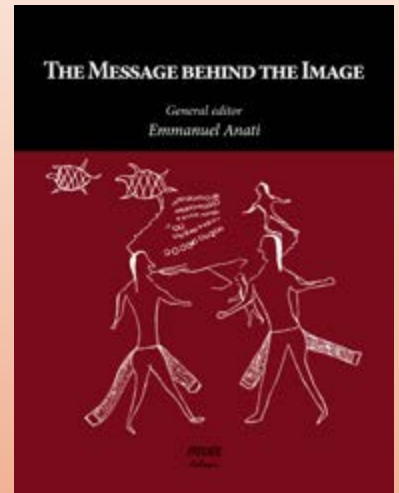
One Life in One Day. An interview to prof. Emmanuel Anati

In the gardens of the campus of Burgos University, while delegates were moving from sessions and lectures to coffee breaks and back, Margarita Díaz-Andreu recorded, for hours, the words of Professor Emmanuel Anati. It was the 5th of September 2014 and when the electric lights of the evening replaced the sunlight, a life-long story was drafted. It concerned just one aspect of Anati's life, that of his experiences as a scholar in the human sciences.



Meaning of Abstract Signs

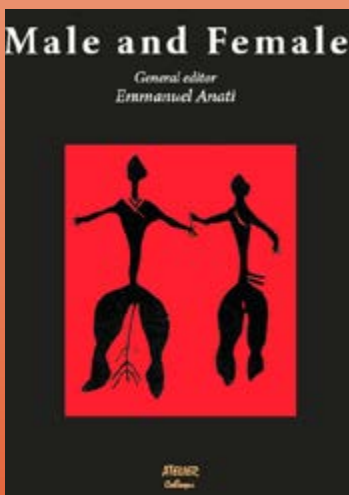
The clan was planning a fight against another clan that had abused hospitality hunting kangaroos in a reserved ground. The painter recorded the gathering of the elders to decide the expelling of the guest clan. He represented the elders and the warriors by standard signs. The art-dealer sold the painting as an "Aboriginal abstract composition". The meaning came from the people of the clan who saw the painting explaining the recorded event. Other examples and studies attempt at defining the meaning of abstract signs.



The message behind the image

Prehistoric and tribal people have left behind millions of images, in Africa, America, Asia, Europe and Oceania. Was their purpose just that of embellishing rock surfaces? What pushed people from all over the world to record their memories throughout the ages?

This immense heritage, whether intentional or not, is full of messages to be read and understood.



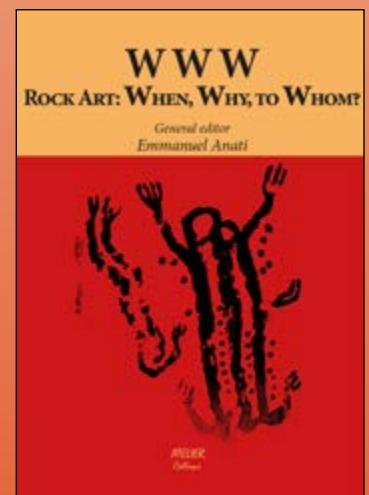
Male and Female

The book includes papers of 20 authors from five continents. It considers human representations in prehistoric and tribal art presenting a broad landscape of different views and cases. In each age and culture a specific choice is emerging in the visual arts, between preferring male or female images, and between having or not the human figure as the main concern. The book presents different cases and views from experts of five continents.



Why Art

The volume presents a search of contents by scholars from different continents with different experiences. Prehistoric art is like the literature of more recent times, some depictions may concern science, others religion, some may be school textbooks and others fiction. The decoding of prehistoric art helps to approach the understanding of contents and motivations



WWW - Rock Art:

When, Why and to Whom

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?

Information or orders: <atelier.etno@gmail.com>

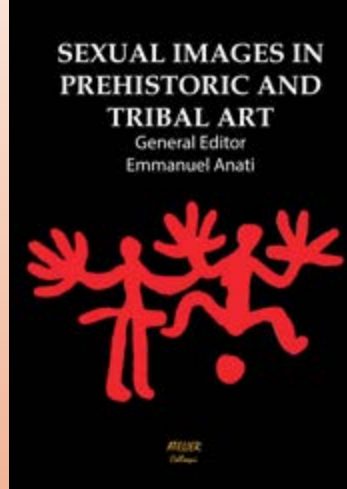
ATELIER' PUBLICATIONS

Colloqui



Colonization

From an original land of origins, likely to have been in Africa, the ancestors of humankind colonized all corners of the globe. Other primates still survive in their limited habitat; humans live in the equatorial regions as well as near the Arctic pole. How did such colonization take place? Authors from five continents replied to this question: a selection of their papers appears in this volume.



