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CULTURAL IDENTITY
PART II

EDITORIAL NOTES

CULTURAL IDENTITY II

How to define cultural identity? Almost every aspect of your behavior and way of life reflects cultural identity. Your mother tongue is certainly an indicator of identity, as are your country or region of origin, your attitude to religion and your faith or denomination. Your hat or tie, if you wear them, also. The people you choose as your friends is also an indication of your cultural identity. Even your way of looking at death is a matter of cultural identity. Is there an afterlife? Is there a soul that survives the death of the body? Your beliefs define an aspect of your cultural identity.

As stated in one of the papers in the present issue, different beliefs in two Australian Aboriginal tribes define beliefs in the afterlife as an indication of cultural identity: “For *us*, the souls of the dead are on the island of the dead people, for *them* they are in the Milky Way.” Or “For *us* the good people go to heaven, for *them* believers go to heaven and non-believers to hell, be they good or bad.”

Defining cultural identity concerns both individuals and social, ethnic and linguistic entities. It usually has a dominant component, producing strong feelings and behavior. For the tribal world cultural identity is primarily the tribal identity, and an individual is classified and self-classifies himself according to his/her tribal adherence and to his/her particular moiety, totemic group or other sub-denomination. When urban settlements grow, tribal identities decrease in importance.

For some countries like the UK, Sweden or Germany, class – aristocracy, middle class or lower class – has been a fundamental element of cultural definition which is gradually changing. For countries like India, caste definition still remains an element of cultural definition which has a strong psychological weight, despite political attempts to change it.

In several countries, the religious denomination of birth is a fundamental element of cultural identity even if a person has become a non-believer. In some Muslim countries, non-Muslims tend to be considered as having a lower cultural status. In Bengal, a fundamental definition of identity is whether you derive from a Hindi or a Muslim family; in Ireland, if your roots are Catholic or Protestant; in Kosovo, if your roots are Muslim or Christian.

In Israel, the main cultural identity is if you come from a Jewish or an Arab family, but in the town of Bethlehem cultural identity is defined by whether you come from a Christian or a Muslim family, and in the town of Safed, if one derives from a family of Ashkenazi Jews or Sephardi

Jews. In a village of South Tyrol in the Italian Alps, the fundamental definition of cultural identity is whether the family of origin has Italian or German as mother language, and in Kazakhstan, if you come from a Kazakh family or a Russian family. In South Africa, despite all the efforts to eliminate racial discrimination, cultural identity is still defined according to whether you are white or black or, if you are a Khoi (Hottentot) or a San (Bushman).

For ages, ethnic affiliation has been the core of cultural identity, and this defined human relations, alliances and quarrels. Recent trends see drastic changes; in the US, political orientation, either Democratic or Republican is a strong definition of identity, beyond ethnic origins. Analogous trends of identity according to political orientation have developed in some countries of Latin America. A similar tendency is present in Europe, where voting for a specific political party or even cheering on a soccer team and belonging to a soccer team supporter club has become a defining element of cultural identity.

Most people consider their own cultural identity as superior to that of other people. I still remember, as a student of French at the Alliance Française in Paris over 60 years ago, how I reacted to a German girl who used to define Italian and Spanish fellow-students as Afrikaner, considering herself to belong to the superior race of Aryans. As an impulsive young man I asked her how come the superior race lost the war.

Ancient Egyptian documents attribute culturally different identities to people named as Asiatic, Shuso nomads, or Ethiopians, thus emphasizing the cultural superiority of the traditional settlers of the lower Nile Valley.

In the Roman empire, cultural identity defined Roman citizens as having a privileged cultural identity, and the barbarians, the non-citizens, were considered to have an inferior cultural status. A similar tendency was applied in Athens, a few centuries earlier, as Athenians, believed to have been the inventors of democracy, considered themselves as having a privileged cultural identity, and had a privileged status in decision-making. Many other examples could be listed to emphasize how relevant cultural identity was and is to all the human societies of today and of historical times.

Before written history, cultural identity emerges from archeological findings and anthropological records. And it is important to trace back the roots of this universal pattern of culture. Some elements remain constant as factors of cultural identity, while others are variable. In tribal societies, totemic identities, moieties and other tribal sys-

tems of categorization served primarily to evaluate mating affinities and social relations, regulating them by imposing taboo rules.

After the examples presented in the previous issue, the following pages contribute additional factors of cultural identity. It is a meaningful sample of different conceptual landscapes. As already mentioned, even beliefs in the souls and in afterdeath are elements of cultural identity in five continents since prehistoric times. Neolithic megalithic monuments in the UK reveal cultural identities through myths and beliefs. Specific customs and habits in Brazil emerge from the analysis of rock art; elements of prehistoric cultural identities in a now desert area of Africa are exposed by the rock art of a few thousand years ago. And coins express the identity of their makers ever since they have come to exist. Following the previous issue of **EXPRESSION**, this issue again accompanies the reader in a trip over the ages and spaces of continents, detecting cultural identities.

Cultural identity is twofold: how you define your cultural identity, and how other people define it. What would you consider to be the main aspects of your personal cultural identity or that of your social or national entity? Would other people agree with your definition? The same holds for individual cultural identity and for social, ethnic, national or linguistic groups. Is there an objective way of defining cultural identity? But what is cultural identity? An old friend of mine, an eminent archeologist, once read in a newspaper that he was famous for preparing excellent *churritos*.

For most people, cultural identity is a matter of tremendous importance, yesterday and today. We see every day minorities fighting for their cultural identity, in China, India, Turkey, Israel, Azerbaijan, Myanmar, Sudan, Ethiopia and in other regions of the world. Entire nations in five continents question or re-define their cultural identity, a trend affecting both emerging and affluent countries. The crisis of identity is an endemic pattern of dynamic societies. It seems to be a topic well deserving further consideration.

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 some other scientific journals, here articles are expected to be stimulating and 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, ethics and dignity of authors, colleagues, and readers.



Front page image

Monolith with fish face, from LepenskiVir (Serbia), on the bank of the Danube, where 8000 years ago fishing communities of the Mesolithic period lived in villages. (Anati Archives).

DISCUSSION FORUM

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

THE ORIGINS AND EVOLUTION OF URBANIZATION

The article “Rethinking Jericho and the Birth of the World Earliest Town”, in **EXPRESSION** 30, has awakened a debate on the birth and development of urban settlements. As a human cultural trend, it developed very late, just in the last 10,000 years, out of over 4 million years since the emergence of the *Homo* species. It seems that ants invented the urban habitation pattern before our species. What can this tell us about the meaning of a recently acquired model?

Urban settlements are not a natural feature of our species, nor are they, as often claimed, a direct outcome of sedentarization. From the layers of human deposits, in caves and open-air sites, in Africa, Asia and Europe, we know that human nuclear clans used to maintain fairly permanent living sites in the last half a million years.

Large settlements, hosting over 1,000 people, are a new event in cultural evolution, implying new ways of socio-political management and new collective means of economic resources: they changed the very core of social organization. One of the main implications is the need of coordination as the fundamental role of leadership. Ever since, leaders have played a vital role determining the success or failure of settlements, human groups and even nations and civilizations. Urbanization has changed the social structure and the daily life of society. Understanding the collective, political and economic implications of this relatively recent trend is a fundamental part of research in the humanities. Urban centers have grown even in the most unthinkable areas of the planet, among the sands of the Arabian desert, in the heart of the Amazonian forest, or in the arctic frozen lands of Siberia. Social, political and economic factors are at the root of this development.

Ever since the birth of Jericho, the pattern of urban settlement has expanded to constitute over three-quarters of the world's population, an increase that awakens divergent opinions. Is this a permanent orientation leading to the globalization of urban humanity, or can we foresee an inversion of tendencies, a turning point in the opposite

direction? Could there be a loosening of the metropolis's fatal attraction and a change to going back to living in the countryside? What factors may lead one way or the other? The topic is worthy of study. Environmental conditions including pollution and climatic changes, social relations, means of communication, economic potential resources and other factors influence development, which may vary, from Shanghai or New York, to Cairo or Manaus, Doha or Brazzaville.

The first simple step is collecting data which are not very available. Stories and histories about the birth and development of urban settlements, beyond statistics, are elementary details. Facts acquire a new dimension, when their specific roots and their dynamics are considered. Knowledge goes one step further when it becomes understanding. Papers based on different disciplines will be published in **EXPRESSION** quarterly journal. Then they will make up the object of a multidisciplinary international seminar and become a basic book on the history of urbanization.

Archeologists studying ancient urban settlements can tell their stories. Town-planners may present their views and theories. Sociologists, anthropologists and psychologists can contribute to encouraging an awareness of social, economic, health and psychic influences on urban living.

The cultural context of the birth and evolution of urban settlements will be considered, along with the role in their development of trade, agriculture and socialization. Early urbanization trends in the Middle East, the Far East, Europe and elsewhere will take us to the core of trends. Also, the later urban development of villages becoming towns and of towns becoming mega-towns reveals social, economic and political factors. The sharing of information and ideas, considering the past and the present, may further extend to the future of urban settlements.

How did a town come to life and develop? The reconstruction of the event is a vital part of the history.

The myths, the conceptual elaboration of submerged memories, the stories behind history, contribute to another dimension beyond dry facts, the alternative reality of human ambitions, emotions and imagination. It is a no less relevant aspect of human life and evolution.

Stories have been told ever since the beginning of history. The myth of the birth of Rome or the biblical account of the tower of Babel are traditional examples. Archeological discoveries provide other examples where the boundaries between history and myth are not always well defined. The birth, social life and economy of sites like Goebekli Tepe (Anatolia), Banpo (China) or Machu Picchu (Peru) are still open to different hypotheses. Also, the origins of Jericho, apparently the oldest town in the world, as discussed in issue 30 of **EXPRESSION**, is causing fascinating discus-

sions, trying to understand the roots of culture and specifically the roots and development of urban settlements. One of the major quests of the human mind is understanding, and one of the major concerns is understanding ourselves, our roots, the how and why we became what we are. Ever since the earliest evidence of intellectual reasoning, the future has been considered to be more important than the past, but without knowing the past we lack sound means to conceive of the future. Colleagues and friends with something to say are cordially invited to join the debate. Contact Atelier research center at atelier.etno@gmail.com, proposing your papers.

ON RITUALS AND BELIEFS: ART AND RELIGION

The study of prehistoric art is opening up a new landscape for the origins of religion. 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. Prehistoric art reveals new aspects of prehistoric religion which are revolutionizing the history of religion. But much more can be revealed by 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 earlier than 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 shapes? Following the debates arising from recent publications, the origins and evolution of religion are experiencing a growing interest among scholars and the public alike. Many rituals and beliefs in surviving tribal societies constitute an immense patrimony of knowledge and spiritual life: this aspect also is worth further investigation. Another aspect to be considered is the function of art in religion, ever since the presence of visual art. To what extent did religion influence art and to what extent did art influence religion? **EXPRESSION** quarterly journal is planning a

forthcoming issue on the origins, patterns and evolution of rituals and religious beliefs. Submission of papers is welcome. They may focus on specific cases as well as on general trends in both extinct and living cultures.

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. As discussed in previous issues of **EXPRESSION**, some of their messages can now be read and understood. 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. Recently, research has been progressing fast. Another question may be worthy of further thought: why rock art? What role did the rock play in the human wish of representing his messages on it? What did the rock hide behind its surface? Recent tribal beliefs and practices help this study.

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 (Marshack). More than ten different hypotheses have been proposed for the purpose and meaning of Paleolithic art, some relying upon solid documentation, others upon theoretical assumptions. These valuable attempts in the course of over a century provided the path for contemporary scholars to understand 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.

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. **ORIGINS AND DEVELOPMENT OF URBAN SETTLEMENTS**
2. **THE ORIGINS OF RELIGION AND THE ORIGINS OF ART.** Possible connections.
3. **RITUALS AND BELIEFS:** universal and local patterns.
4. **DECODING PREHISTORIC AND TRIBAL ART:** meaning and purpose.
5. **WHERE DOES *HOMO SAPIENS* COME FROM?** Where, how and when.
6. **IS *HOMO SAPIENS* THE INVENTOR OF FIGURATIVE ART?** Is visual art the sign of his presence?
7. **IMAGES OF WARFARE AND FIGHTING IN PREHISTORIC AND TRIBAL ART.** Their commemorating role and their historical value.
8. **SEAFARING DEPICTIONS: RECORDING MYTHS AND EVENTS** Considering the story of seafaring and its earliest documentation.
9. **WHEN AND HOW DID 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?
10. **MYTHS OF ORIGINS: WHERE DID THE ANCESTORS COME FROM?** Global and local versions.
11. **DEFINING THE CULTURAL IDENTITY OF *HOMO SAPIENS*.** Art, material culture, myths, beliefs, and conceptual trends.
12. **PERSONAL IDENTITIES OF ARTISTS.** Identifying the hands of a specific artist, school or tradition in prehistoric and tribal art.
13. **BURIAL CUSTOMS AND PRACTICES** as expression of beliefs in the afterlife. How was the world of the dead conceived?
14. **IMAGES OF WARFARE AND FIGHTING IN PREHISTORIC AND TRIBAL ART.** Their commemorating role and their historical value.
15. **REGIONAL PATTERNS IN ARTISTIC CREATIONS.** What generates local characteristics in artistic expression?
16. **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.

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DEATH: ETERNAL CONFRONTATION BETWEEN KNOWLEDGE AND BELIEFS

Emmanuel Anati

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Between Knowledge and Beliefs

The village is crossed by the procession that accompanies the dead to the cemetery. The symbols go ahead. They may be the cross, the crescent, the sickle and hammer, the symbols of the deceased, the flag, the crown if he was a ruler, the gun if he was a fighter. The religious officiants who pray and chant, or his partisans who praise him or inveigh against their enemies, follow the coffin and behind him, the weeping wife supported by family members or the sons dressed in black, or the companions of fights, sad and subdued; friends and supporters follow. The procession accompanies the coffin to its final resting place.

Passing through an Italian village, some passers-by will take off their hats and make the sign of the cross. In Central Asia, passers-by will bow their heads and put their palms together in deference. In some Australian tribes, up to a century ago, the deceased's treats consisted of roasting the meat for the funeral meal, thus ensuring the deceased would continue living in the body of those who ingested the meat.

No spoken language, religion or fashion can boast the longest duration of the cult of the dead, which takes on different forms, but whose first records date back to over 100,000 years. Today, in certain societies people dress in white as a sign of mourning, instead of the black suit of the West. In the tribal world, even those who do not wear clothes paint their bodies in accordance with customs as a sign of mourning. The presence of death requires ritual behavior and the use of conventional formulas. Behavioral peculiarities express cultural identities, but the cult of the dead is a common cultural habit of all of humanity.

In the funeral area, the most emotional moment is when the coffin reaches the grave that was intended for it, into which it is lowered and covered with earth. There is no going back from that pit. The psyche confronts nature and doubts arise: is the dead really dead? "His soul is watching us from up there."

Or, on the bank of the sacred river, the body is placed on a pile of wood which is lit. When the fire goes out, the ashes are collected and dispersed into the river, accompanied by flower petals. They will enrich the earth and make the gardens grow. "From earth you come, to earth you return." But...? While the body burned, what brought with it that smoke that emanated from the fire and disappeared skywards? That smoke, what did it bring with it?¹

In Tibetan Buddhism the soul awaits reincarnation. The *bardo* is the transition phase between the death of the body and the rebirth of the soul in the newborn who inherits it.

Those who survive the moment of death testify to having experienced the split between soul and body. In surgical operations and in other circumstances in which a temporary death occurs, the vision of one's body and its immediate surroundings is manifested as if it took place from above, without the eyes of the beholder. Such an experience is remembered and comes back to the reborn mind. This phenomenon has different interpretations, including that it is a psychic resonance, a mirror effect, or that it proves the separation of the soul from the body.

Not one of those having had this experience has claimed to have seen the world of the afterlife, Dante style. All of them have just seen the earthly context of that instant in which they either lost or reacquired consciousness. The experience does not seem to be comparable with that of Samoyed shamans describing their journeys to the underworld and their contacts with the souls of dead people. Nor can it be compared with the claims of some Australian *Karadji*, or wise elders, regarding their contacting and talking to the spirits of ancestors and the souls of totemic animals. The experiences of contact with the underworld are variable, according to the psychic background.

Nature follows its course and the psyche runs after it:

¹ The Italian version of the present text is a communication to the Annual Convention of Micro-psychoanalysis, 2021, now in press.



Fig. 1. The soul in the arms of the Bardo in a Tibetan painting (Tibetan Book of Death, Anati Archives).

both that of the individual and the collective face reality and decipher it. The psyche is not limited to manifesting reactions; the decoding process leads to the exegesis of reality, both imaginary and that believed to be real, true reality.

Is death the end of existence or the transition to a better life? This question leads to the eternal confrontation between knowledge and beliefs. As elaborated in *The Origins of Religion* (Anati, 2020), it is the core of the origins of religion. The concerns relate to the invisible soul and its possible faculties. “Pass over to a better life” is a term that avoids pronouncing the dangerous term “death”. When someone mentioned it, my grandmother repeated the superstitious phrase “*Non sia mai!*”(Never be!) and gently tapped the top of the table next to her three times with her hand, thus awarding confirmation of the “never be”. This did not exempt her from the common destiny of us all.

Every human society has a cult of the dead aimed at alleviating the trauma of the living and implying

that something remains alive of him/her who has gone, beyond memory. The lifeless body becomes a skeleton or dust. The vital energy left him ... and where did it go?

The mind produces the hermeneutics of what it configures as reality, be it real, apparent, fictitious or illusory. Reality is what the individual wants to consider so.

What the mind tries to explain through logical reasoning, which often is not, calms apprehensions. The things that despite the application of this semblance of logic do not find solutions cause anxiety, which is alleviated by the expedient of beliefs.

The vital energy of the individual has left the body. Exegesis leads to the hypothesis that it acquires autonomy from the envelope that housed it. The faith in the survival of the soul relieves the trauma of death: the soul survives, death is not death. According to archaeological finds in burials, this belief appears to predate the presence of *Homo sapiens*, our direct ancestor.



Fig.2. The complex vision of the deities in the Bardo (Tibetan Book of Death, Anati Archives).

Is Death the End of Existence?

Burying a deceased person may have practical reasons but providing the deceased with funerary equipment, objects and even food, implies something more. The lifeless body is left without energy: something leaves the body. Where does the energy that leaves it go? What happens with his faculties and powers? The spirit goes away, but where? "Yesterday you were talking to your father and today he no longer hears you and does not answer. What happened?" Another nagging question followed: is the energy, the soul that left the body, still present? Does he keep seeing you? You don't see him but is he watching you?