Sexual Images in Prehistoric and Tribal Art

Since the earliest figurative art, sex appears to be a theme of primary concern in every corner of the world. Why were such depictions made? In some cases oral traditions allow us to identify the cause or the inspiration. Can we trace back the stories behind the images? Sharing knowledge is favoring an overview on images, myths, rituals and customs related to sex, in prehistoric and tribal art.



Etnogastronomia La cucina dei popoli (In Italian)

Tra le 10.000 popolazioni che vivono negli oltre 200 Paesi del pianeta Terra, abbiamo scelto le cucine di undici punti del globo, descrivendole nelle loro caratteristiche essenziali, fornendo ricette accettabili dal gusto occidentale, e realizzabili con prodotti facilmente reperibili. Capire il sapore del diverso, è saper apprezzare non solo i cibi, ma anche i sorrisi dei popoli.

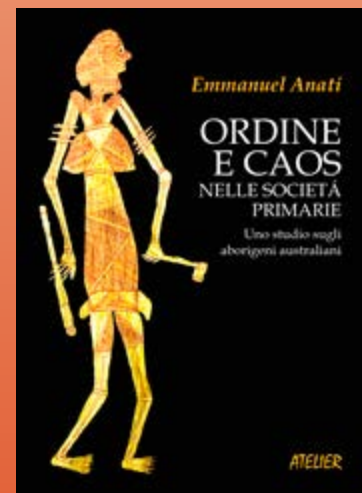
ATELIER' PUBLICATIONS

Essays



Nascere e crescere da nomadi. La relazione madre-figli nelle società primarie (in Italian)

A study of constants and variants between human societies of hunters-gatherers and urban societies in the mother-child relationship reveals archetypes and variants. The mother-child relationship is the backbone of all species of mammals and acquires special rules in primates.



Ordine e Caos nelle società primarie. Uno studio sugli aborigeni australiani. (in Italian)

Order and chaos are compared as a principle of the binary concept that characterizes the search for an elementary logic of what man is able to hypothesize about the behavior of the world around him. To what extent does the order of nature determine social order in primary societies?

Information or orders: <atelier.etno@gmail.com>

ATELIER's PUBLICATIONS

Essays



Origini della Musica (in Italian)

How and why did music originate? What function did it hold for the individual and for society? The book presents the oldest documentation of prehistoric art and archeology on the presence of music, dance and musical instruments. The text is accompanied by figures of the oldest musical instruments known to date and images depicting music and dance.



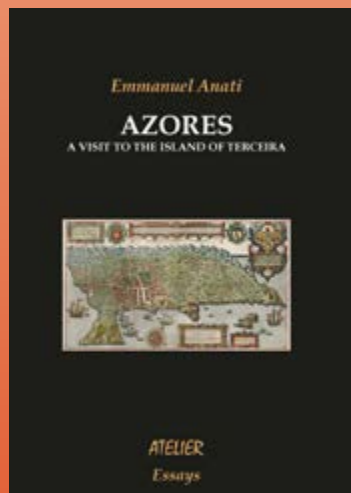
Iniziazione e riti di passaggio (in Italian)

What are the origins of baptism, circumcision, marriage and burial? The practices of initiation and rites of passage of certain Aboriginal clans of Arnhem Land, Australia, reveal the archetypes of accepted practices which are still common to many peoples of the world. The ritual has the dual role of educating and socializing. It has maintained stable their life of clans for millennia, serving as the glue between individual and group.



Chi sei? Chi sono? Alla ricerca dell'identità (in Italian)

The problems arising from the search for identity begin in the infant and accompany the human being to the last breath. Defining the identity of the person, of the nation or "race", concerns all people from the Early Hunters to the most advanced urban, literate cultures. The present study is proposing a historical dimension to an archetype of the cognitive system. When does the need to define the identity start, and why?