Even for today's sophisticated minds, the idea that millions of molecules that form the matter we are made of can suddenly suspend their function leaves a sense of amazement. Millions of molecules cease their usual activities all at once? The whole body shuts down. Energy has abandoned him: can energy dissolve into nothingness? We feel the energy but cannot see it, yet yesterday it was in the body and today it is gone.

Among all the peoples on earth, death is an unambiguous fact for those who undergo it and traumatic for those who observe it. And it is just this term, "unambiguous," that is questioned. Is death really the end of life? What happens with the energy that left the body? The confrontation between reality and imagination is perpetuated. In anthropological terms the psyche, in decrypting nature, goes beyond the boundaries that separate knowledge from belief. This is a recurring process at the basis of religions, which is transmitted from the individual psyche to the collective psyche of the human core. The human mind demands answers and if knowledge does not satisfy, the resort is belief. Belief is transmitted from the individual to his social group and back, from the collective beliefs to the individual, in a permanent, albeit variable, interdependence.

The energy leaves the body: where does it go? The psyche seeks explanations in elaborating the reality of the invisible and the impalpable. The same mental process leads to myths and beliefs about the sun and moon moving across the sky: why do they move, where do they go? What is the sun doing at night and the moon during the day, when they hide? Then they reappear, the night-day cycle repeats itself: where



Fig.3. Ambasi village, Papua New Guinea. Widow painted white as a sign of mourning, dressed in a beaded tapa, probably her best dress. Three women participate in mourning. (Photo by Frank Hurley, April 1921; Anati Archives).

were they during their absence? Myths are a paraphrase of a limited knowledge.

Each level of knowledge is limited, even that of the luminaries of science: due to the accumulation process of memory, today's knowledge is greater than yesterday's, tomorrow's knowledge will be greater than today's; belief is a substitute for knowledge that changes with variations in knowledge.

The confrontation between psyche and nature manifests two fundamental processes. First, the psyche analyzes nature and makes its exegesis, the conclusions of which are determined by the baggage of knowledge (=memory). Second, the personal psyche of the individual determines the trends of the collective psyche of the social core; this, in turn, influences the processes of the individual psyche. It follows that, except for pathological cases, the individual and the collective psyche are interdependent.

The Dawn of the Cult of the Dead

To realize how deeply the dilemmas of death are rooted in the human mind, it is relevant to go back to their origins. Some sites dating back to the Lower Paleolithic indicate the presence of ritual acts for the dead. A collective burial in Atapuerca, near Burgos in Spain, over 300,000 years ago, looks like a deposit of skeletons accumulated over generations. It was hypothesized that a specific site reserved for the dead was intended to guarantee their post-mortem social life. The act could suppose an ideology if it turned out to be a custom. But it is an isolated case for its time. We therefore do not know if it was a cultural

widespread custom, or a local practical habit. The clan could have a fixed place for the dead, for piling firewood, for working flint implements, and other things. A well-shaped flint hand axe found in the communal grave-site, if intentionally placed there, could be the earliest known case of a mortuary deposit.

Another notable funerary site, dating back over 100,000 years, is the cave of Qafzeh, in Israel, where several burials concentrated in a few square meters were accompanied by marine shells, ochre lumps, yellow and red coloring matters, and animal bones, traces of food. It is currently the oldest clear case in which the presence of funeral furniture, objects, and food



Fig. 4. Arenice Candide cave, Liguria, Italy. Upper Paleolithic Tomb. The deceased has several ornaments, most notably a cap of small shells. The hand holds a flint blade and at the side there are two finely decorated "bâtons-perforés", objects of (unknown) use, usually made of animal antlers or bones, with a large regular hole. They were buried with the deceased body. The fact that the holes of the two objects were found one on top of the other presumes that something passed through the two holes, probably a wooden pole. (Photo by Pegli Museum, in Anati, 1995a).

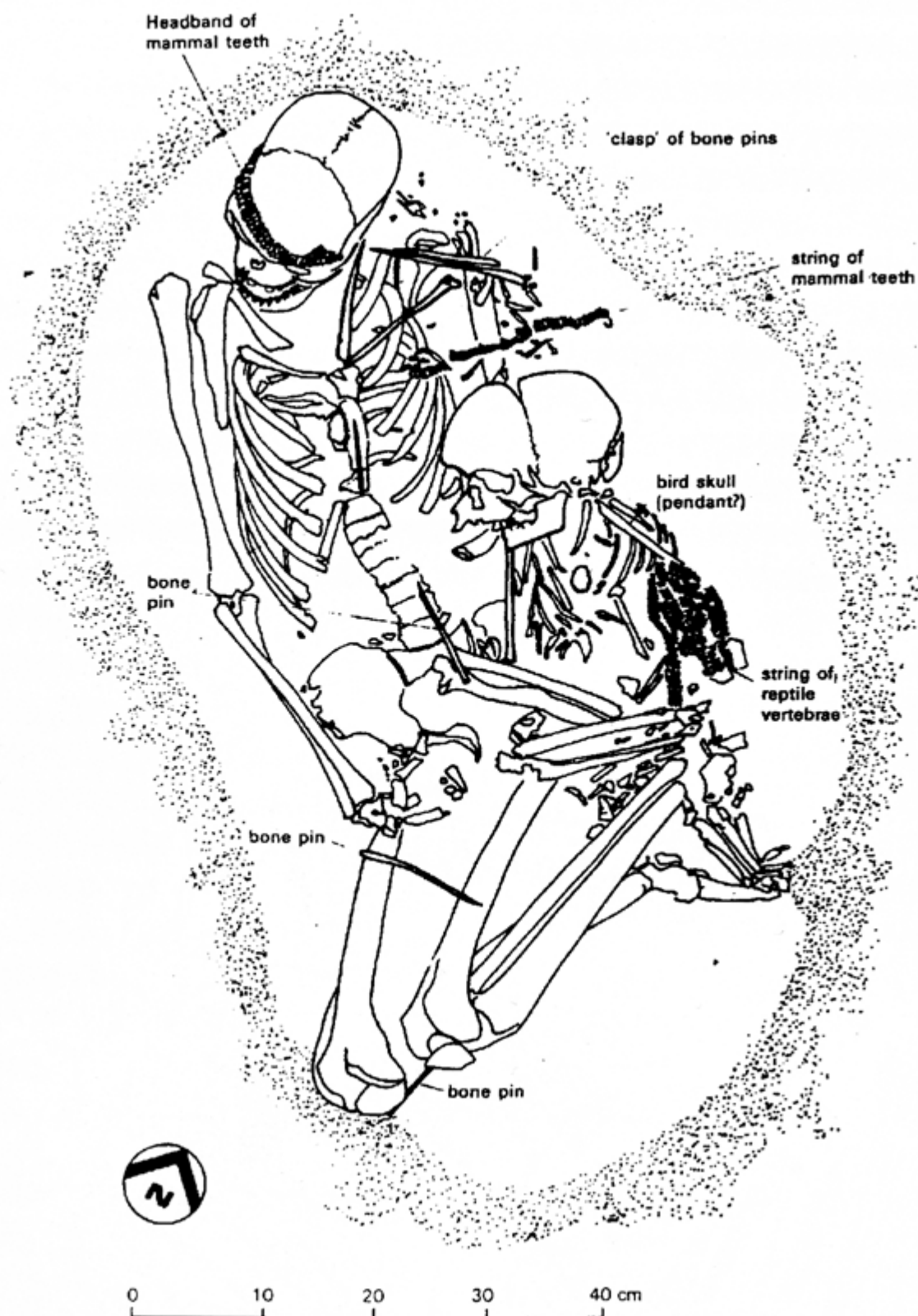


Fig. 5. Roonka, South Australia. Burial of woman and child. Adult and adolescent are buried with ornaments and tools of daily use. According to the reconstruction of the discoverer (G. Pretty), the adult was wrapped in a skin or tapa, closed by a bone pin. To the left of the skull are bones of small mammals and birds which are presumed to be food remains. The skull is adorned with a crown of mammalian teeth. The teenager had beside him a necklace of reptilian vertebrae, a bird skull and yellow ocher spots. The date of this tomb is controversial. The remains of a hearth next to the tomb have been dated to C14 to around 18,800 years. (From Flood, 1983).

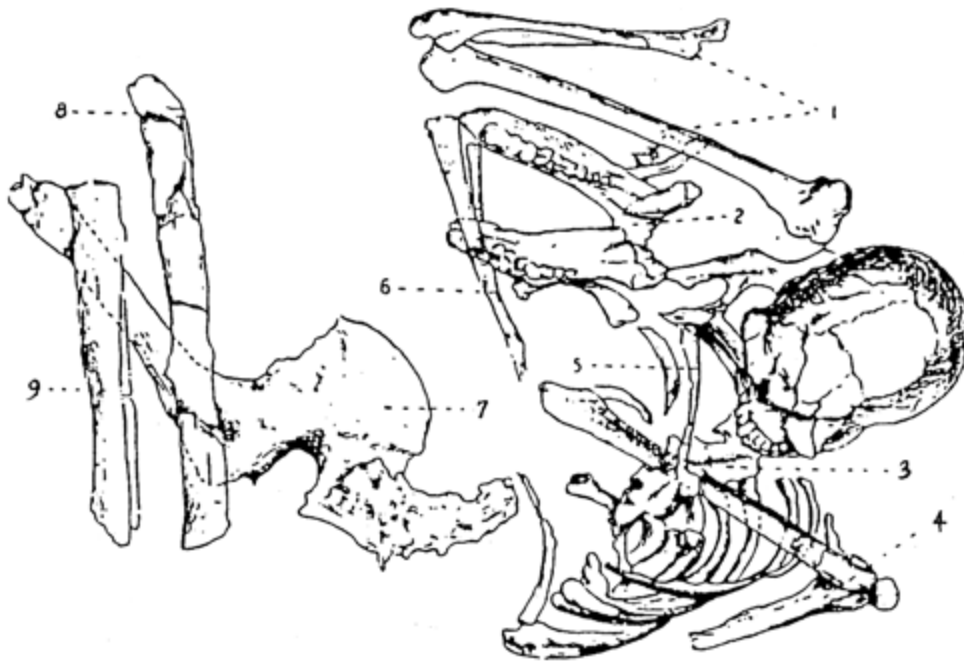


Fig. 6. Skhul Cave, Mount Carmel, Israel. Mousterian burial dating back to about 75,000 years. The deceased is accompanied by a trousseau. The pig's jaw is considered to be a residue of the meat that was to wrap it. 1. Right arm; 2. Pig jaw; 3. Dorsal vertebrae; 4. Left scapula and humerus; 5. Left collarbone; 6. Left radio; 7. Right ilium; 8. Left femur; 9. Left Tibia and Fibula. According to the discoverers, the pig jaw was held between the right arm whose radius overlaps it and the left arm next to it on the other side. (From Garrod and Bate, 1937).

next to the deceased seems to be attested.

For about 100,000 years, specifically funerary areas were present on three continents: Africa, Asia, and Europe, but this is not a global practice. Till recently some Arctic populations abandoned dead bodies to animals or threw them into the sea to become food for sharks. There are populations that cremate the dead and disperse the ashes. Others, nomads from the Middle East and Central Asia, bury the dead wherever it happens, in isolation, covering them with mounds of earth or stone.

Burying the dead in circumscribed cemetery areas is a widespread custom. The areas thus destined are considered sacred, and the descendants return there for generations. The deceased are buried next to each other, and keep up their social lives. Cemeteries are places of multiple socialization: socialization of the dead with the living, socialization among the living professing common rites, and conceptual socialization among the dead.

The burial with conventional canons, the funeral equipment that accompanies the deceased, and the virtual socialization in cemeteries indicate the presence of widespread traditions, implying indoctrination and catechism. The ideology includes the vision of a world beyond, the survival of the soul, and the need to guar-

antee the deceased the happy continuation of an imaginary post-mortem life. The corpse is buried with its dinner. What remains are fossilized bones, with signs of intentional cuts made with lithic blades. The meat that wrapped them has not been preserved.

The practice of giving food and objects to the deceased implies the belief that the lifeless body needed it and highlights an apparent contradiction. The act of burying confirms the awareness of death and contrasts with the custom of providing the deceased with objects and food. Hypotheses such as a practice aimed at believing that the deceased is still alive may explain subsequent elaborations, but the first act of giving food to the deceased appears to be an act of faith, a confrontation between knowledge and belief. What mental mechanisms lead to giving tools and food to a dead person while he is buried and covered by earth? The act of burying and placing his funeral kit next to the deceased are two acts in conceptual contradiction that are nevertheless part of the same process of caring for the deceased, still widely practiced by some.

Burying the deceased with food and objects involves something essential: the refusal to see the end of life in death. It indicates a conceptual archetype, that of refusing to be aware of unpleasant realities.

Conceptual Implications

The habits enunciated above, in addition to illustrating funerary practices, reveal the belief in an afterlife. They also highlight an essential aspect of the conceptual mechanism, the constant confrontation between knowledge and belief, the doubts between knowing of believing and the believing of knowing. How to imagine the afterlife? How to conceive of the never seen? Faith must be witnessed; the mind tries to understand nature and tends to produce evidence that confirms beliefs. When these assert themselves as dogmas, the proofs become superfluous: so it is and so be it.

The body of the deceased decomposes, something vital leaves it; a split occurs between the lifeless body and what gave it life. Where does the energy go that escaped from the body? How to conceive the afterlife, the other world, from which, as it seems, no one has ever returned and of which no one has direct knowledge?

Various beliefs include proofs of this afterlife: visions, dreams, miracles, and revelations. From tribal mythologies we know that different populations imagine it in various ways, but the idea of the existence of another world, populated by the energies released from the bodies, has been present worldwide for millennia: it denotes the structural need to define the space of the spirit world. Do spirits, if such they are, really need space? Could there be a conceptual world that does not have and does not need space? The spirit, in the guise of intellect, which, according to our senses, does not occupy tangible physical space, tries to define a self that gets rid of its own body, and has difficulty in conceiving itself without material space.

The mental process assumes that the soul, freed from the body, needs an alternative body. The concept consists of a sequence of non-affirmable perceptions: the very existence of the soul can be doubted, that this soul, if it exists, also needs a virtual body, and that this hypothetical virtual body occupies a physical space. However, this belief, with local variants, is shared by people the world over.

The megalithic funerary monuments that characterize the Neolithic period from the Atlantic shores of Europe to Central Asia and beyond often have limited space for the bodies, and a much larger space for thick walls on which images of spirits appear. The stone, receptacle of souls, allows them to remain next

to the lifeless bodies in the same monument. The megalithic tombs reflect the role of the stone receptacle that mitigates the split between the body and soul of the deceased.

Rock art over five continents has images of spirits residing within the rock, an impassable and inaccessible space for the living. The image of the spirit, performed by human hands, is intended to represent the invisible, which is inside the rock. The monoliths called menhirs in many cases appear to be receptacles for the soul of some deceased or mythical ancestral spirit.

Personally, I witnessed a rite performed by a holy man and his disciples in a forest of Madhya Pradesh, in central India, in which a monolith was placed vertically, next to a centenary tree considered to be sacred, and became the home of the soul of a deceased person. After the ceremony, in which a choir raised their voices, pronouncing arcane words in a liturgy to help the soul to settle down, the relatives of the deceased placed food at the foot of the monolith, consisting of a bowl of milk, some yellowish shapes, probably a sort of fried chapati, and fruits. They then gathered in prayer in front of the monolith. The monolith had become an object of worship. Probably the next day the family noticed that the soul of the deceased had enjoyed and consumed the food offered (thanks to the nocturnal contribution of animals). This ceremony can suggest one of the functions of many menhirs, erected over millennia. Today's gravestones, to which flowers and prayers and even kisses are offered, are heirs of animistic beliefs that still survive, which are celebrated in particular on the annual day of the dead in some parts of the Western world.

The concept of reincarnation, of the return of the soul in the body of the pregnant woman, the rebirth of the ancestor in the newborn, is still present in various populations. In the Western world the tradition is discreetly preserved, when the ancestors return virtually when newborns are given their name (Anati, 2011; 2018).

Anima (Soul), Animal, and Animism

Animal burials date back over 50,000 years (Bonifay, 1964). Even with animals, the dilemma arose of understanding the phenomenon of energy that leaves the body. Do animals have an *anima*? Do they have an afterlife too? The hunted animal was active



Figs. 7, 8, 9. Megalithic tomb of Gavrinis, Brittany, France. Neolithic period. External view of the immense pile of stones, and internal view of the funeral corridor with images engraved on the walls. (Wikipedia).



Fig. 10. Field of menhirs in Carnac, Brittany, France, Neolithic period (Wikipedia).



Fig. 11. Jowalbinna, Laura, Queensland, Australia. Image of the Quinkan spirit superimposed on previous figures. According to the myth, the snake bites the sex of the spirit. The outlines in white are recent additions, probable expressions of the revival movement of ancient traditions (Anati Archive, AUS0207).

until the moment it received the fatal blow which removed the energy from the body. The live animal suddenly turns into food. Alive and dead, the same body changed identity.

The conservation of skulls and other animal bones placed in rocky interstices since Paleolithic times offers other aspects of an ideology that puts the material remains of animals in relation to the rock and implies the presence of related beliefs.

For some Australian Aborigines, the souls of animals and those of men meet, have a dialogue and come to terms. The hunter ensures the spirit of the animal of its survival in the body of those who consume its meat. The animal lets itself be hunted, and the hunter acquires the strength and power of the animal and thanks its spirit by consuming the meat. The Inuit,

seal hunters of the American Arctic, have rather similar concepts (or they had them until half a century ago). It is unlikely that they met Australian aborigines over the past 50,000 years.

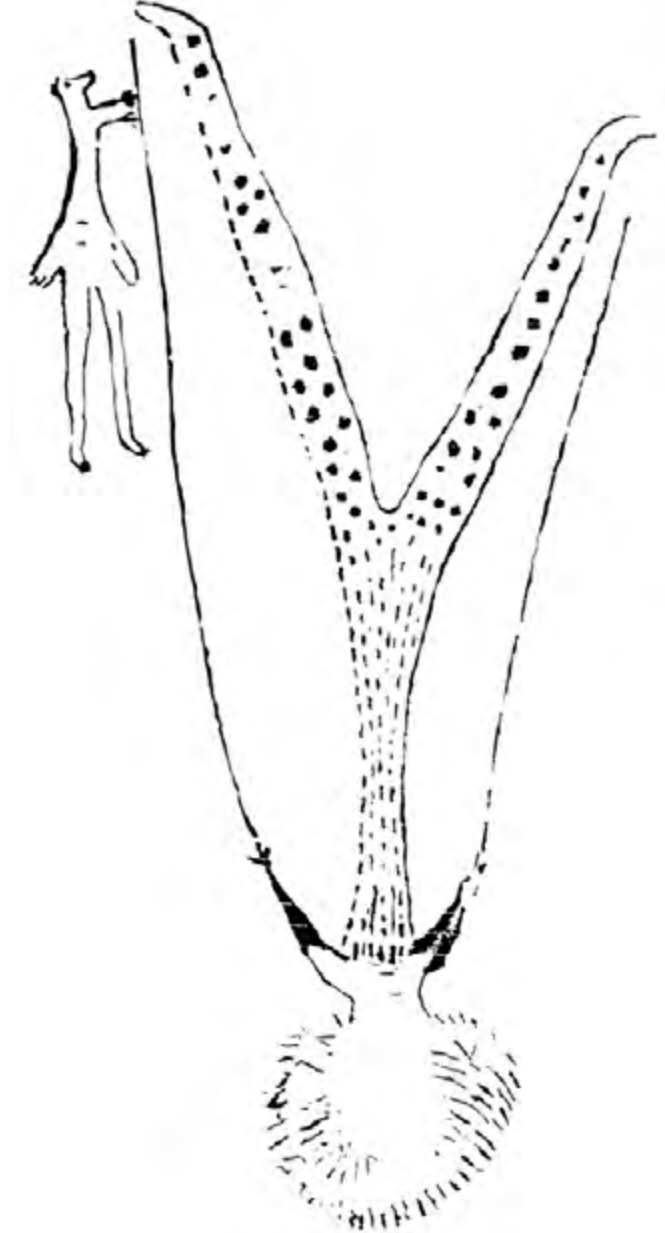


Fig. 12. Kisese, Tanzania. Rock painting attributed to advanced hunter-gatherers. A character with an animal face (indication of totemic identity) meets a great spirit that emanates energy from the hands, energy that the character tries to collect with his own hands. The spirit has its head turned downwards and its feet upwards, an indication of its belonging to the other world, to the world of the dead. The lack of a face indicates his identity as a spirit, not as a living being. It is believed that the image represents the experience of an encounter with a living person, probably the same author of the image, with a spirit of the afterlife (Anati, 2003).

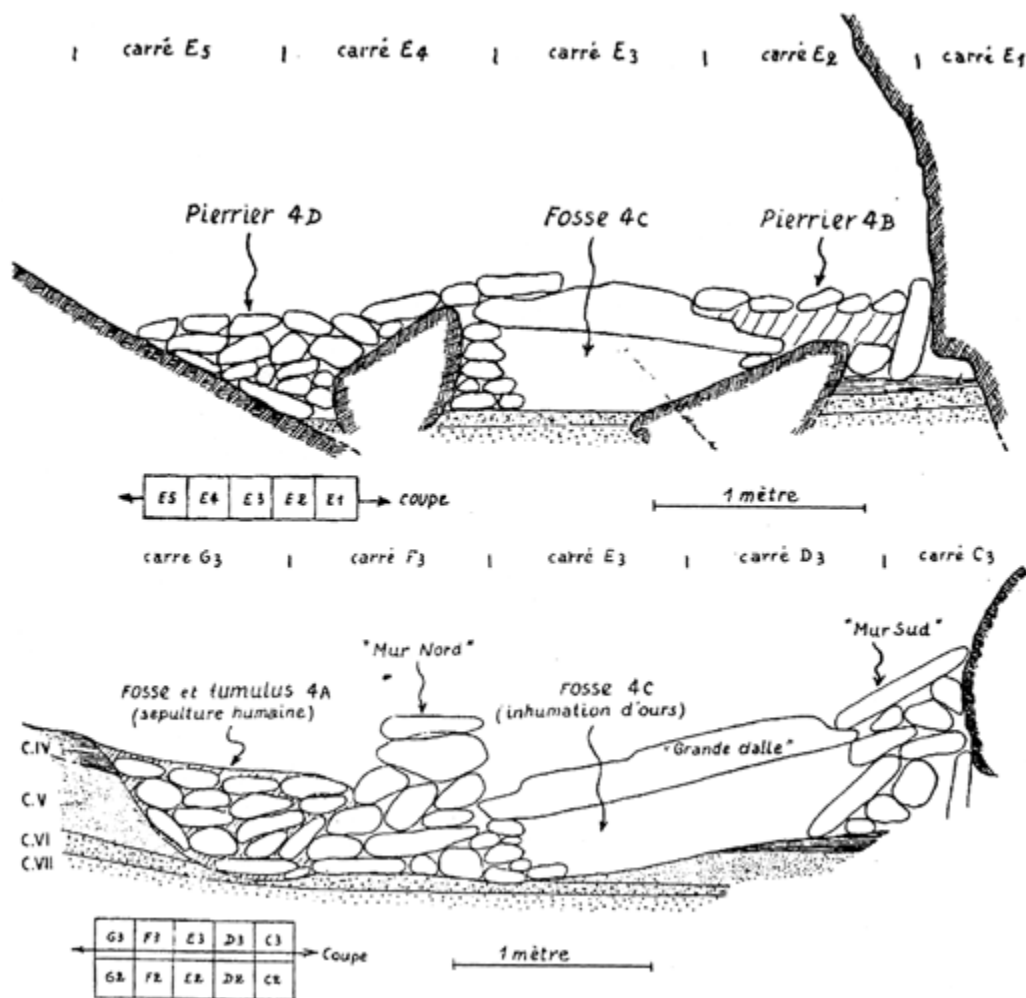


Fig. 13. Regourdou cave, Dordogne, France. Two sections of the Mousterian burials where the bear burial is next to the human burial. The bear and the man rest close together and can meet and converse. (From Bonifay, 1965).



Fig. 14. Drachenloch, St. Gallen, Switzerland. Bear skulls intentionally placed with stone from the layer of Mousterian culture of the Middle Paleolithic, dating back to about 50,000 years. (From Anati, 1995a).

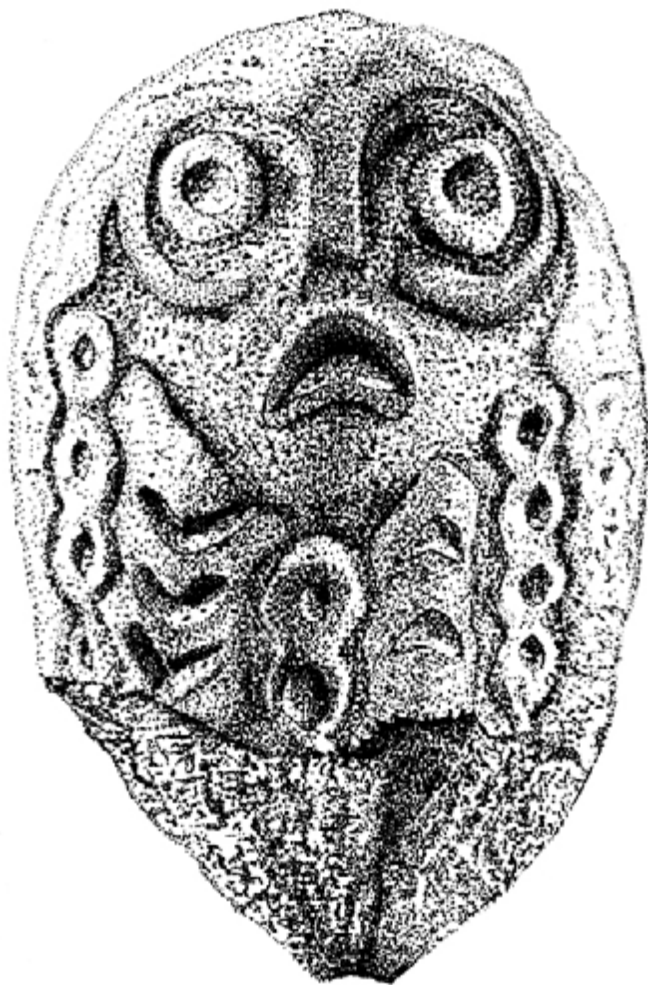


Fig. 15. Monolith with fish face, from LepenskiVir (Serbia), on the bank of the Danube, where 8000 years ago fishing communities of the Mesolithic period lived in villages. The dead were buried in the huts, under the floor, near the hearth and virtually participated in the daily meal. The statue of the mythical ancestor, man-fish, patron of daily food, was placed in the hut, next to the hearth, presumably he was the virtual procurator of fishing, to whom prayers and thanks were addressed (Anati Archives).

The totemic animal accompanies the human being, its counterpart, among various populations, including some groups of Australian aborigines. Each being was his totem before becoming human. During lifetime, the identity of the totem is maintained and after death the human soul reunites with the animal totem in a dualistic vision of life: body and soul, life and death, physical identity and totemic identity. Can the widespread belief in the survival of the soul over the body be a proof of truth? If everyone or almost everyone believes it, is it truth? The only demonstrable truth is that all or almost all believe it. This does not prove the truth: it demonstrates the presence of global

archetypes of belief. It does not transform beliefs into knowledge. But it is truth for those believing it. The widely diffused belief attributing the role of receptacle for souls to stones with suggestive shapes is present also in modern religions, for example the Kaaba, the sacred stone of Mecca, founding witness of Islam. There is no lack of tombs of saints or miraculous statues even in the Christian world. Energies are also attributed to images printed on paper. The very concept of miracle, which assigns supernatural powers to images, places or objects, is an expression of animism. Manifestations of animism aimed at non-organic materials are widespread in prehistory and tribal societies, cave paintings, to which particular powers are attributed, figurines and statues since the Neolithic, objects of worship of ancestral spirits or saints, monoliths and menhir-statues, icons of divinities or saints of Western cultures, or Hindu gods, to whom flowers are offered, ceremonies are performed and other acts of devotion are addressed. Prayers in front of images produced by human hands imply the image's ability to perceive and act, and even to perform miracles. Thus, animism survives in contemporary urban societies, the persistence of millenary traditions shared since the Paleolithic. The saint survives, listens, and performs miracles, through the man-made image representing him.

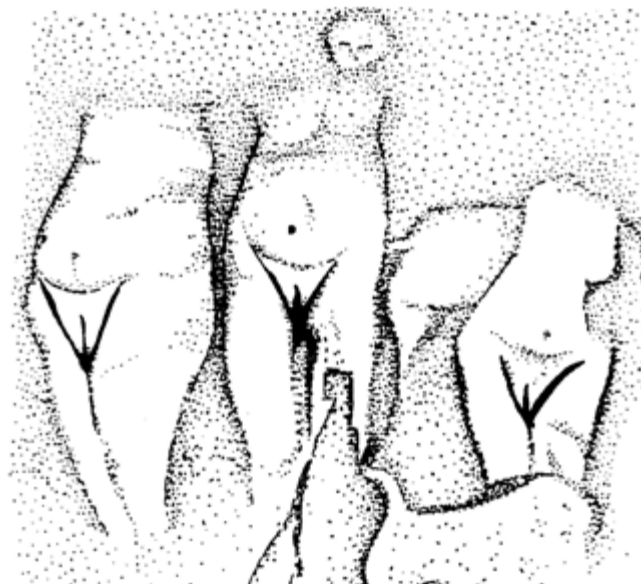


Fig. 16. Animal metaphors of the Paleolithic period. High relief of Angles-sur-Anglin, Vienne, France. (About 25,000 years BP). The female body on the right is connected to two bison profiles, one below and one above it. The intentional overlap indicates the interface between the human being and his totemic animal. (From E. Anati, 1989, p.51).



Fig. 17. Gabillou cave, Dordogne, France. Late Upper Paleolithic (about 15,000 b.p.). Anthropo-zoomorphic figure (human body and bovid head) accompanied by ideograms. (Gaussen, 1984). The being depicted seems to be dancing and also communicating with the rectangular shape in front of him. Further to the right, three parallel lines are believed to be a numerical sign. The line coming out of the mouth means speaking or communicating. The image is considered to be that of a shaman who takes the form of his totemic animal and addresses the entity or spirit represented by the rectangular shape made up of two parts.

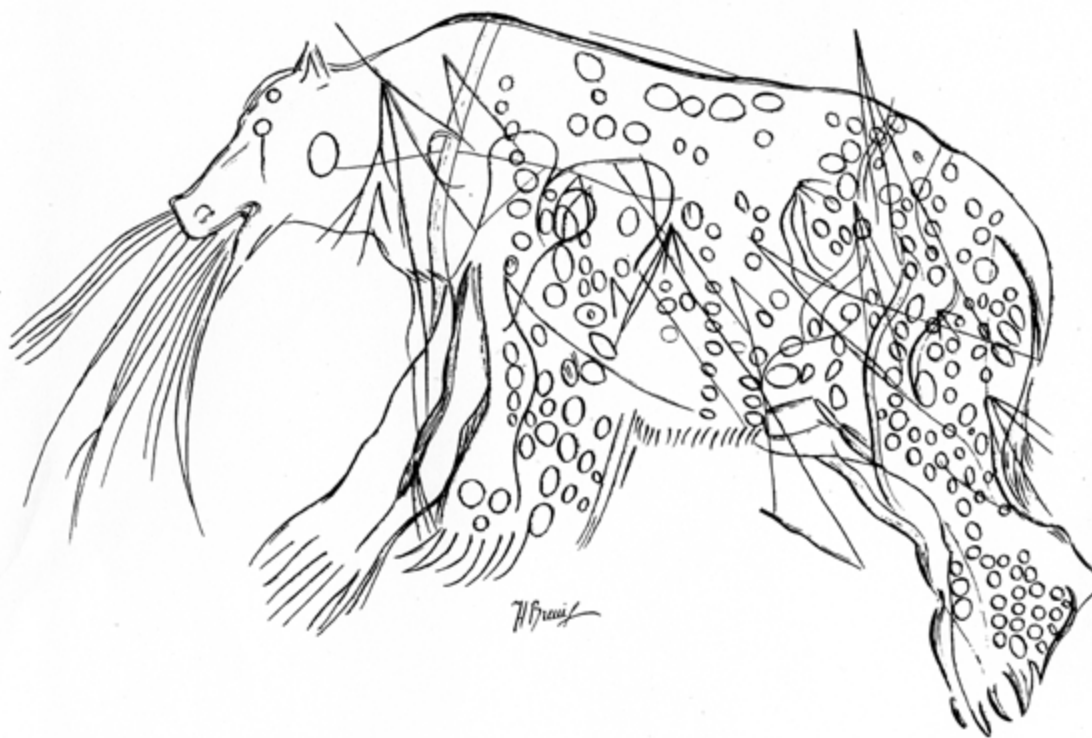


Fig. 18. Les Trois Frères cave, France. Bear spitting blood, with the body covered with blow marks. Parietal engraving of the Upper Paleolithic. Stoning and virtual killing of the image? (Breuil relief, in Anati, 1995a).

From the beginning of figurative art, the image has permitted a new dimension of the chimerical, the fantastic, the dreamed, the invented: icons of imaginary beings and concepts, ancestral spirits, divinities and saints document the dimension of human creativity, preserving its testimony for millennia.

Concepts of the Afterlife

The elaboration of a world of the souls of the dead with categories of groups based on the judgment of a supreme judge, with angels and devils, with departments for the good and the bad, rewards and penances, reflects the structuralist society that invented it. Some societies have a special afterworld reserved for heroes and martyrs, the world of eternal erotic pleasures, where the female sex is at the service of the male, according to the concept of immaculate fornication, with women eternally virgin and eternally young, beautiful and eager; others, as a relief from material

needs, with sexless angels, chanting Alleluia; others still, like a happy island with an exuberance of food, where souls eat all the time, are never hungry and never satiated. The identity of the afterlife depends on the inclinations, wishes and needs of its inventors.

The concept of an afterlife does not seem to be an archetype. Some religions, like Judaism, devote little or no concern to the afterlife: only the memory of the deceased and what remains of his lifetime deeds survive. If an afterlife existed, what would its true identity be? The question is deliberately rhetorical, as all we know is the product of human imagination. The afterlife's identity is based on characteristics deemed real by the collective conceptuality of its believers.

The different location of the afterlife, in the sky, underground, or on rocks, on an island in the middle of the sea or on the moon, the variations on the function and faculties of souls, which have or do not have powers of action, may either control or not the living people, are moved by prayers or ignore them, appear to be cultural versions deriving from the primary concepts which offer food to the deceased. The profession of faith is an act of cultural identity, of belonging to the community. "For *us*, the souls of the dead are on the island in the middle of the sea. For *them* they are in the Milky Way.". Or "For *us* the good people go to heaven, for *them* believers go to heaven and non-believers to hell, be they good or bad."

The dualistic conception of life, the union of body and soul, the belief in the survival of the soul, the need to conceive of the afterlife, form a primary conceptual core that preceded that of apology for the past. The need to historicize, to produce an exegesis of the origins, appears to be posterior to that of answering the primary question of what happens afterwards. The comprehension of an afterlife, as mentioned, is over 100,000 years old. The need to understand the past, is manifested by the spread of figurative art about 50,000 years ago.

Imaginary beings, with mixed anthropo-zoomorphic features or humans with wings able to fly are acquired in the collective memory; the afterlife is enriched by local or widely diffused ghosts.

The Imaginary in Figurative Art

While recording a rock art site with figures of imaginary beings, a *karadji*, an Australian Aboriginal elder



Fig. 19. Danggurrung, Arnhem Land, Australia. Rock painting of archaic hunter populations. The central image with numerous ramifications is Nodjurlum, the spirit of the devastating winds that the aborigines still venerate and fear. The image is superimposed on older handprints on a rocky wall still considered a sacred place by the Aborigines. (From Anati, 2003).



Fig. 20. Anthropo-zoomorphic figure with human body and bison head called "the sorcerer with the musical bow" from the cave of Trois-Frères, Ariège, France. Rock engraving. (Tracing by H. Breuil).

said: "The spirits look at us and every now and then they come to meet us." "Have you ever met them?" he was asked. "I often meet them, in dreams ... this is their way of appearing." Those who meet them in dreams can also represent them, and the ancestral spirits have been immortalized in prehistoric paintings over the course of millennia. They are recorded together with other elements that reached man in dreams and visions, which he represented. The figurative image clarifies the concept: the imaginary being thus acquires a permanent shape.

The *karadji* then said a striking sentence: "Dreams

bring truth that we do not know when we are awake." For the *karadji*, dreams testify to the existence of the spirits. His mental process is that spirits speak to him in a dream, therefore they exist. The source of this cognitive process originates in the painted image on the rock surface: it is the testimony of its truth. The image has been repainted several times, even recently, but the human hand was just refreshing an eternal image that springs out on to the rock surface.

According to Cartesian logic, the spirits that manifest themselves in the dream are conceived before appearing in the dream: they are the effect of conceptual conditioning; subsequently, the image appearing on the rock surface is the figurative result produced by its performer. The conceptual process is that if they appear in the dream they are first conceived by the mind; their images represent the visual materialization of the actor's imagination. The mental course is similar in the two cases; the divergences are in the determination of the primary source of the rational sequence and in the diverse concept of the real. For the *karadji* the image on the rock is the cognitive source, for the Western visitor, it is the result of a cognitive process. Two different truths face each other.