Azores: a Visit to the Island of Terceira

When did man first arrive to the Azores islands? The Portuguese colonization in the 15th century marked the beginning of the official history. Is there a history before this history? The controversy, between the traditional history and the advocates of a previous human presence, finds partial solutions in the dating and decoding of traces indicating ancient human presence.



Comunicare per esistere (in Italian)

This text, inspired by travel notes of about 40 years ago, seems now to refer to prehistory. Aboriginal people have made a jump of millennia in two generations. Today they speak English, live in houses, drive cars and use the shotgun. Their lives changed since the 70s of the last century.

Information or orders: <atelier.etno@gmail.com>

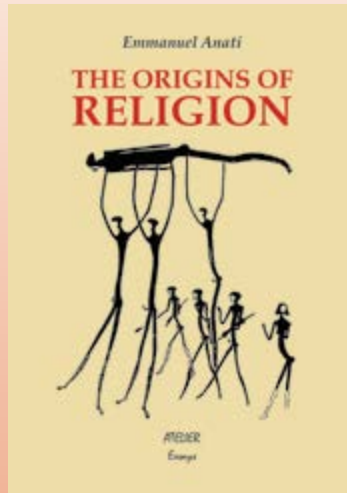
ATELIER' PUBLICATIONS

Essays



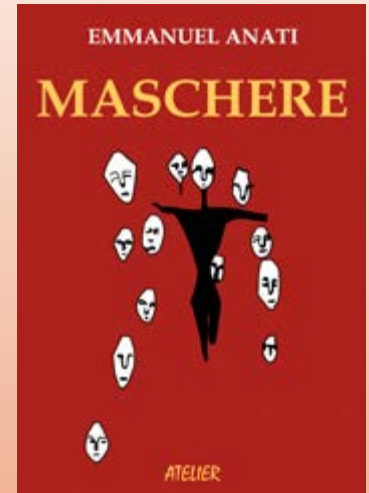
Mito tra utopia e verità (in Italian)

How do myths originate? The production of myths proves to be a constant of the cognitive process of all human societies. Parameters of this process are examined: the roots of a distant memory, the itineraries of idealization, sublimation and structuring. Similar myths from different cultures reveal recurring conceptual criteria. From the beginning man feeds the myth and the myth feeds the man. Myths feed myths.



The Origins of Religion

How and when did religions originate? The study of prehistoric art is bringing a revolution to our knowledge of the origins of religious thought. Rock art sites have held for millennia the function of places of worship and tribal identity, serving as archives of myths, beliefs and rituals. Visual art, however, is not the oldest evidence of the presence of religion. Burial customs and other material traces are bringing us further back to the origins of religious behaviour.



Maschere (in Italian)

What is behind the mask? The mask can hide the identity, but can also reveal an identity submerged, both as an object-mask or a conceptual-mask. Going back to the roots, an aspect of the cognitive process of the mask awakens questions on the comparison of human tendencies, between globalization and individualism. Tracing the history of the mask reveals recurring phenomena of man's relationship with his own identity.



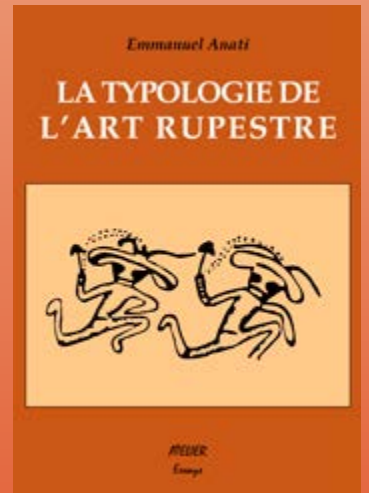
Guardare l'invisibile. Religione, miti e spiriti degli aborigeni australiani. (in Italian)

Some scholars in the history of religions affirm that religion was born in the Neolithic age. People coming directly from the Paleolithic bluntly contradicts this preconception.



Amore e sessualità (In Italian)

Love and sexuality, a theme of all lives and many books, is considered under the aspect of conceptual anthropology. Biological impulses, cultural rules and individual feelings meet in different cultures, in different formulas and lead to a vision of how they work and interact socially, psychologically and emotionally on the human being and on the social context.