Even fantastic animals such as dragons or other mythical monsters popular in various mythologies are the result of conceptual elaborations that have become part of beliefs of certain populations.

The rock surfaces of the entire planet are covered with millenary visual memories. The birth of figurative art, the practice of immortalizing visual memory by entrusting it to an external memory, that of the rock surface, is a manifestation of the last 50,000 years. The insistence and tenacity of thousands of human groups, for thousands of generations, in immortalizing messages and beliefs on rock surfaces, have produced an immense database.

Figurative art develops at a certain moment of the conceptual evolution and is fast extended to the entire human species; it is the faculty to materialize ideas in a visual form. Man could deposit the message in the external memory that he had created, leave it visible even in his absence, go back to seeing and understanding it, offering himself a new mnemonic dimension, adding a tangible and visible element of collective memory. The ability to conceive images and reproduce reality or unreality, seen, experienced or imagined, marked a



Fig. 21. The soul is abandoning the body. From the Ani Papyrus, Egypt, ca. 1250 BC. (British Museum, London).

turning point in culture, without which history would not have had the same course. Can we imagine a world today without images?

The ability to produce the image plays a revolutionary role in the conceptual process. The image allowed a new affirmation and confirmation of the chimeric, the fantastic, the dreamed, the invented: imaginary, intangible, unreal beings and concepts, spirits and divinities, would not have acquired their concrete forms without their icons. Images provide a new dimension to the human memory, preserving it for millennia. In the 4 million years of history of mankind the introduction of the image 50,000 years ago is a rather recent event. The iconoclastic movements, the prohibitions of reproducing images adopted by some religions, stress the power of images and their mental influence. For most religions, however, images are a fundamental element of identity, belief and communication.

The other world has acquired the dimensions of the imagination. Death does not allow us to verify its reliability. However, the images that populate the conceived afterlife represent imaginary beings which have become objects of faith, the source of adoration, and the basic religious ideology of entire populations. Universal conceptual rules are emerging in the global analysis of past ages. The psychological mechanism

that produces diversity of beliefs and traditions also emerges. How have beliefs evolved and multiplied trying to answer the primary question of what then. The context is that of the confrontation between natural events and their mental processing, in the frame of cultural conditioning.

Rock surfaces decorated with images inspired by beliefs, join burials, cemeteries, and sanctuaries to reveal the perennial search to communicate with the non-visible and non-palpable (Anati, 1995b).

The wide range of intellectual experiences and the immensity of artistic production, which counts millions of images in five continents, attest to a dedication of time, thinking and energy that goes far beyond those dedicated to the search for food (Anati, 1995c; 2003). What stimuli have operated on man to produce this materialization of conceptual experiences?

A factor that unites these externalizations is the survival of the messages immortalized on the rocks beyond the death of the individual who produced them. The images survive, their meaning only if it is understood. The challenge to overcome the dictates of death is recurrent. The message, even if in code, survives its author. It is a candidate for immortality.

The dedication is almost obsessive in insisting, repeating, and reaffirming elements of totemic identity



Fig. 22. Har Karkom, Negev desert, Israel. Flint orthostats from the Paleolithic sanctuary, a group of monoliths associated with finds of flint implements referable to a transitional phase from Middle to Upper Paleolithic, tentatively going back 50,000 to 40,000 years (From Anati, 2020b).

and ancestral spirits, and seeking a dialogue, mostly a monologue, with ancestors, the world of the dead, and those energies freed from the weight of perishable matter.

The psyche has also produced the antidote to the monologue, making of it a dialogue, thanks to dreams, revelations, apparitions, and miracles, proofs of the truth of the imaginary that is transmitted from the individual to the collective and vice versa. Rock surfaces preserve human-made images and symbols, making the invisible visible. Are they the images of incorporeal spirits observing the living from their immortal stone body? The Australian *karadji* told us that even millenary spirits do not disdain the dialogue. The dream brings the living into the spirit world and in what Aboriginal people call Dreamtime (Anati, 2015).

The Dualistic Vision

To support the intellectual and philosophical-religious speculations of *Homo sapiens* of the Paleolithic is a dualistic vision of the world. The universe is conceived as an association of complementary binary realities: body and soul, earthly life and the hereafter, physical identity and totemic identity, man and animal, male and female, heaven and earth, light and darkness, day and night, good and evil (Anati, 2003; 2020).

This binary vision was already present when the Neanderthals conceived life as a union of body and soul 100,000 years ago. The individual had a binary identity, which unites soul and body in life and separates them in death. The human mind had formulated the equations: body + soul = life; body - soul = death; soul - body = spirit.

Death is considered as a consequence of the splitting of the binary identity, a profound concept in philosophy, which manifested itself much earlier than hypothesized by current philosophers. The dilemma of the complementarity between life and death formulated the binary vision of the world in the collective psyche, the world of the living and the world of the dead. The mental archive is organized like a dictionary of equivalents and opposites. This binary logic, in fact, is a conceptual system that establishes order, a cognitive archetype still present in our way of thinking, seen in our daily thoughts, philosophy, political conceptions, social ethics establishing what is good and bad, the pros and cons, us and others, me and him or her, and in various religious phenomena, such as angels and devils, benedictions and maledictions, faith and lack of faith, believers and non-believers.

The human being creates not only the conscious reality of the existing or what is presumed to be existing, but also concepts that insert a set of causes and effects where there are no limits between the real and the imaginary, or between believing and knowing. The only limit is that of the creative abilities of the mind.

From the above pages, it emerges that one of the main aspects of the ideology of the last 50,000 years consists in the evocation of origins and conceiving and memorizing the myth-history, which was practically a record of dead people. The search for the past overlaps that of the future and becomes a source of identity and heritage to be pre-

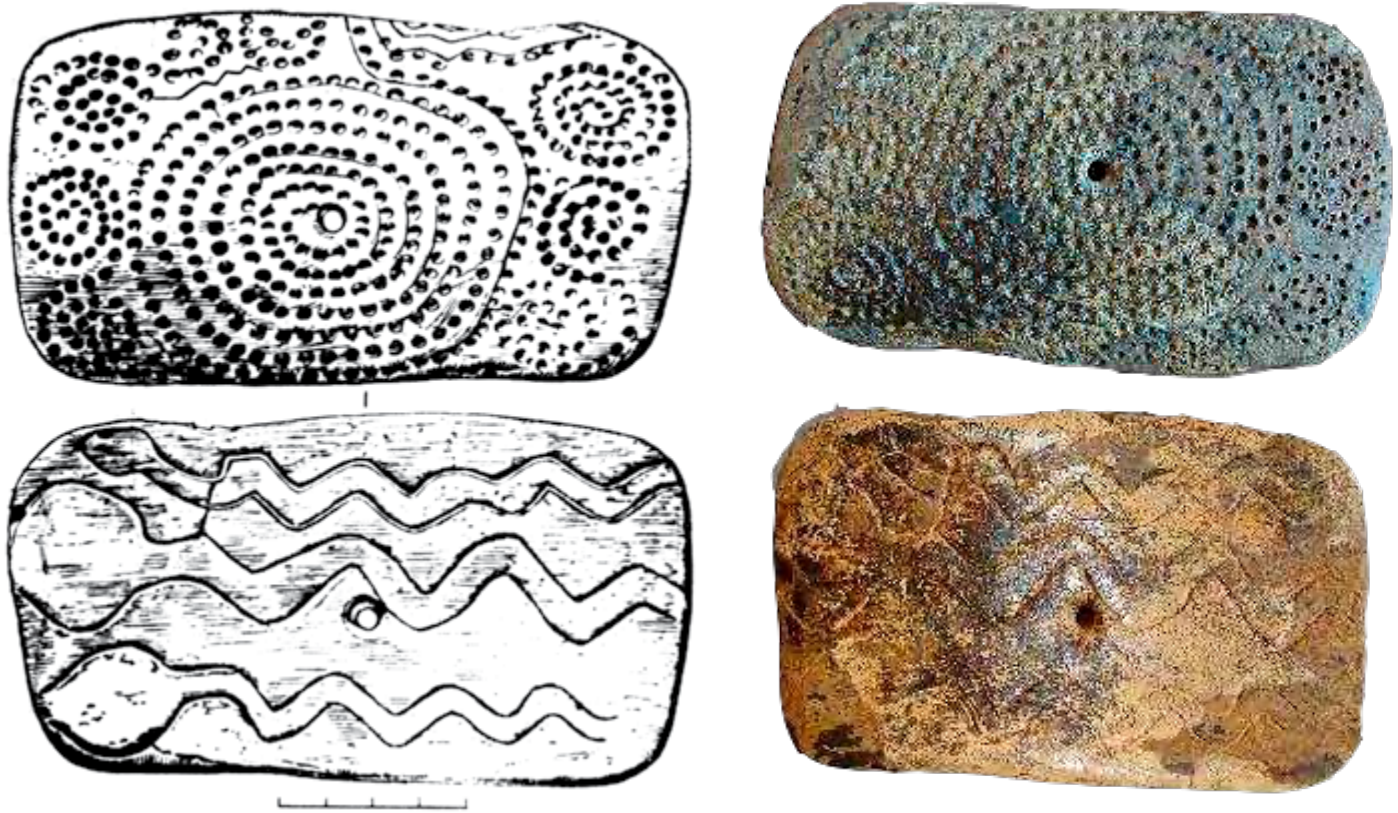


Fig. 23. Archaic cosmology: the two faces of a plate with central perforation. The two faces have been considered to represent the two aspects of the binary world, the earthly world with a central large spiral and seven smaller ones, and the underground world, with three snakes: the world of the living and the world of the dead, one, circular, with feminine value, the other linear, with masculine value, according to a dualistic conception of the universe. Malta, Siberia, Russian Confederation. Conceptual art dating back over 30,000 years (B. A. Frolov, 1974; 1983; L. Lbova, 2019).

served and handed over. Memory, both individual and collective, is not only the basis of identity, it is an apology for the present and is also the root from which the stems of conceptuality grow. An oral proto-bible has developed. One of the fundamental roles of the many millions of images of prehistoric art is the intent to transmit and preserve the intellectual heritage, to avoid its death and guarantee the immortality of ideas.

The cult of the dead, the belief in the survival of the energy that leaves the body, the concept of soul and the vision of an afterlife presuppose beliefs that overcome knowledge. The need to explain the origins, the past, and the before added a new dimension to the primary concern posed by the question of the future, the afterlife. It is the need to guarantee the immortality of the past, be it real or imaginary.

Mythology intends to explain identity to the present generations. The cult of ancestors, the evocation of origins, and mythical migrations are represented in prehistoric art and predate the survived sacred books,

Vedas, Bible, or Koran. Immortalizing memory is a concern of everyone, while local traditions vary in the details. A multi-level conception of memory emerges: the global memory of all humanity, the cultural memory of ethnic or social entities, and the individual memory of the individual.

The era of origins, the Aborigines' Dreamtime, is a source of mental elaborations that constitute the patrimony of beliefs and knowledge, transmitted for generations. The biblical narrative of Genesis, of the six days of creation, has similarities with the Arantas of central Australia, the Sandawe of Tanzania, the Ainu of Hokkaido, and groups of Fuegians of Patagonia. Is it truth? But what is truth if not what our psyche considers to be so?

Humanity is one and we may postulate that all human beings have common roots, not only physical, also intellectual. The very execution of the immense patrimony of figurative art, pursued for millennia, often in the same localities and with similar themes, the world

over, reveals a common cultural identity. Visual art constitutes an immense database of the variable truths that have occurred over millennia. Despite human efforts to make them immortal, even the ultimate truth is not necessarily eternal.

The primary core of the conception of death is of a philosophical nature; it is a search to understand the identity of life. Philosophy was born with the first attempts at understanding the meaning of life and death. The human mind has produced myths and beliefs that have formed a growing intellectual heritage. Acts of faith and identity have become memory, and memory has become acts of faith and identity.

Conclusions

Archaeological data, analyzes of conceptual anthropology, and certainties and doubts that have emerged in the previous pages summarize two fundamental moments of conceptual evolution that overlap and merge. The first, dating back over 100,000 years, with the most ancient repetitive formulas of burials with funeral goods, is connected to the dilemma of the after-death: where does the spirit go? The second, with the explosion of figurative art, 50,000 years ago, fixes images of spirits that populate the mythology and reveal the search for the origins, and of ancestors who created the past and populate the afterlife. Death acquired an ever-growing dimension conceptually.

The hermeneutics of death, the afterlife, the images of the spirits that populate it, and the elaborations of their faculties and powers sprout from a common denominator and developed into regional and ethnic variations. The mental space for the question of being, life, and death varies in the individual and collective psyche, depending on social conditioning and the impact of external factors.

The primary dilemmas concerning the existence of an afterlife and the souls, and the story of the origins undergo adaptations. Myths and sacred stories of all religions, peoples and ethnic groups, if saved from oblivion, will remain a great literary and intellectual heritage, a formidable source for seizing the spirit of humanity.

The shock caused by death and the faith in the other world are at the roots of concepts, enriched over time by details, beliefs, and rites about ancestors, spirits and gods who determine earthly events. Human beings

cannot prevent their will being done, but they believe they can change it through petitions or prayers. The dialogue with the afterlife has been perpetuated from prehistory, and persists in the historical periods of the Egyptians, the Yucatan Maya, the Tibetan Buddhists, the Muslims and Christians. The beliefs of prehistory are re-emerging from the analysis of the art. The variants derive mostly from the impact of the collective psyche on the individual psyche and vice versa.

The imagery relating to death and the afterlife reflects social conditioning. The clans led by the elders recognize ancestral spirits in it. The tribal world, where each tribe has its own leader and its own territory that come in touch with each other, imagine a place beyond led by numerous gods. The people with a central regime imagine a dominant god who rules the destinies of both the world of the living and of the dead. The afterlife is shaped according to social and economic aspirations. In a society where there are restrictions on sexual needs, the afterlife gives vent to such repressions; in a society suffering from hunger, the afterlife offers food in abundance.

Some cults developed widespread formulas, such as mythical ancestors, practices, such as that of the rules of burial grounds, or supplying the deceased with funerary goods, and some beliefs, such as those about the survival of the soul. They can be traced back to common archetypes. Reality is what the mind accepts. Is there an objective truth? Does the soul, the vital energy that leaves the body and determines its death, survive the body without which it would not have existed? After 100,000 years of intellectual adventures, the primary problem that has arisen in the human mind still urges on the eternal confrontation between knowing and believing.

Besides the memory of the living, what remains of the deceased after death? Is death really the end of life? The millenary question persists in the individual and collective psyches of a large part of humanity.

Cultural identity is the patrimony of every social and ethnic entity. Beyond the cultural identities of families, clans, tribes, and nations, there is the cultural identity of all humanity, which unites all in its common heritage, the common memory and the common destiny. Death still remains the source of eternal confrontation between knowledge and belief.

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COINAGE, THE COIN AGE AND CREEDS

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History before the print age, in the absence of original documents, had to rely on copies, themselves issued from a string of copies by copyists writing according to the dominant ideology of their time. Over the last ten years, this situation has changed totally with open virtual access to all kinds of artefacts (clay tablet, funerary stele, coins, parchments, etc).

Archaeometry, as its name implies, is the measurement of antiquity. Coins can be pointed out among artefacts which have best withstood the wear and tear of time. Fig. 1 shows a denarius two millennias old looking nearly brand new. Actually, since the victory of Rome over Greece at Tarentum, a huge amount of Greek drachmas were recycled into Roman denarii. The recycling mint facility was erected on the premises of the temple dedicated to Juno Moneta. The following consonantic skeletons are worth noticing:

- **moneta**: **mnt** which appears in **mint**
- **drachma**: **drm** which appears in **dirham**
- **denarius**: **dnr** which appears in **dinar**

Numismatists tell us that the presupposed mint year of our denarius is two years before Julius Caesar's assassination. We would like to believe them, but this is the core of the problem: the message is incomplete. Fortunately, all coins are not so secretive. Some have a colophon, their birth certificate, so to speak.

We are now going to devote our attention to five particular dirhams: see fig. 2. They all carry a number: 1424 written in so-called Arabic numerals, 874 in Latin characters with numerical value, 173 in Greek characters with Milesian numerical values, 67 written in full in Pahlavi and 1302 in all letters in Arabic.

My advice as a physicist is that, before performing any kind of antiquity measurement, one should get familiar with a suitable measuring device and calibrate it on astronomical events, such as solar eclipses (the antiquity of which, nowadays, is perfectly well known). In order to identify unequivocally a reported solar eclipse, one must know where and when it was observed, and if it was total or partial at this particular observation site.

In the electronic archives of Coimbra, I discovered three years ago this parchment, see fig. 3, where a solar eclipse is mentioned. The date of occurrence was 1000 & 100 & 10 & 7 (1117) of the ERA calender, at the Calends of Juli. "At the 6th hour of the day, the sun darkened and the stars appeared in the sky" Coimbra was thus doubtlessly inside the totality zone.

Fig. 4 shows a sequence of pictures of an eclipse taken on 9 March 2016 from a Japanese geostationary satellite. On the surface of the earth, we can discover the path of the Moon's shadow, cast by the sun. Let us note that both Moon and Sun attract the Earth crust with nobody noticing this tide, nor that it is slowing down Earth's rotation. The cumulative delay Delta T can be calculated.

In my analytic model, DeltaT varies with the square of the time: $\Delta T = -20 + 32.4 t^2 [s]$

The cumulative delay over 2,000 years is one-eighth of a turn, and half a turn over 4,000 years.



Fig. 1. Denarius with effigy of the goddess Juno Moneta.



Fig. 2. Coins with the mint year 1302, 67, 173, 874, and 1424.

For an ancient eclipse, there are no satellite pictures, but retrodiction software, which means that it is able to predict the past. The best retrodiction software has been worked out by the computer scientist and eclipse hunter Xavier Jubier. This software traces on GoogleEarth the path of totality, according to the deceleration model chosen by the user. Fig. 5 shows the totality zone for the eclipse of 1 July 1079 CE (Common Era), being the secular and universal calendrical era introduced four centuries ago by the astronomer Johannes Kepler.

All the reported characteristics of the solar eclipse of ERA 1117 correspond to the retrodiction of the eclipse which occurred on 1 July 1079 CE, see fig. 6. The Era Hispanica, also called *date Safar* by the Arabs, thus is 38 years in advance of CE.

By proceeding in this way with other solar eclipses, we will learn the differences existing between the various calendrical eras. The summary of the correspondences between original reports and modern retrodictions of relevant solar eclipses is given in fig. 7.