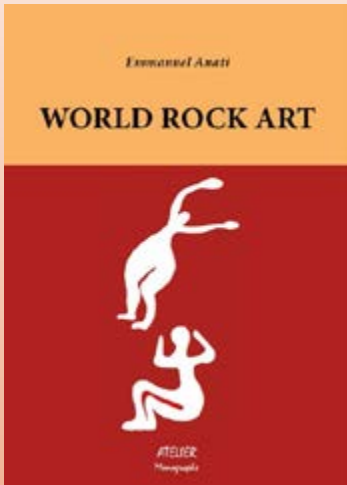
La typologie de l'art rupestre (In French)

Rock art is a human expression, produced over the millennia, on five continents. In the frame of the UNESCO "World Report on Rock Art: the state of the art" (2008), the author presented a typological structure of rock art, which has since been updated and revised.

Information or orders: <atelier.etno@gmail.com>

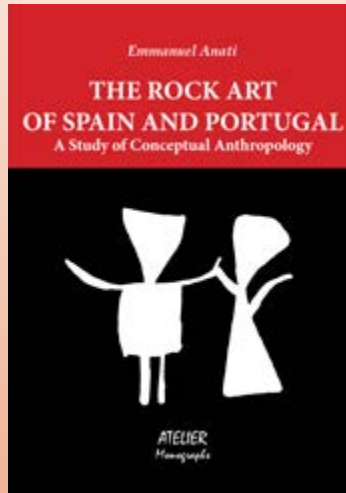
ATELIER's PUBLICATIONS

Monographs



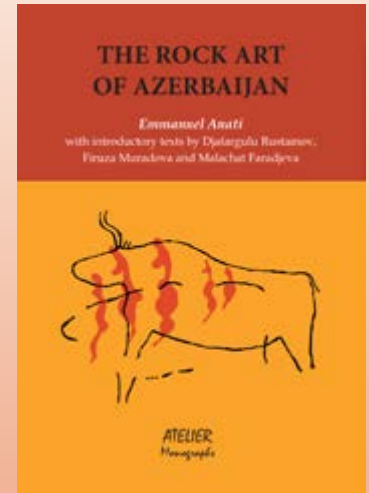
World Rock Art

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. It can be seen at the beginning of a new discipline, the systematic study of world rock art.



The rock art of Spain and Portugal

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.

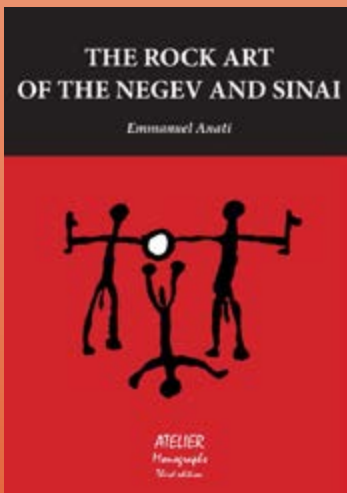


The Rock art of Azerbaijan

Over the course of centuries, Azerbaijan, was a great centre of rock art.

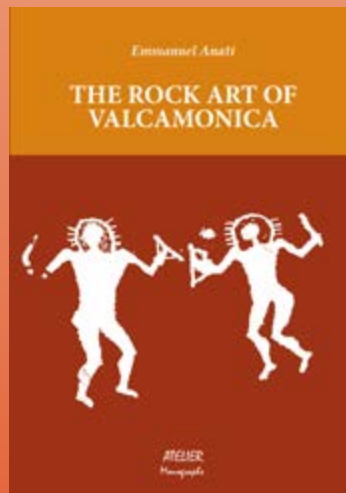
This gateway of Europe, between the Caucasus Mountains and the Caspian Sea, was a major way of migrations from Asia to Europe.

Showing influence and connections with both Europe and the Near East, the succession of phases of rock art illustrate the movements of cultures and ideas from Paleolithic to recent times, shedding new light on the early movement of *Homo sapiens*.



The Rock Art of the Negev and Sinai

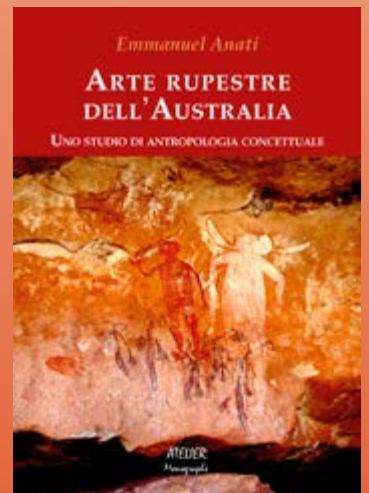
The present volume is concerned with a new theme of archeology and anthropology: the rock art of the Negev and Sinai, which never had before a general analysis in English. It elaborates on articles and a book written in the last 60 years, to produce a synthesis and an overview.