The oldest one is engraved on a Babylonian clay tablet in year 175. The era called Seleucid Era, SE, also called

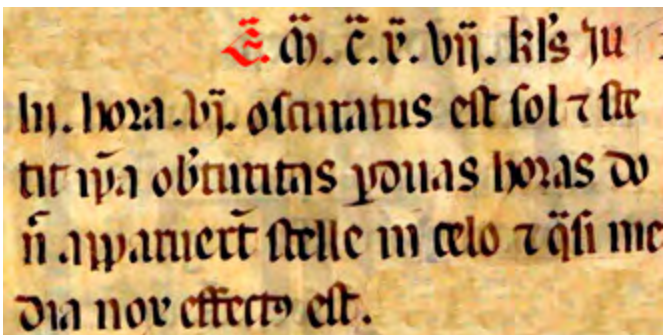


Fig. 3. Report of ERA 1117, total solar eclipse over Coimbra.



Fig. 4. The Earth on 9 March 2016 seen from height 36,000 km.

Anno Græcorum, has therefore 310 years' advance on the CE.

Another solar eclipse was observed in Antioch in the year 1487 of the Seleucid Era and also in Jazirat Ibn Omar, nowadays Cizre, the 29th day of the month of Ramadan in the calendrical year 571 of the era called *Anno Hegiræ*, AH, also called the Hijri calendar. The initial delay of 622 years of the AH relative to CE decreases by three years per century.

A solar eclipse had been predicted for Emperor Claudius' birthday two years before the 800th commemoration of the founding of Rome. The era called Ab Urbe Condita, AUC, has consequently 753 years' advance on CE.

The first solar eclipse dated in terms of the era called *Anno Domini*, AD, appears in the electronic annals of St Gallen. There is therefore Zero advance or delay from AD to CE.

Let us summarize: the year of occurrence of the eclipses depicted in those reports is expressed in terms of the calendrical era proper to each observation.

Question: Is there a simple synoptic representation of these calendrical eras?

Answer: What about the representation of sound E on the guitar? E 330 Hz is the frequency of the first string. To represent this frequency on another string, it suffices, as shown in fig. 8, to indicate the position of the finger on the correct fret. For frequencies one talks about strings, while for years one talks about timelines.

On a guitar-like chart, see fig. 9, let us draw the timelines of the calendrical eras: SE, the Seleucid Era; AUC, the birth of Rome era; ERA, the Era Hispanica; AH, the *Anno Hegiræ* era; AD, the *Anno Domini* era; CE, the Common Era.

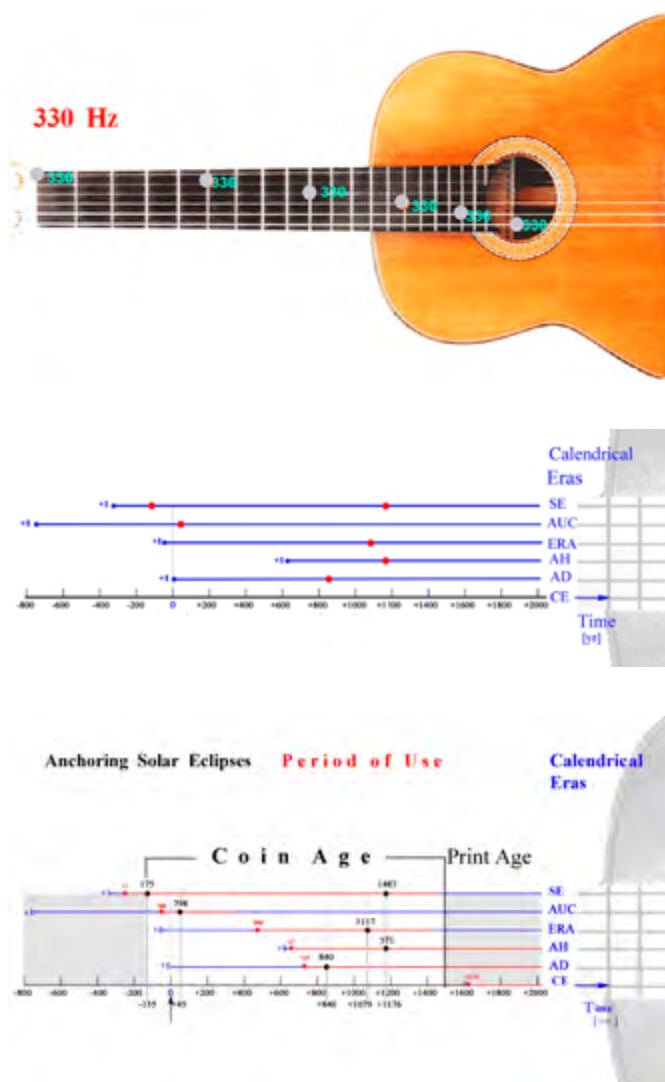


Fig. 8. Representation of the finger position on the guitar for E 330 Hz.
 Fig. 9. Guitar-like chart with dates of solar eclipses and of years 1 (SE, AUC, ERA, AH, AD).
 Fig. 10. Guitar-like chart for calendrical eras: coin age, timelines and period of use.

The Common Era extends to the left and right of its year zero, while all other eras begin with a mythical year 1. The red dots represent our five solar eclipses anchoring calendrical eras to CE.

The eclipse of 11 April 1176 CE anchors the position of year 1487 of SE, and also the position of year 571 of AH.

From those anchor points, one can retrodate the Year 1 of each timeline. Each of those years 1 refers to some mythical founding events:

Year 1 of the Seleucid Era would be the year of the takeover of Babylon by Seleukos, which occurred six months after the battle of Gaza, i.e. there are two

founding events to consider for SE!

Year 1 of Ab Urbe Condita would be the year of the foundation of Rome by Romulus.

Year 1 of the Era Hispanica would be the year of the Romanization of the Iberian Peninsula.

Year 1 of the Anno Hegirae would be the year of the migration of a Muslim tribe from Mecca to Medina.

Year 1 of the Anno Domini would be the year of the Incarnation of the Lord of the Christian creed.

It should not be imagined that the calendrical eras were used as early as their year 1, for the good reason that nobody had thought about them. The periods of use of these calendars are marked with a red line while the years of introduction of the calendars are marked by red dots, fixing their order in the guitar-like chart, see fig. 10.

From bottom to top:

CE, used for the first time by Kepler in its year +1616.

<AD, introduced by Bede the Venerable in its year 725.

AH, introduced at the latest in its year 67.

Era Hispanica used in its year 480, then made official in its year 554 by the Arianist Council of Tarragona, then abolished in its year 1460, but still used until CE+1523 as a known and popular label.

- AUC, introduced by Varon in its year 700.

- SE, introduced by the Babylonian astronomers after Seleukos' death, in its year 61. This is the first known calendrical era, and its use went on till the early print age.

We are now ready to position dirhams and eclipses on their timelines, see fig. 11. Nevertheless, let us check if both sides of each coin do qualify for the attributed calendrical era, see fig. 12.

1424 at SANTTUS GALLU: The colophon haloes the effigy of St Gallen, a crozier in the right hand. St Gallen's prince-abbot minted this *plappart*, the Germanic transliteration of the French adjective *blafard*, the color of silver. This *Anno Domini* coinage is the first to bear its mint year written with arabic numerals. The obverse bears the coat of arms of the prince-abbot's theocratic state, an eagle in the center of a flower cross surrounded by the new profession of faith: *MONETA NOVA: SANT:GALLI*. This creed of *MONETA NOVA* sounds like a revival of *JUNO MONE-TA's* creed (see Fig.1).

Verdict: This *plappart* qualifies for the timeline of *Anno Domini*.

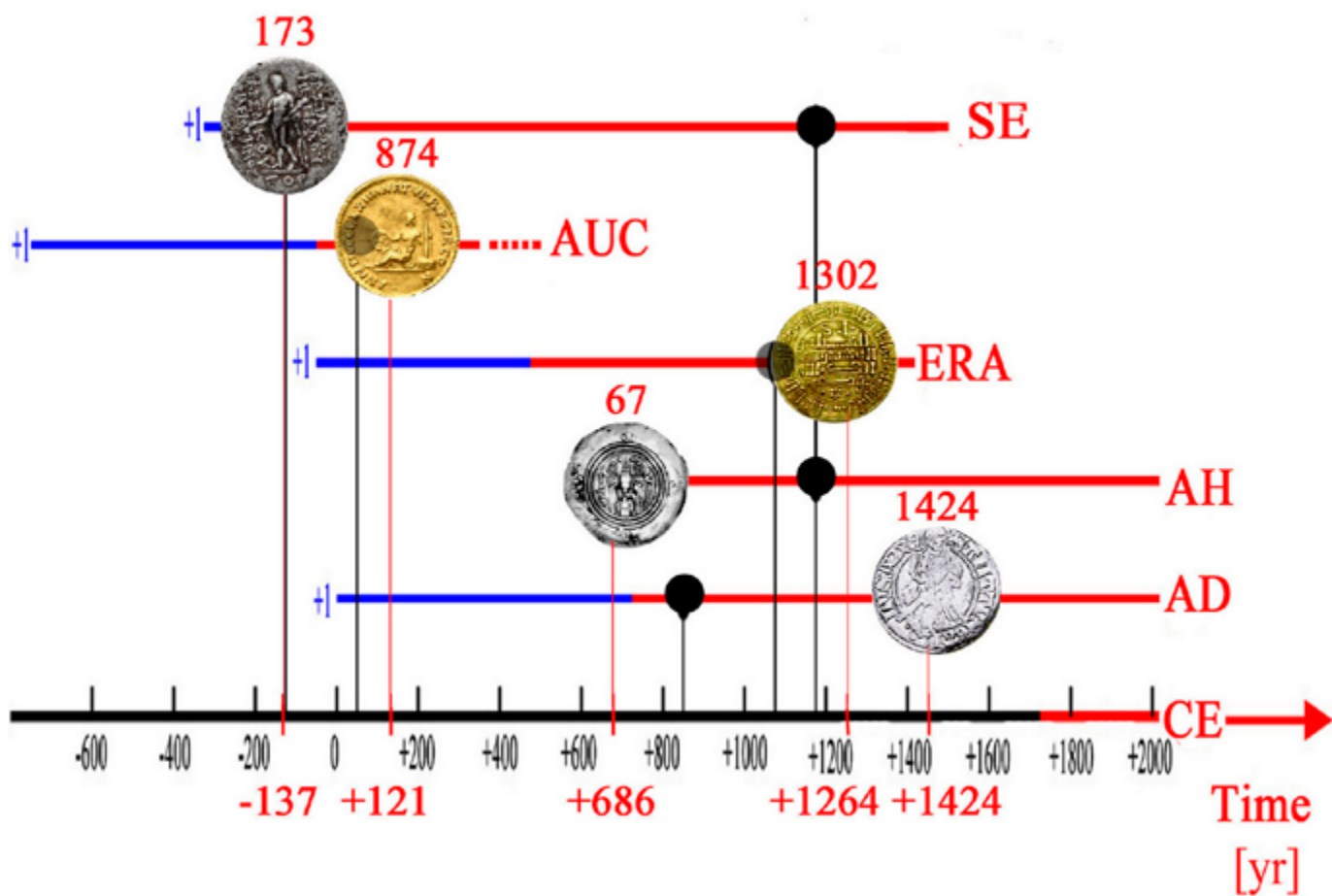


Fig. 11. Ancient dirhams positioned on their respective timelines.



Fig. 12. Reverses and obverses of five ancient coins.

A	B	Γ	Δ	E	ς	Z	H	Θ
1	2	3	4	5	6	7	8	9
I	K	Λ	M	N	Ξ	O	Π	Q
10	20	30	40	50	60	70	80	90
P	Σ	T	Υ	Φ	χ	Ψ	ω	
100	200	300	400	500	600	700	800	

Fig. 13. Greek numeration system.

874 is written with the letter Eth for 500/3C for 300/L for 50/2X for 20 & 4I... *Nat Urb*, the birth of the city referring to Rome. Emperor Hadrian had this *aureus* minted on the occasion of the Parilia, the feast of ancient Roman creeds, which, until then, was celebrating the commemoration day of the founding of Rome on 21 April, but without any reference to a particular year.

Verdict: This *aureus* qualifies for the timeline of *Ab Urbe Condita*.

173 is written using Greek letters, a very efficient numeration system, see fig. 13. The tetradrachma reads: Gamma, Omikron, Rho, 3 & 70 & 100, so 173.

The effigy of the tetradrachma is that of Mithridates. His name means Gift of Mithra, an early testimony of the Mithraic creed. Mithridates was not a Seleucid monarch, but Arsacid. He let himself be called Basileos Megaloy Arsakoy *Phil-ellenos*, i.e. friend of the Greeks. And, in his fervor, he did not hesitate to annex not only Babylon, but also the mint of Seleucia on the Tigris.

After mint year 173, Mithridates let mint a 174 issue of his tetradrachma but not in 175, the year of the total solar eclipse over Babylon. Was Mithridates murdered during this eclipse?

Verdict: This tetradrachma qualifies for the timeline of *Seleucid Era*.

67 is written in full; in Pahlavi, it reads 7 & 60. The reverse testifies, 823 years after Mithridates, to the survival of Mithraic creeds: the altar of the eternal Zoroastrian fire flanked by its two guardians is haloed by the colophon with mint place: Bish, for Bishapur. The effigy is that of the shah of shahs, Khosro-II. The margi-

nal inscription in Arabic reads: *Bism Allh*, in the name of Allah, *Mhmd Rasul Allh*, Muhammad, the Messenger of Allah. This very first mention of the name of the prophet testifies to the entry of the Muslim cult into its phase of personalization. Let us note that just ten years after, a reform would ban all iconic representations and replace them with a proselytizing profession of faith, the *shahâda*. Therefore, mint year 67 is NOT a Khosro-II regnal year, but a year of the Hijri calendar. *Verdict:* This dirham qualifies for the timeline of the *Anno Hegirae*.

1302 is written in full. In the margin of the reverse of this *Morabetin* (the coin of the Almoravid), the colophon reads: Was minted this dinar in Seville in year 2 & 300 & 1000 of date SAFAR. In the margin of the obverse is written in Arabic: Emir of the Catholics: Alfonso, son of Fernando. Help him, God & Protect him. And in the center: Imam of the Christian church, the Pope, and then, in Latin letters, ALFo, see fig. 14. In accordance with the Islamic aniconical model, the Catholic King of Castile Alfonso X, known as El Sabio, is represented only by the word ALFo. In order to prevent his subjects of other creeds feeling uncomfortable with Latin, the language of the Catholic church, he declared Castilian as the official language, while confirming the legitimacy of the traditional Visigothic calendar. This king, poet and astronomer, who extended his kingdom up to Jerez de la Frontera, actually considered his role to be far superior



Fig. 14. Particular profession of faith on a dinar dated 1302.

to the role of elected dignitaries, thus, to mention the pope in front of his own short name exhaled a delicate flavor of irony.

Verdict: This dinar qualifies for the timeline *Era Safar*. To conclude, the set of dirhams discussed here was chosen with care, but variants do exist. Each one of our dirhams, once its timeline was identified, delivered an antiquity measurement of the creeds it trans-

mits. Taken together, they opened a new multifocal vision on early history prior to the print age.

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ROCK ART REPRESENTATIONS AND POSSIBLE ZOOPHILIA THEMES AT SERRA DA CAPIVARA NATIONAL PARK, PIAUÍ, BRAZIL: A CASE STUDY

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Introduction

Serra da Capivara National Park (SCNP) is 530 km from Teresina, Piauí, Brazil and is bounded by the towns João Costa, Coronel José Dias, São Raimundo Nonato, and Brejo do Piauí. This southeast part of the state has an area of almost 130,000 ha and a perimeter of 214 km². The park was created during the government of President João Baptista Figueiredo in 1979 (Araújo et al., 1998).

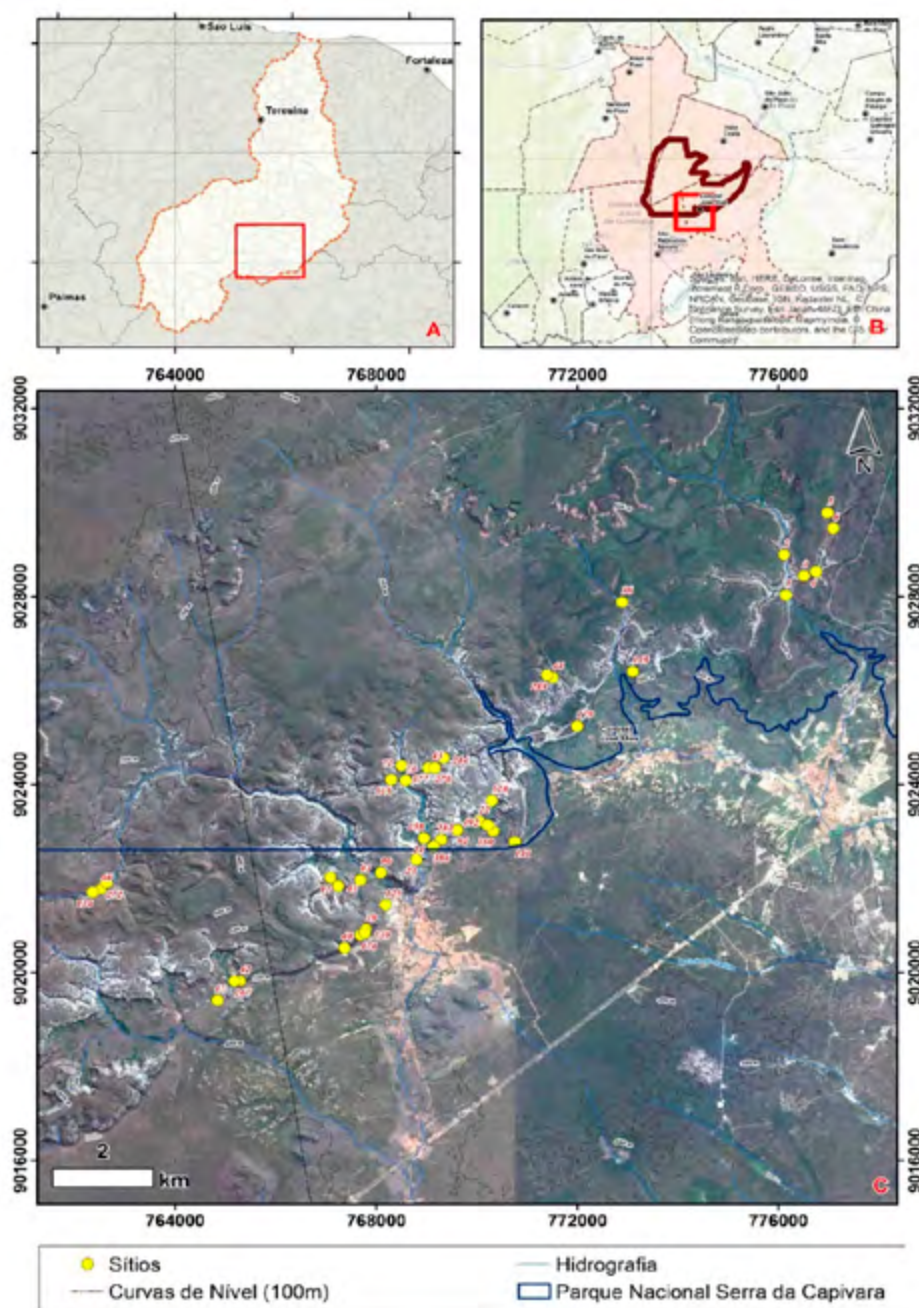
SCNP was established in order to protect its archeological, paleontological, and environmental heritage in the region and, with the aim of contributing to conservation unit management, FUMDHAM was instituted under the direction of Niède Guidon and Brazilian and French researchers in 1986. FUMDHAM intended to support the scientific research in the region, as well as help environmental preservation and conservation, assisting the development of sustainable and educational policies. It was nominated a World Heritage Site by UNESCO in 1991, and a National Heritage by IPHAN in 1993 (Guidon, 2014a).

The scientific studies that were carried out in the region presented important results for knowledge of Brazilian precolonial archeology. Currently there are 1,335 catalogued archeological sites, 184 sites with ce-

ramic remains, 946 sites with rock paintings, 206 sites with painting and engravings, and 80 sites with engravings (Guidon, 2014a, 2014b; Maranca and Martin, 2014). The paleontological traces also constitute a significant segment of the scientific studies. More than 7,000 fossils and more than 60 species of animals were found in the region of SCNP, of which 30 specimens are considered extinct (Guerin and Faure, 2014).

SCNP is one of the largest archeological sites with preserved rock-art quantitatively in the world. Of the 172 rupestrian sites that are ready to be visited, 16 s have been adapted for people with reduced mobility (Buco, 2013). FUMDHAM, ICMBIO, and IPHAN are involved with the conservation and preservation of this cultural and environmental heritage. The local communities have an important role in the socialization and promotion of the place, and looking after guests at the hotel and bed and breakfasts, customers at the restaurants, and tourists for the specialist guides in São Raimundo Nonato and Coronel José Dias (especially in the villages Sítio do Mocó and Barreirinho).

The pictorial corpus in the rock-art archeological sites has more than 10,000 figures of humans and animals, and most of them produce scenes that are recognized



Map 1. Localities of 51 archaeological sites that were selected for the research. Source: Gabriel Oliveira (2018).

in accordance with our references. In this study, zoo-
philia rock-art scenes at several archeological sites in
the SCNP and around will be used.

The rock art engravings and paintings help to show
what may be considered the real world, but not sim-
ply that. In fact, they seem to consist of the imag-
ination of the authors. They register social events,
their beliefs, rituals, and daily myths, information
that seemed to be essential in their lives in relation to
cosmology and cultures.

The rock-art images store topics that were not written
in paper, like modern history, but they can be some-
how decoded or inferred by our observations. Nowa-
days, many of us think we are not able to deduce what
was produced thousands of years ago and we cannot
decipher their meanings. The real significance of this
art was lost as well as the authors, but the image diver-
sity facilitates interpretative hypotheses.

It is not a surprise that art objects and rock art are
depositories of myths, rituals, and beliefs world-



Fig. 1. Toca da Ema do Sítio do Brás I. Source: Gabriel Oliveira (2018).

wide. This fact is known through many examples that have been analyzed, published, and disseminated by many means: journals, books, chapters in books, and newspapers.

There is literature about the histories of ancestors who lived in Brazil. The images that were shaped on the rocks, which form scenes that represent a part or visual clip of life at that time, come from a period that is considered as the most ancient in the country, even though little researched. This study intends to share this analysis with people concerned with the same topic.

The rock painting production provides hints about the motivations and meanings for those first inhabitants in the *terra brasilis*, as in other parts of the world. The results of the archeological studies in the region show the past presence of precolonial human groups who lived in the area more than 40,000 years ago (Guidon and Arnaud, 1991; Parenti et al., 1996; Guidon and Pessis, 1996; Guidon et al., 2002). The region is considered as the largest enclave (a place with many archeological sites, see Martin, 2008) of archeological sites in the world, along with absolute dating more recessed for American archeology.

The representations in rock art with the zoophilia thematic, showing sexual interactions between human and animals in pictographic sets, were selected from a sample of 51 sites studied in the SCNP. However, it is necessary to observe other features that can corroborate this theory.

Development

A preliminary survey was carried out considering the physical and cultural features of the archeological sites, highlighting the landscape's importance as an element of natural and cultural construction, and then the usual geographic division of the SCNP was used. The studied sites are in three regions of the SCNP: Serra da Capivara/Serra Talhada (44 sites), Serra Branca (four sites), and Veredão (three sites).

The northeast tradition of rock painting is made up of topics of anthropomorphic, zoomorphic, and phytomorphic figures which are easily and visually recognized due to the scenes of hunting, dance, and religious and sexual ceremonies. They can be found in the states of Rio Grande do Norte, Pernambuco, Bahia, Sergipe, Paraíba, Piauí, and Minas Gerais; perhaps they originated in Piauí (Monzon, 1978; Guidon, 1991; Pessis, 1999; Martin, 2008; Martin and Vidal, 2014).

The main subsets of the northeast tradition are Salitre and Várzea Grande at the SCNP and around it; the Seridó sub-tradition that covers a region between Rio Grande do Norte and Paraíba; the Central sub-tradition is located in Bahia and Chapada Diamantina; others also exist in the north of Minas Gerais (Martin, 1984, 2008; Schmitz et al., 1997a; Schmitz et al., 1997b; Prous, 2007a).

Research was carried out in the African continent, more particularly in the desert in Libya, showing erotic practice with animals, although other researchers interpret this religious ritual transcendence as shamanism. Montés has been analyzing several regions in



Fig. 2. Toca de Cima do Fundo do Baixão da Pedra Furada. Source: Gabriel Oliveira (2018).



Fig. 3. Toca da Entrada do Baixão da Vaca. Source: Gabriel Oliveira (2018).

Africa, Europe, and Asia, highlighting erotic practice that seen in rock art. The scenes are not only featured male human beings, but also women and several types of animals as well, like elephants, rhinos, giraffes, buffalos, and goats (Montés, 2005, p. 63).

The rock art representations that are considered as having possible zoophilia themes are found in some sites that were studied at the SCNP, possibly showing sexual relations between humans and animals, which are presented as follows.

In fig. 1, the rock art representation in the archeological site Toca Ema do Sítio do Brás I allows the inference of sexual relations from the anthropomorphic and zoomorphic pictures, where possibly an animal lifts its tail to a man. This type of representation is a composition of anthropomorphic and zoomorphic figures that is commonly found at the SCNP sites. During the field research, the recurrence of this type of composition was observed, with erect phalli.

In fig. 2, a zoophilia rock art representation can be seen that is similar to fig. 1, which is found at Toca de Cima do Fundo do Baixão da Pedra Furada archeological site, showing the interaction between an anthropomorphic and a zoomorphic figure, where the anthropomorphic figure holds the tail of the zoomorphic one, indicating strength being used to prevent escape, and probably an attempt to control the animal with both hands, which gives the idea of sexual intercourse beginning.

In fig. 3, a rock art representation of Toca da Entrada do Baixão da Vaca also shows an anthropomorphic figure holding the tail of a zoomorphic one, trying to

grasp it; and a small erect phallus can be seen, possibly showing the intent to make a sexual relation.

In fig. 4, a rock art representation at the site Toca da Entrada do Baixão da Vaca shows an anthropomorphic figure with an erect phallus, trying to reach the zoomorphic ahead, which is a recurrent scene of zoophilia rock art representations at the SCNP.

In Figures 5 and 6, the intention of a sexual relation between an anthropomorphic figure and a zoomorphic one is clearly seen, following the format in which an anthropomorphic figure holds the tail of a zoomorphic one in order to grasp it and then insert the phallus in the anal area.

The format of the molded registries at the SCNP shows the control of zoomorphic figures by anthropomorphic ones who use human force to prevent the escape of the animal. Zoophilia practice presents the domination of the weak; the non-human being has its movement and autonomy annulled because of the strength of the moral agent, thus analyzed through a utilitarian perspective. The paintings show the movement of the animals conveying the sensation of fear, despair, distress, and unhappiness, indicating an invasive and violent practice – at least it is what it seems. Another important detail is the representation of male genitalia in the paintings in Figures 3 and 6, which show zoophilia practice. This does not mean that the sexual practices were performed by men, and only men, since virility and strength were responsible for hunting. Studies showed women taking part in zoophilia scenes (Montés, 2005), as protagonists in hunt-



Fig. 4. Toca da Entrada do Baixão da Vaca. Source: Gabriel Oliveira (2018).



Fig. 5. Zoophilia rock-art representation at the SCNP. Source: Mário Filho (2019).

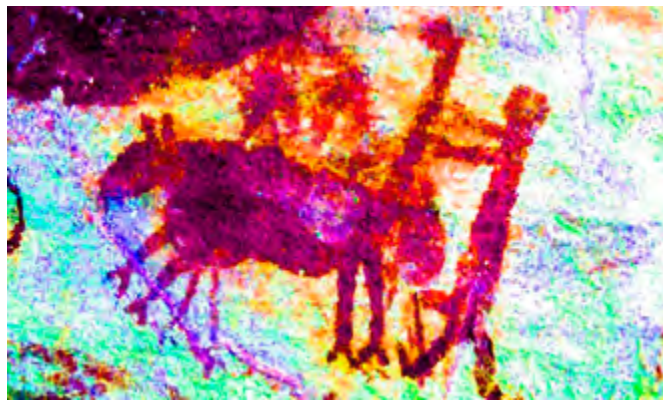


Fig. 6. Zoophilia rock art representation at SCNP after Dstrech filter treatment. Source: Vitor Almeida (2020).

ing, and also having more active and diversified roles (Ribeiro, 2009) in shamanic rituals in the world of spirits and the dead.

In fig. 7, a composition with two men and an animal is seen, showing a possible penetration of the animal. It can also be seen that a male figure holds the phallus of the other. In contrast to other compositions on this theme, there is no doubt about the animal that is represented, which is a cervid, recognized by its antlers. In the region of the SCNP, the cervid is the most represented animal, since it had great importance for the subsistence of cultural groups living in the area during pre-colonial periods.

It can be inferred that the molded paintings at the SCNP are associated with the interaction of a group specializing in hunting, and they seemed to recognize the behavior of a specific species, and there was some sexual fetish in the group, without there being any

ethical or moral oddness in zoophilia in the contemporary society.

If wild animals were submitted to erotic contact with *homo sapiens*, and they behaved comfortably, without force or resistance, it can show the domestication process of the animals during the sedentarization of the human species that was in progress. The utility of animal control did not only permeate agriculture, farming, and transport but also sexual purposes.

There are rock art representations of sexual scenes found at different archeological sites around the world (Dolgovessova, 2000; Abreu, 1989), and one of the most published images is a relation between a human figure and an animal in Capo di Ponte, Valcamonica Valley region, Italy (Bucu, 2012). fig. 8 presents the this, together with one scene at Toca do Boqueirão da Pedra Furada that shows the gestural similarity among the figures, which confirms the connection.



Fig. 7. Zoophilia scene with a cervid and two human figures and penetration indication, at Toca do Caldeirão dos Rodrigues, SCNP. Source: Michel Justamand (2013).



Fig. 8A. Zoophilia rock art representation. A) Rock 60, scene 6, Capo di Ponte (Abreu, 1989: 30, fig. 7). B) Boqueirão da Pedra Furada (BPF), SCNP. Source: Buco, 2012, p. 445, fig. V.35.

The debate about zoophilia in contemporary times involves several fields of knowledge, from archeology to sociology and anthropology, law, and the psycho-sciences (psychology, psychiatry, and psychoanalysis), as well as biomedical sciences (Aggrawal, 2011; Zequi et al., 2012; Oliveira, 2013; Miletski, 2016).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5, 2014, p. 687) of the American Psychiatric Association classifies zoophilia as 'Other Specific Paraphilic Disorder'. The term paraphilia can be defined as 'any sexual interest that can be higher or similar to normophilic one'. In the case of the paraphilia, zoophilia involves an erotic target, so there is animal interest or preference.

Most countries have legislation against sexual practices with animals. One recent example was the decision taken by the German courts to provide tighter laws to prevent practice that is based on the pain, suffering, and absence of consent by animals (Oliveira, 2013; Bizawu et al., 2017). There are several zoophilia classifications in the literature, as this practice has received different nomenclatures depending on the society and culture (Aggrawal, 2011).

In this context, studies have shown that these practices have taken place in various regions in the world, from Sri Lanka (Chandradasa and Champika, 2017) to Brazil (Zequi et al., 2012).

Another panoramic research based on cases was carried out by Bizawu, Ramos and Nepomucemo (2017), which was named 'Zoophilia in Brazil: an analysis of concrete cases and the need of incrimination', in which the authors highlight the gaps in the national constitution that facilitates ambiguity about conviction in this practice, based on Law 6.905/98, in particular Article 32 that deals with ill-treatment and where the federal scope shows the absence of a more specific orientation. In the same research, the authors present a legal advance undertaken by the state with the sanction of Law 22.231/16, which widely criminalizes ill-treatment and specifies zoophilia as a crime in Article 1º, Paragraph IX, and which is a pioneering action in the country.

For Campo-Arias, Herazo, and Ceballos-Ospino, 'the information about the Zoophilic behavior prevalence within the population at large is limited.' The researchers draw attention to the internet, that will play a role as a tool to understand this sexual behavior (2019, s/p). Some data show a strong link between zoophilia behavior with individuals that develop living and/or work spatial relations in rural zones (Oliveira, 2013). Through a utilitarian perspective, it is necessary to consider that all beings are capable of experiencing situations that have moral or immoral importance.

Peter Singer broadened the human moral conception

limits from the principle of equality, displacing the pain directed to the moral patient in the search of social rights with the equity, safety, and respect of all individuals (Bizawu et al., 2017). This more humanist view is relevant when questioning the principle of the pain or pleasure itself.

Closing remarks

As discussed, sexual practices with animals in the contemporary world, which are classified by DSM-5 as sexual paraphilia, have been observed and organized in a medical psycho-corpus, although the practice of zoophilia can traverse the lives of people as individuals or groups initiating sexual ritual.

Sex with animals is a human taboo that has not yet been overcome. Sexual relations with animals are not isolated or uncommon (Singer after Oliveira, 2013), and they have always been noticed in present and very distant history, as found in the rock painting at the SCNP.

It is important to emphasize that the aim of this study was not analyzing zoophilia as a practice of human sexuality nor analyzing the attributes of ethical and moral values in relation to the criminalization or acceptance of the practice as it is treated in the current hyper-globalized society. It was intended to contextualize as a practice the possible erotic contact between human subjects and animals that could compose a part of the imagery that was represented in rock art, which is a portion of the range of actions of the paleo-history of humans, as seen in sites around the world.

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THE *HIEROS GAMOS* WORLDVIEW AND ITS EXPRESSION BY SUNRISE DRAMA AT IRISH AND BRITISH STONE CIRCLES OF THE NEOLITHIC AND BRONZE AGES

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Introduction: symbols and images

The *hieros gamos* (ἱερός γάμος in Greek), sacred marriage or hierogamy is a universal divinity fecundity concept centred on belief in a fertility duality between earth and sky. It is characteristic of cereal-farming societies because its prehistoric origins, as currently understood, date from earliest agricultural times, and not before. Seeing that it is so well loved worldwide, the idea may lie in fundamental principles initiated by the psyche because of the basic needs of agriculturalists. This can explain why hierogamy is found to have emerged independently in all inhabited continents apart from aboriginal Australia, which was found by pioneering Western explorers to be in the Paleolithic pre-farming era (Eliade 1957: 172). The concept of hierogamy is also absent from the hunting and herding peoples of the Arctic, the northern regions of Asia, and Tierra del Fuego in Patagonia in extreme South America.

Known as the sacred marriage or marriage of the gods, this cosmic faith played a deeply spiritual role in religious devotion and ritual throughout the known protohistoric world, as for instance in the images and writings of the Middle East, Near East, Egypt and India of the third millennium BCE, later in the Hebrew Bible, and subsequently in the first-millennium BCE classical literature of ancient Greece. The issue of recognizing signs of hierogamy in the remoter, preliterate, agricultural period is challenging, but it is achieved in the circumstances published in this paper. Hence, in the absence of the written word the present enquiry necessitated identifying the significance and influence of particular symbols and images that were in general use by the cultures of the early agricultural period. In those days, symbolism and metaphor provided potent imagery that helped illiterate worshippers to appreciate better their legends and religion, and to rationalize their worldview more meaningfully and effectively.

Stories, artfully conceived and piously narrated in mythology and religion, have always had the objective and capacity of accounting for and validating the

mysteries of life, , and the universe to the satisfaction of the people. Myths answered the primary questions raised by society. For instance, what or who was responsible for the changing seasons, for fruitful plant growth, successful human birth, and productive animal husbandry? After the cold of winter, how might nature's spring renaissance best be guaranteed, because farming communities forever needed the seasons to return on time and with appropriate weather? And what were people to make of death and aspirations for life renewal after death?

In preliterate times, the means for storing and recording ideas, legends, and traditions was oral. The impermanency of the spoken word rated poorly with the lasting power of written text or artwork pecked in stone. It meant that with the deaths of the last storytellers and worshippers of the community, long-held customs and practices were lost. This is why it is so daunting to determine how and why Stonehenge and the many thousands of other prehistoric stone monuments including stone circles were planned and used. But although knowledge of explanations and traditions did not last the test of time, specific kinds of clues latently survived. The difficulty lies in recognizing and deciphering them. Examples include ideas recorded as engravings on rock and stone, or locked into design layouts of megalithic monuments. Sometimes clues reside in the choice of lithic shapes or outlines to which values and meanings had been assigned. Sometimes there are excavated artifacts. In their various ways they provide a legacy of images and symbols that test contemporary curiosity about the lost wisdom of the past. The images of prehistoric art and the symbols of architecture are not random actions of a whimsical peasantry. There are no idle graffiti. Marks and carvings were made by righteous people led by an ardent priesthood. Many age-old problems can be resolved and answers reached this way. Dr Samuel Johnson (1709–1784) intuitively wrote, "There is no problem the mind of man can set that the mind of man cannot solve."