The Rock Art of Valcamonica

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.



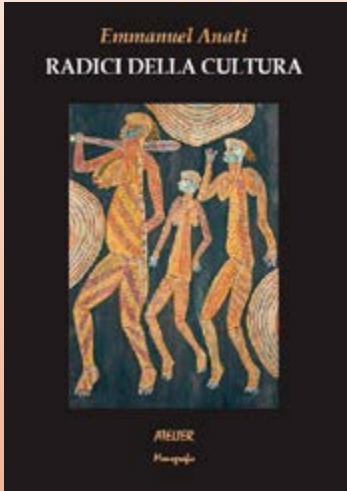
Arte rupestre dell'Australia (in Italian)

The Australian aborigines until yesterday were hunter-gatherers, creators of visual art according to ancient traditions and beliefs. The rock art tells their story and the history of art of 50,000 years.

Information or orders: <atelier.etno@gmail.com>

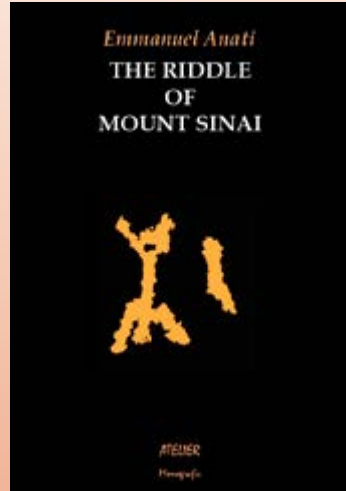
ATELIER' s PUBLICATIONS

Monographs



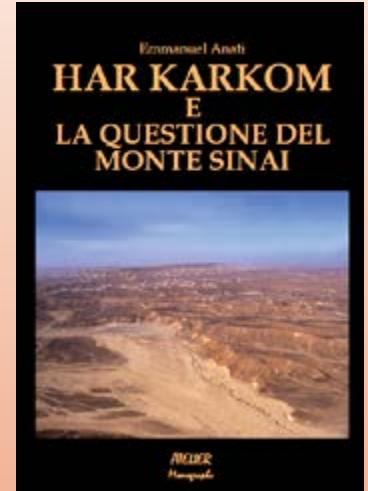
Radici della cultura (in Italian)

The history of culture is the history which unify the whole humankind. As Yves Coppens wrote in the preface, from the very first flint tool four million years ago to the conquest of space, the human adventure shows an hyperbole, which from the beginning of history, through the ages, builds the reality of present and project us to the future.



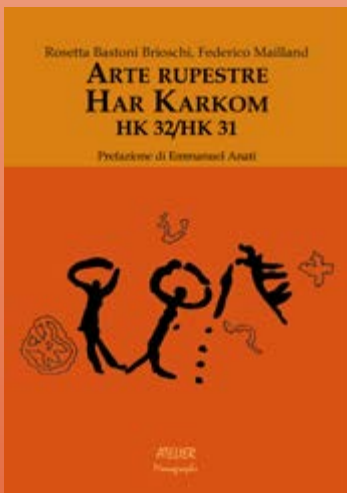
The Riddle of Mount Sinai

What is the true story behind the biblical narration of Exodus? The discoveries of the Italian archaeological expedition at Har Karkom, in the Negev Desert, tell the hitherto unknown story of the sacred mountain in the heart of the desert of Exodus, reflecting surprising similarities to the events and conditions described to us, albeit in mythicised form, in the Old Testament.



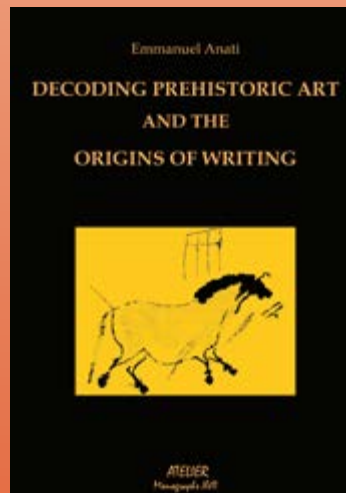
Har Karkom e la questione del Monte Sinai (in Italian)

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 be identified with the biblical Mount Sinai.



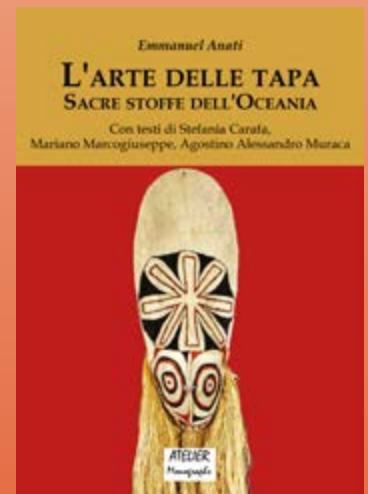
Rock Art - Har Karkom HK 32/HK 31 (in Italian)

Within the frame of the Archaeological Italian Expedition in Israel, the present book is a record of rock art in two adjacent sites on the plateau of Har Karkom. The rock art is in the same area with tumuli, altar stones, stone circles and other megalithic structures. Some of the rock engravings are on these monuments. The rock engravings are described and illustrated by numerous photos and tracings.



Decoding Prehistoric Art and the Origins of Writing

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 give a new vision for the beginning of writing.



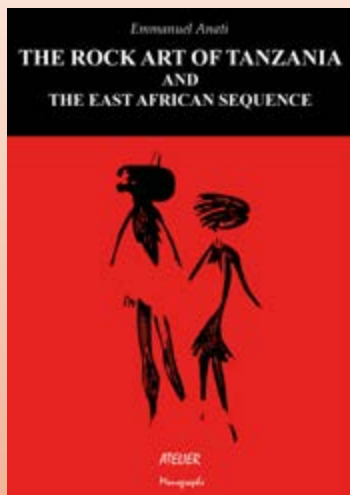
L'arte delle tapa. Sacre stoffe dell'Oceania (in Italian)

The tapa is a non-woven fabric, a kind of felt produced from the bark of some species of trees. Their origins are much earlier than the invention of weaving. Their roots go back to the Old Stone Age. Indirect testimony of their antiquity are provided by the discovery of tools used for the manufacture of tapa in archaeological layers and by figures of tapa cloths in the rock art.

Information or orders: <atelier.etno@gmail.com>

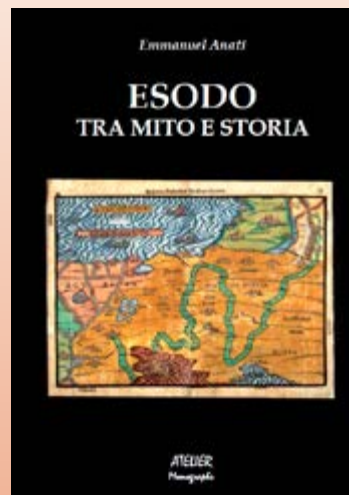
ATELIER's PUBLICATIONS

Monographs



The Rock Art of Tanzania and the East African Sequence

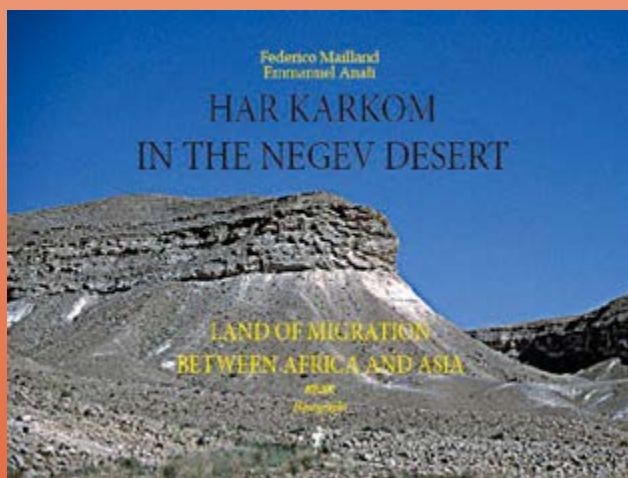
The rock art of Tanzania, in over 200 caves and rock shelters, is presented in this book using the analytical method of Conceptual Anthropology. Stylistic phases and periods are covering millennia.