Creation myths

Many of the people's stories, legends, and traditions begin with creation myths that explain the origin of the world and everything in it. Besides what is known from established written sources, accounts of creation myths from early or primitive sources have been obtained by interview by 19th- and 20th-century anthropologists and scholars of comparative religion, folklore, and mythology. Many myths were found to commence with a universal mother or father who generates by marriage or by parthenogenesis a line of descent leading to the peopling of earth. Mircea Eliade (1958: 412) explains: "The creation myth provided a model and justification for all human activities besides constituting the archetype of a whole complexus of myths and ritual systems. Every idea of renewal, of beginning again, of restoring what once was, at whatever level it appears, can be traced back to the notion of 'birth' and that, in its turn, to the notion of 'the creation of the cosmos'".

The binary nature of prehistoric philosophical religious thought

The earliest concepts of religion that developed in the human mind date from very far back, from the Paleolithic, as explained and demonstrated by Emmanuel Anati (2003, 2020). He recognizes that the fundamental conceptual base arose initially from within a natural dualistic worldview. Citing Anati (2020: 171) we can say, "According to the vision of hunter-gatherer societies, the whole universe is considered to be made up of the association of two complements: life and death, body and soul, day and night, heaven and earth, man and animal, male and female (Anati 2003)." The beginnings of this binary ideology lay in the remote Middle Paleolithic, as attested from the life-and-death existential duality deducible from the evidence of recorded archeological finds relating to funerary customs, where these point to beliefs in hopes of a renewal of life after death. Subsequently, the Upper Paleolithic saw an eruption in artistic representation expressing binary thinking through the medium of figurative and symbolic rock art, signs, and symbols.

Anati (2020: 182) writes, "The primary core of religion is a quest to understand life and death, the future and the past. ... The first manifestations of both

religion and philosophy are in the habits that became rituals, which were revealed by grave goods and related traditions concerning the afterlife. The human mind has produced myths and beliefs that have formed a wealth of intellectual concepts, becoming memory, acts of faith and expressions of philosophy."

The choice of site for shrines and sacred places was often related to natural forms of the landscape, where it was considered that dialogue with the ancestors could take place or where people could interact with sun or moon or stars of the celestial vault. Progressively this led to divinities, among them two major figures: the mother goddess as controller of earth, and a sky god, controller of the celestial realm and its participating elements of sun, cloud, rain, thunder, storm, tornado, etc.

Open-air sanctuaries were in use by the Mesolithic, and commonplace by the Neolithic. At this time throughout the Neolithic and Bronze Ages, open-air megalithic structures and shrines were rising sharply in number, but long before—as at Göbekli Tepe—temple-like monuments had appeared in some Pre-pottery Neolithic circumstances, the constructive consequence of grand community effort. As Anati (2020: 192) further explains, "The binary concept is confronted with the vision of a universe where a third element, the underworld, is added to sky and earth." Gods and goddesses were devised as omniscient all-powerful creators within a newly broadening worldview, hence the creation myths.

Common to many creation myths, involving the people's annual rituals that celebrate the renewal of the world, was the *hieros gamos*. Much appreciated among divine weddings were the celestial ones, between deities representing heaven and earth, or sun and moon. Thus, widely in Polynesia a solar eclipse was taken as a holy marriage between sun and moon. Broadly across the undeveloped world, the sky was the dominion of a sky god, and the land the domain of an earth mother or mother goddess. Eliade (1958: 411) explains that the idea was "often thought of in quite literal terms: *ut maritus supra feminam in coitione iacet, sic coelum supra terram*". (As the husband makes love above his wife, so does the sky above the earth). In European languages, frequently the sky is masculine and earth feminine, the sun masculine and moon feminine.

Hierogamy, the myth: examples worldwide

Hierogamy refers to the mythical union of a god and goddess, or, when it is dramatized in real-life events in temples and sanctuaries, the sexual union of proxies as enacted by royals, priests, priestesses, or hierophants.

The purpose is an expectation of high, or higher, fertility of farmland and plants, beasts and humans. Agricultural success depends on rain, sunshine, and warmth arriving at apposite times in the growing season until the triumphant finale and reward of a golden autumn harvest. In writings of the sacred or cosmic marriage as understood by scholars of comparative religion studying translated texts of the Near and Middle East, Eliade (1960: 206-252) declared:

“When Heaven meets Earth, life bursts forth in forms innumerable, at every level of existence. The hierogamy is an act of Creation, it is at once cosmogony and biogony.”

This is how it could have been during the millennia of the megalithic period, through the Neolithic and much of the Bronze Age in Europe and the Mediterranean, namely, the view that the marriage of the gods revitalized and maintained the universe. The people likely believed that a form of hierogamy was ever potentially present, ready to burst forth and be witnessed at designated times. For many societies in Britain and Ireland, divinities of sky and earth were perceived as meeting in marital union at portentous calendar dates and times of the year, like the four quarter dates, which include the solstices. For the British Isles, such evidence may lie with the recurring union between the rising sun and prearranged standing stones—as at Stonehenge and Avebury—and achieved through a form of dynamic observable symbolism that reassures apprehensive communities about the continued renewal and fertility of their world. It is this aspect of revealed hierogamy that is treated in this paper.

The arrival of agriculture settled clans and families which hitherto had been wandering hunter-gatherers. They worked the soils and built monuments within a religious-observant culture and tribal authority. The principle of sacred marriage was a potent spiritual force. In disparate forms it was celebrated everywhere that temples, stone circles, chambered mounds, passage graves, and long barrows were built. Some monuments continued in use for many centuries, so well cherished were they. Only when this megalithic peri-

od was ending towards the middle of the second millennium BCE in Britain and later in Ireland, was the distant Mycenaean empire and the later exceptional epoch of the literary classical Greeks rising with their own development and embroidery of symbols and images. Long before the Mycenaeans, celebration of the *hieros gamos* was made absolute, with considerable aggrandisement of ritual and pomp as recorded in the temple texts of the Middle East and Egypt.

For instance, the ritual enactment of the *hieros gamos* was plainly expressed in the *Epic of Gilgamesh* in the third millennium BCE. Gilgamesh was a hero-king of Uruk (the biblical Erech) who took part in proxy sacred marriages, as tradition demanded, with priestesses of the goddess Ishtar (Kramer 1969).

Here follow examples from the many related in *The Golden Bough* by J.G. Frazer (1957: 142).

In Egypt at Thebes, Frazer recounts that a virginal maiden, adopting the role of divine consort, slept in the temple of the god Ammon, except for occasions when the role was instead occupied by the Egyptian queen. The masculine role in this intercourse was played by the king who bore the mythical authority of having been fathered by Ammon. Frazer writes: “The divine procreation is carved and painted in great detail on the walls of two of the oldest temples in Egypt, those of Deir el Bahari and Luxor; and the inscriptions attached to the paintings leave no doubt as to the meaning of the scenes.”

Frazer continues: “At Athens the god of the vine, Dionysus, was annually married to the Queen, and it appears that the consummation of the divine union, as well as the espousals, was enacted at the ceremony.” Aristotle explains that the ceremony took place in the former official residence of the king on the northeastern slope of the Acropolis. “The object of the marriage can hardly have been any other than that of ensuring the fertility of the vines and other fruit-trees of which Dionysus was the god. Thus, both in form and in meaning, the ceremony would answer to the nuptials of the King and Queen of May.” And at Eleusis, renowned for its secret mysteries that happened every September, it was the union of Zeus the Sky God with the corn-goddess Demeter that was enacted between a priest and priestess.

Frazer (1957: 143-144) gives more examples, including Scandinavian sources such as Frey, the god of fer-



Fig. 1. Big stones in Jharkhand arranged as a subtle, meaningful expression and presentation of male-female fertility. Photo: Prantik Das, *The Archaeoastronomy of a Few Megalithic Sites in Jharkhand*, 2018.

tility, and the Algonquins and the Hurons of Peru. He summarizes, “Thus, the custom of marrying gods either to images or to human beings was widespread among the nations of antiquity.” It leaves no doubt “that the civilised Babylonians, Egyptians, and Greeks inherited it from their ... forefathers. This presumption is strengthened when we find rites of a similar kind in vogue among the lower races.”

Although European and Middle Eastern celebrations of sacred marriage diminish with the rise of Christianity and Islam, nonetheless in the Orient, as in Hindu India, the archetypal sacred marriage continues to be respected and is well-loved to this day. In the ancient myths of India, the marriage of Shiva and Shakti is considered to be a divine union. It is especially a fundamental concept of Tantra.

A divine mother figure was prevalent worldwide as prehistory gave way to recorded history (Prof. Ronald Hutton, private discussion, 29 May 1998). The concept of a divine mother and divine father was then not only a universal worldview (Eliade 1958: 38-123, 239-264) but it still is for many believers today, including Tantric Brahmans, Hindus and numerous tribal communities such as in Jharkhand, northeast India (Das 2014). Moreover, there is the hidden significance of stones, which because they were believed to be endowed with fundamental images were held to be sacred. Eliade (1958: 216-238), recognizing psychological archetypes, discusses at length how early societies viewed sundry epiphanies and signs in stones and rocks.

The practice of raising megaliths on holy land persists today with the proto-Australoid Kolarian Mundari tribes of Jharkhand, together with beliefs in mother earth and sacred marriage complete with festivals, and the raising of fertility settings in stone.

Subhashis Das (2014: 31-34) provides contemporary examples. One is the Sarhul fertility festival: “Sarhul celebrates the marriage between the Mother Earth and the Father Sky. The festival also celebrates the earth becoming fertile ... which is signalled by the blossoming of the Sal tree (*Shorea robusta*). The blooming signifies that Mother Earth is all set to produce because she is fertile now, hence farming can commence ... For the tribals Sarhul also beckons the beginning of the New Year.” Das (2014: 31) adds, “A similar three-day fecundity festival is celebrated by the Hindus in East India known as Ambabuchi occurring on or a day later to the Summer Solstice.” He further says, “Among several tribes in North-East India where megalith erection after death continues uninterrupted, many monuments are dedicated to Mother Earth.”

In 2016 Sanjay Ghosh wrote to the present author recounting a prevailing fertility cult in West Bengal. He describes the summer marriage between Shiva as Sun God and Durga as Mother Earth in the festival called Gajan in which thousands of people continue to take oaths and play active parts in the festival. The marriage is between the Sun Father and Earth Mother who give birth to crops, as if crops are their offspring. In this part of India there is always a fear of drought, so the farmers are praying for rain and thus a good harvest. A little stone representation of Shiva and Durga in the enjoined shape of phallus and vagina is drowned in water, milk and coconut water. They say that if the images are drowned, there will be good rain and harvest because it is a magic culture. It is reassuring that tribal beliefs in sacred marriage endure in Asia and the Americas, where anthropologists and archeologists continue to obtain explanations from living communities. For the native Indians of North America, Krupp (1997: 97-125) is among those who have studied similar aspects of indigenous traditions that today persist with beliefs in time-honoured views of an earth mother and sky father, especially those having links to rocks and stones. Moore and Bender (2013) have done similar work in North America, particularly insightful fieldwork involving

the study of positioned earthfast stones.

Ancient India, too, had many megalithic sites driven by beliefs in the mating of the gods. Das (2018: 31-44) reports a megalithic fertility site that he discovered in the state of Jharkhand in northeast India (fig. 1). Yet it is more than a fertility site because it is related to horizon features and therefore the sky, betokening a concurrent union between heaven and earth. This megalithic setting at Chola, near Rola, is such that the nearest stone in the photograph serves as a phallus by virtue of the pre-Hindu lingam perception. The discoverer crouches at an east-west oriented female symbolic recumbent stone dotted with cup marks while framed by two triangular stones, thus completing a representational picture of male-female intercourse. In Greece the rite of *hieros gamos* certainly existed before the first-millennium classical dramas, as Frazer established. To find evidence in the earlier Bronze Age or the Neolithic, it is first a case of knowing what to look for and where to look. Cognitive archeological fieldwork is called for, that is, seeking to understand how societies thought by deciphering the figurative symbolic structures of that epoch. Kiotsekoglou (2020a: 16-32) has discussed what can be deduced about the *hieros gamos* for Thrace in the Bronze Age and earlier times. Thrace is a region now divided between parts of western Greece, southern Bulgaria and northwest Turkey. Kiotsekoglou reports that “in both the Neolithic and the historical period, the Goddess of Earth Fertility was depicted 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.” He continued,

The sacred space and the megalithic places’ orientation are always associated with the annual solar cycle. The sun’s adoration spread in Thrace during the late Bronze Age (12th century BCE) and continued during the Iron Age (11th to 6th centuries BCE). The sacred places of the Thracians had to be illuminated by the first rays of the sun ... The hierogamy presence reflected in the dolmens of Roussa, Kila, Petrotopos (viz. the feminine principle) is functionalized by the eternal light of the Sun when the solar ray penetrates in the womb (dolmen) through the hole of the slab, thus the authentic hierogamy.

Working independently on preliterate Bronze Age and Neolithic Thrace, Kiotsekoglou arrived at similar con-

clusions to those of the present author in finding evidence for hierogamy for the preliterate Neolithic and Bronze Age peoples of Britain and Ireland. The answers lie in recognizing preselected, specially arranged stones of trimmed or natural shape.

Then again, Kiotsekoglou (2020b: 37-40) reports aspects of the *hieros gamos* that are apparent at particular sites in southern Italy and Thracian Greece, Bulgaria, and Turkey in connection with the fertilizing deity of the great mother goddess, whose presence was widespread across the Mediterranean countries: 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 regeneration and fertility with the known rituals of the Sacred Marriage (Gimbutas 2001: 194ff.). The male principle and the female principle are embodied in the rocky landscapes of Albano di Lucania and Lagyna of Evros (Aegean Thrace), as is intrinsic cosmological duality, located as the origin of the world.

Other elements of the landscape citable as examples include “the carved throne or seat (Seggio del Diavolo) in the sacred (Italian) landscape of Lucania [which has] the same ritual purpose as the rock thrones that we encounter throughout Thrace”. “Thracians believed that these thrones were the mother goddess’s welcoming place for the male god that fertilized it. The illumination of the throne of the solar god by sunlight is the real Sacred Marriage ... The faithful offer sacrifices and gifts to this sitting aniconic deity; after worship, the throne acquires the functions of an altar (Fol 2007: 307; Francovich 1990: 69, note 642).” Again, the similarities with shaped megaliths on Avebury’s eastern hills in southern England are apparent, where two splendid throne-stones survive in all magnificence despite the time-long stone-breaking trials by unsympathetic Christendom.

So, again, as we leave prehistory and move into the realm of recorded epics and known history regarding the principles of sacred marriage in Celtic countries of western Europe, we encounter Tara and Taran in Ireland and the core concept behind king-making. Barbara Walker (1983: 501-508) explains as regards Ireland, “No king could be allowed to rule unless he was an accepted spouse of the Goddess (who represented the earth) through her mortal incarnation, the

queen.”Indeed, throughout the prehistory of mankind, primitive farming communities everywhere benefitted from the solace provided by mythologies inspired by the concept of an earth mother or mother goddess, a sky god, and their divine marriage. Such dramatic concepts, so widespread and long-lasting, are but the consequence of fundamental instincts deep in the subconscious, so their implications are also approachable with psychoanalytical methods. The sacred marriage is an understandable worldview. The present paper explains how it likely became omnipresent through the Neolithic and Bronze Ages of Britain and Ireland. This period includes the building and use of Stonehenge and Avebury, Newgrange and Drombeg, and dozens of other stone circles and certain other monuments of the British Isles.

Megalithic culture

Turning to the Neolithic and Bronze Age periods of culture and activity, we now consider aspects of the special role that megaliths had in farming communities. Just as with temples, stone circles enclose sacred space for worship and ritual. The obvious difference is that circles are roofless and open to sky and sun. In religious practice this scarcely matters. Some 1,300 stone circles in various degrees of damage are known in Britain and Ireland. Hundreds more, perhaps thousands, have been lost forever. Most stone circles were preceded in time by long barrows, court tombs, passage graves, chambered barrows, wedge tombs, dolmens, and timber circles. Nonetheless, stone circles were likely contemporary in time and activity with the continued later use of some of the earlier monuments.

The spiritual aspects of the megalithic world embraced animistic-type beliefs that certain stones could be called upon to help when people needed to contact fertility deities, notably through epiphanies in which deities were thought to materialize in stone, at least during the time of seasonal ritual and ceremony. The pinnacle of pomp and glory was reached with high-status regional sanctuaries compared with the small provincial stone circles that only served clans or individual farmsteads.

Reverence for the ancestors, most obviously apparent by way of bone deposits in the chambered long mounds of the Early Neolithic, did not end; priorities

changed. Devotional prominence moved from the ancestors to a cult of fertility deities. Previously, the female divinity was a guardian deity, sheltering the dead in a consoling cave-like womb, whether a wedge tomb or a galleried long barrow. West Kennet Long Barrow near Avebury (dated to 3650 BCE) is a splendid example with its pecked, deep, long vulva at the eastern entrance and the meter-high, fully carved, left-facing image in the furthest chamber (Meaden 1999: 102-108). By the time of the transition from the Neolithic to the Bronze Age, the fecund powers of mother earth were ascendant. At stone circles, imaginative choreographies were devised, as demonstrated in the present paper for the high-status sites of Drombeg, Knowth, Newgrange, Loanhead of Daviot, Avebury, and Stonehenge, in which the heavenly, solar power of the sky was united at sunrise, as if in coition, with the terrestrial dominion of the earth mother.

As previously indicated, creation tales commence with the cosmic union of a primordial pair, heaven and earth, from which the believer’s cosmic world is born. This is followed, in a metaphysical sense as time passes, by a gradual revision in which the transcendence of a passive, all-knowing heaven gets replaced, devotionally, by a “more dynamic, active and easily accessible” sky god or sun god (Eliade 1958: 52). So, when it is a question of grand staged drama (as planned, most usually, for one of the four quarter days), the sacred marriage microcosmically repeats the primordial creation (Eliade 1958: 110, and more generally 38-121), and that additionally on the dates of the other calendrical dramas (the cross-quarter days), sacred marriage repeatedly embraces pleas for seasonal fertility. Reunions between sky and earth recur at the stone circles on specific well-planned dates, and is achieved in the presence of a watchful, anxious community seeking fertility reassurance for their local world order and affairs. That is to say, the observed calendrical harmony resulting from using paired standing stones with respect to the rising sun amounts to a predictable re-enactment of the fertility drama by *hieros gamos* or cosmic marriage. This organized theatre presents life’s cycle of drama through the power of religious myth that is held by priests and worshippers to be the indisputable truth because it explains their uncertain world to their level of satisfaction.

We now move to the proof, and commence with the megaliths that are so persuasively expressed by rational layout at Drombeg Stone Circle in County Cork, Ireland, for the dates of the March and September quarter days.