Exodus

Between Myth and History

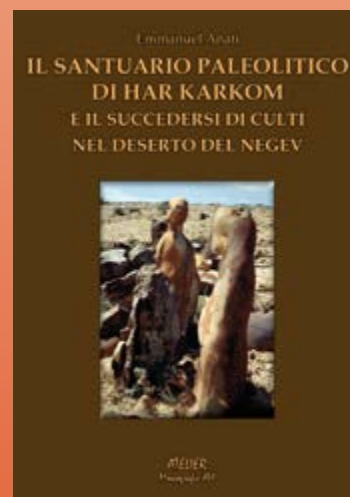
The epic of Moses: is it myth or history? The Biblical narrative of the exodus and the revelation of Mount Sinai are a monumental literary work that has been passed down for well over two millennia, after being transmitted orally for centuries. What would have really happened during the Exodus? How did monotheism emerge? Who were the mentioned people of the desert met by the children of Israel? The central episode of the epic is the revelation at Mount Sinai.



Har Karkom in the Negev Desert

A mountain located in the land-bridge between Africa and the rest of the world yielded traces of ages of human presence ever since the first steps of the human ancestors out of Africa.

The archeological discoveries tell us of two million years, from the earliest stations of archaic Pebble Culture, to recent Bedouin camping sites.



Il santuario paleolitico di Har Karkom (in italian)

The discovery of a Paleolithic sanctuary, the oldest known, in the middle of the desert, and right in the desert of the biblical Exodus and the perennial exodus, along the great migratory route between Africa and Asia, awakens questions about the spiritual and conceptual world of the origins of religion. The surprise of this volume is that it reveals how and why. Concepts and beliefs emerge that gave rise to one of the oldest religious expressions in the world: it adds a new chapter in the history of religions.

Information or orders: <atelier.etno@gmail.com>

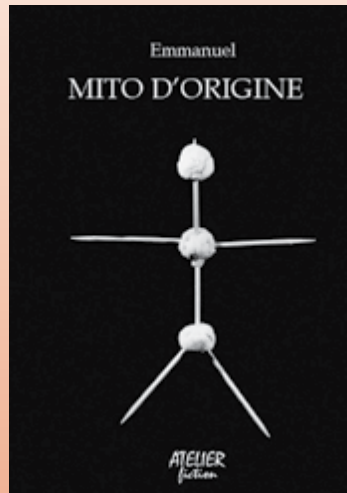
ATELIER'1 PUBLICATIONS

Fiction



La Seduta (in Italian)

This work of the author's youth reflects a biting social commentary that after half a century seems to have not lost its charge. It was written in the 60s of the last century, in the climate of postwar youth revolt. It was published for the first time in 1979 in a bi-monthly magazine. It now comes out in a revised edition.



Mito d'origine Epoca dei Sogni (in Italian)

The first works of Atelier Fiction, Mito d'Origine and Epoca dei Sogni, tell stories that at first sight seem to come from another world. Between reality and dream, realism and myth, symbols and metaphors, they accompany us in the space of flooded memories. Balls and sticks wander, meet and multiply in black space, always accompany the shadows and the lights of thought. They are works created by the author at a young age now published for the first time, a few decades after since they were first conceived.

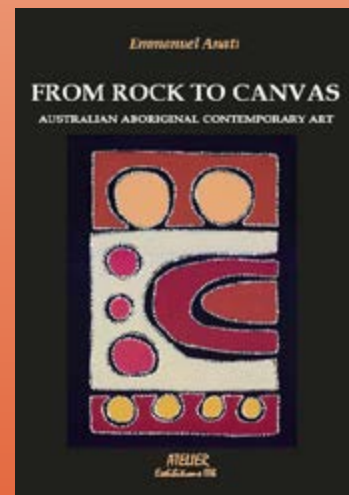


Exhibitions



The Art of the Australian Aborigines Bark Paintings

Australian Aborigines have produced paintings on tree bark that, in addition to being remarkable artworks, store myths and memories, emotions and human relations. What remains today of authentic bark paintings, made by Aborigines for themselves, is an extremely small group.



From Rock to Canvas Australian Aboriginal Contemporary Art

Turning from the Stone Age to the age of air-conditioning in a generation is an experience which leaves its mark on artistic expression. The canvas paintings made by contemporary Aboriginal artists, whose fathers painted on rocks or tree bark, display a momentous revolution in the spirit of a generation that has leapfrogged millennia.

Information or orders: <atelier.etno@gmail.com>

At the same e-mail you may request the full catalogue of Atelier