Sacred Marriage at Drombeg

A carving of an ithyphallus 200 mm long with testicles (fig. 2) is on a tall narrow straight-sided portal stone at the northeastern side of Drombeg Stone Circle. This announces that this standing stone was regarded as masculine.

Another big stone, recumbent on the southwestern perimeter, bears a carved image of a vulva, indicating that this supine stone was to be viewed as female passive (fig. 3). At sunrise certain other stones, considered male because of their tall straight-sidedness, cast a figuratively male shadow that unites either with this female-symbolic supine stone and its vulva carving, or with a second female-symbolic stone on the perimeter. This second stone has the shape of a lozenge (fig. 4).

A functioning fertility religion is intimated by the



Fig. 2. Drombeg: An ithyphallus carved on a tall narrow shadow-casting stone.



Fig. 3. Drombeg: A vulva pecked into the top surface of the recumbent stone.

symbolic sexual coupling.

“Such symbols [as with this lozenge] carry further the dialectic of the hierophany”, wrote the Eliade (1958: 446), by which he meant the logic of the manifestation of the sacred.

At the March and September quarter days (often called the equinoxes by some authors in other contexts), an extraordinary artifice was arranged at Drombeg by the Bronze Age builders. At sunrise on these spring and autumn quarter dates two stones of differing symbolic gender join in visible union. The female-suggestive waiting stone, lozenge in shape, receives an ithyphallic shadow from a male-specific pillarlike stone (fig. 4). These moments are the climax of representative sacred marriage symbolism. The sky god in his rising-sun theophany meets his earthfast surrogate (the pillar stone), which casts a masculine shadow upon the terrestrial, lithic embodiment of the earth mother in *acta non verba*.

A similar representation of this ancient idea was found in England in 1987 (fig. 5). In a fourth-millennium-BCE occupation site and ritual centre in Dorset is one of the oldest mural sketches known for Britain. The outline drawing is scratched on the vertical side of a chalk-cut trench near the county town of Dorchester at a site called Flagstones. The idea expresses more than the obvious virility; it is demonstrably connected to fertility (Meaden 1992: 59; 1997: 45). It informs that in Neolithic southern England around 3500 BCE the consummation of divine marriage was deemed to be a part of the spiritual fabric of the age. The picture



Fig. 4. At sunrise on 20 September 2019 the demonstration of sacred sexual union is made manifest. Photo: John Davies.

is not to be judged or reflected upon for humanlike features. This would miss the point. Instead, the artist was depicting divine sexuality; the deities are reduced to their essential attributes, using aesthetic economy of design. It is a straightforward Early Neolithic rendering of life-giving principles, bearing the implications of sacred marriage.

A third engraving that points to the actuality of a fertility religion has been recognised at Drombeg Stone Circle (fig. 6).

This was first noticed and photographed by the author in June 2012. The clearest photograph (fig. 6) was taken by John Davies on 21 June 2019 half an hour after sunrise. It is also well seen when illuminated by the light of the rising sun at the March and September quarter days. The carving is flat-bottomed, a few mm deep, 200 mm long and 108 mm wide at maximum. Although such a symbol may symbolize a vulva, it could better perhaps be interpreted as evoking the shape of an egg.

As with the carved vulva and phallus, an egg-shape can also serve as a prime fertility symbol, although for some communities it may well have meant more

than that, representing possibly a symbol of immortality as well.

A symbology Spanish scholar, J.E. Cirlot (1971: 270), writing about the traditional symbolism of the egg, records that “a great many prehistoric tombs in Russia and Sweden have revealed clay eggs which had been left there as emblems of immortality. In the language of Egyptian hieroglyphs, the determinative sign of the egg represents potentiality, the seed of generation, the mystery of life.”

A Dutch scholar of symbology and imagery, Ad De Vries (1974: 158), explains, “in prehistoric tombs, eggs have been found as symbols of immortality ... ‘laying the egg’ equals birth of man.” Moreover, when present in symbol combinations as with “egg and dart” where dart means phallus, De Vries succinctly notes “androgyny: female productiveness + phallic male generator (cf. the Jewel in the Lotus)”. At Drombeg this could have been the meaning intended by this dual sexual combination at the shadow-casting fertility monument.

Barbara Walker (1983: 270) reports, “The Egg was a common Oriental image of creation. Its western versions went back to cosmologies of the Tiamat-type and to early exchanges between Greece and the East.” She

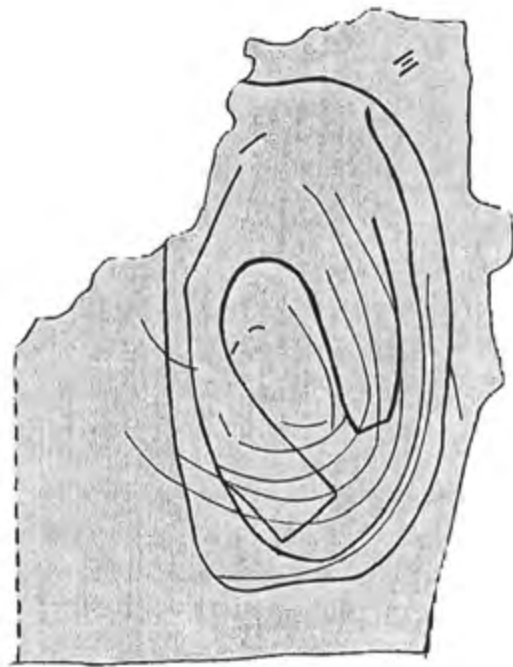


Fig. 5. Sketched on a chalk wall at a Neolithic site in England.



Fig. 6. An egg-shape form, carved as part of the fertility symbology at Drombeg.

was citing Jack Lindsay (1971: 116). Tiamat was the Sumer-Babylonian *dia mater* or goddess mother held responsible for creating the universe, which was later divided by her son Marduk into the separate zones of heaven and earth, an archetype later modified and used in the Hebrew Bible where Tiamat became Tehom, the deep, meaning a personified womb. Possibly, these fertility carvings could be articulating a metaphorical story, that this is a site where phallus and vulva unite to produce an egg, and hence offspring.

Sacred Marriage at Avebury

Avebury has three stone circles and two stone avenues, some 600 megaliths in all. It is the biggest complex of megalithic circles and avenues in the prehistoric world. The perimeter of the widest circle, the Great Circle which is over a kilometer long, was planned with probably 100 standing stones. The construction is bold and massive, at the center of a vast sacred landscape.

Two grand areas inside the Great Circle were plausibly, because deductively, devoted to the sacred marriage.

Avebury's megalithic cove, dating from 2900 BCE, functioned as a carefully planned stone setting at the center of a northern internal stone circle. The belief was that the community would witness divine consummation between stones representing the sky father and earth mother during the time of supposed sexual union achieved by phallic shadow at midsummer sunrise. The event's play of shadows was eminently crowd watchable. It is described in a recent *Expression* paper (Meaden 2020a).

Similar unions were arranged to function on eight dates every year at a southern internal stone circle, diameter 105 meters (fig. 7). Again, this was likely inspired by the people's belief in the truth of the *hieros gamos*. The circle is much damaged. At one time it comprised 29 megaliths around the circumference with a single tall stone standing high in the middle. This stone, called the Obelisk, was the tallest at Avebury. Measured by William Stukeley (1743: 24) in the 1720s it was 21 feet or 6.5 meters long, and one of Avebury's heaviest at 80 tonnes. If one meter had been in the ground, then for the people watching the action of the rising sun, the Obelisk stood 5.5 meters (18 feet) high. A short concrete quasi-pyramid marks the spot. In 1998 the author had a replica Obelisk

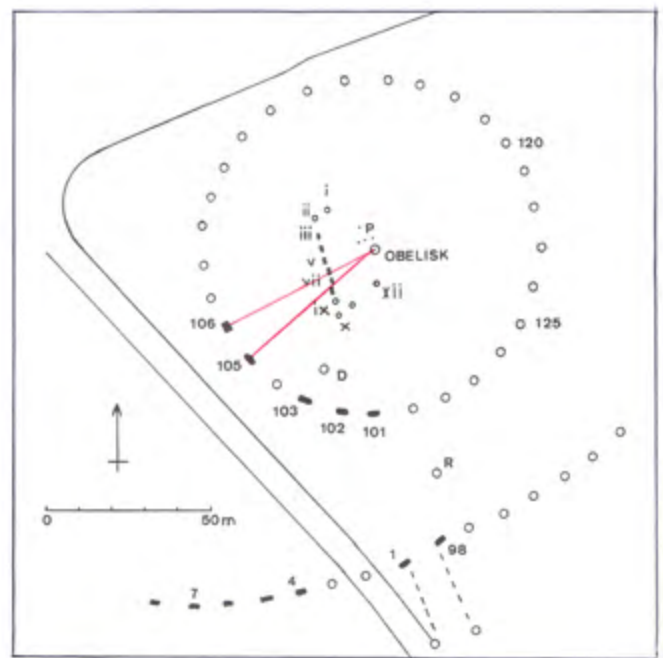


Fig. 7. The southern internal stone circle at Avebury with the five surviving stones indicated by number, 101-103 and 104-105.

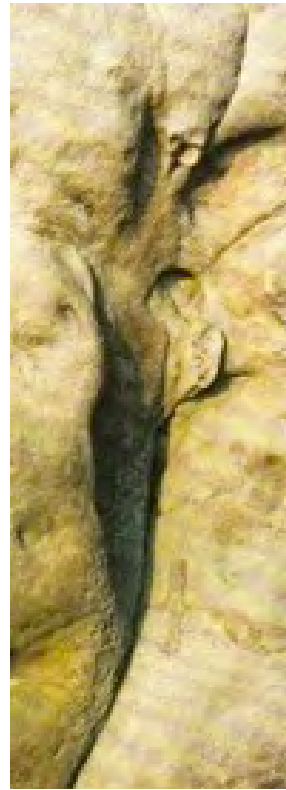


Fig. 8. Avebury South Circle, the Beltane Stone, numbered 106.

Fig. 9. Detail of the middle of this stone.

built over it *in situ* to the correct height and width for a television film for Discovery Channel and the British Channel 4. The five surviving perimeter stones are female-expressive. The positions of missing stones are known from socket-holes picked into the chalk bedrock.

Although the people left nothing in writing, there is fortunately an inherited store of interpretable symbolism. In understanding the nature of Avebury's stones, the starting point is the proposal by Keiller and Piggott (1936) that the ancient Britons likely regarded the megaliths, depending on shape, as either male- or female-symbolic.

Quoting Isobel Smith (1965: 197 and Plate 35), "There are Type A stones which are much taller than they are wide, with sides more or less parallel and vertical, which are possibly male, whereas Type B stones are much wider, sometimes broader than their height and are possibly female. The latter are squarish, rhomboidal, or trapezium-like, while the best have the shape of a lozenge or diamond balanced on a point." This reasoning has stood the test of time and scholarship. Indeed, there are nations where similar deification and devotion continue to this day (as with

American Native Indians, tribal inhabitants of India (in Jharkhand, etc), Nepal, and Borneo among others) (Das 2014; 2018). The archeologist Michael Pitts commented appropriately about the sexuality deemed to be held by particular lithic outlines. Quoting Cope (1998: 95), "Michael Pitts was told by the late Stuart Piggott that the theory for the male/female paired stones of West Kennet Avenue came 'out of thin air.'" Later, when in Madagascar, "Michael Pitts ... met an old man ... who remembered megalith building as a child and showed Michael known male and female stones in his village. Sure enough, they followed Piggott and Keiller's pattern." Tellingly, as explained above for the Drombeg Stone Circle in Ireland, not only are male- and female-symbolic stones seemingly so because of their shape, but the assigned sexuality is rendered firmly explicit by the manner in which they function (e.g. as in fig. 4).

Hicks (1989: 480), writing of Drombeg, remarked that "it was quite reasonable to postulate that the sun was considered male (as seems evident from all the recorded European mythology). This being the case, perhaps the tall stone marking the summer solstice [viz. portal Stone 1 at Drombeg] ... was interpreted



Fig. 10. Avebury: the roundish Stone 105.

by the builders as being phallic.” Yes indeed, the present research has shown that this portal stone was likely considered phallic because at the summer solstice sunrise its shadow joins the vulva carving on the female recumbent stone. As indicated above, the companion portal stone at Drombeg (Stone 17) bears the phallic carving (fig. 3).

In the middle of the east-facing side of Avebury’s Stone 106 is a fissure a meter long offering female characteristics (Figures 8 and 9). The stone aligns with the Obelisk and the direction of sunrise on May Day which was 6 May in ancient times, because this day (when counting from 21 December) is the exact mid-point

(namely, Day 137) between the March quarter date (Day 91, 22 March) and the summer-solstice quarter day (Day 183, 21 June), for which see Meaden (2017b; 2020a) in *Expression*. May Day is traditionally the first day of summer in England, having been shifted from 6 May to 1 May on the Roman calendar. At first, the rising sun illuminates the female stone, but soon afterwards the sun unites Stone 106 with the Obelisk, using the male shadow of the latter to consummate the union. After a while, the shadow moves away and light and warmth again infuse the female stone which *a priori* represents the earth mother for the purpose of the occasion. This is the Neolithic version of the worldwide fertility rite of the marriage of the gods (Meaden 1999: 22-26).

When days are notched by tally stick and counted this way, the date is Day 137, which we recognize on the Roman calendar as 6 May. The direction of the rising sun, as calculated for North Wessex in the Late Neolithic, is then 62 degrees east of north. This matches the on-site alignment at Avebury. By contrast, for 1 May (Day 132) the Avebury sunrise azimuth is an ill-fitting 64.5 degrees. It follows that the May Day festival used to be 6 May and not 1 May. This and similar Neolithic calendar facts are supported by the author’s comprehensive study of 100 Wessex long barrows (Meaden, to be published) and that all references to the date of 6 May apply equally

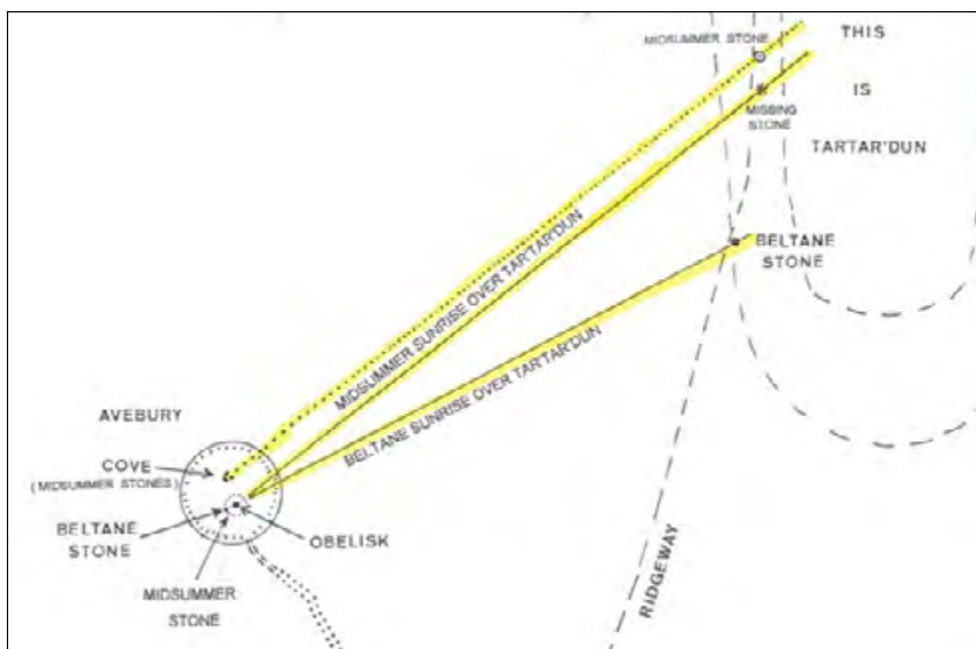


Fig. 11. Significant directions for the summer and cross-date sunrises for Avebury.



Fig. 12. The May Day or Beltane stone on Totterdown or Tar'tar'dun.

well to the second of the summer cross-quarter dates, which is 6 August. The author's documentary film that was made for television in 1998 reproduced the shadow-casting well.

The action and the imagery were similar for the mid-summer sunrise between the Obelisk and Stone 105 which has a female-symbolic circular outline. It experiences the sacred marriage with the sun god/sky father via the Obelisk on the morning of Midsummer Day, 21 June.

In fig. 10 the rounded Stone 105 is seen from the southwest. The stone additionally aligns via the Obelisk to the point of midsummer sunrise over Totterdown (Tar'tar'dun) and Hackpen Hill 2 km distant. Refer to the plan in fig. 11.

The plan shows where megaliths on the northeastern hill, known as Totterdown (Tar'tar'dun), were placed

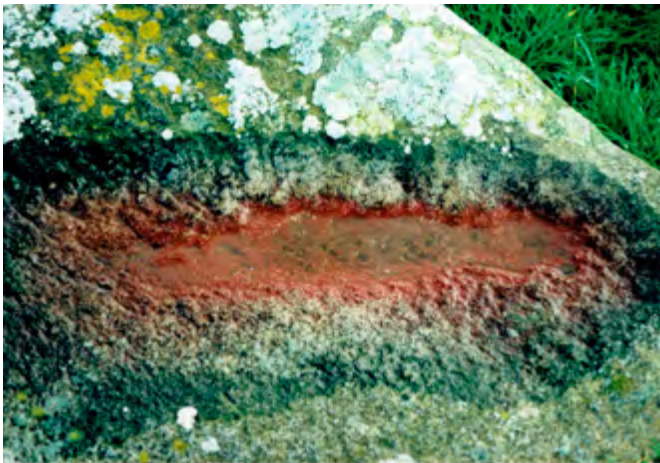


Fig. 13. Detail of the pecked feature on the lozenge stone.

in antiquity to indicate where the sun would rise on dates that we call 6 May, 6 August and 21 June as witnessed from Avebury. The Totterdown stone representing the May Day sunrise is symbolically expressive and meaningful.

Photographs of this triangular-topped rhomboid sarsen with its artificially pecked longitudinal vulva-like hollow are given in Figures 12 and 13. The stone lies on the heights of Totterdown (part of Overton Down), at national grid reference SU 1265 7120 on a false crest as viewed from the lower ground of Avebury.

The stone was positioned to correlate with the May Festival Beltane sunrise (and equally the early August festival sunrise) when, at Avebury, the male shadow of the Obelisk meets female Stone 106. The Totterdown vulvar stone lies flat, probably deliberately so, but it may have fallen. Through befitting serendipity, the blood-red coloration is strongly emphasized in wet years, the result of algae living in the rainwater-filled, pecked hollow.

Rising Sun at Stonehenge

The most spectacular of known examples of stone-to-stone union by shadow takes place at Stonehenge in the week of the midsummer solstice. In the minds of the builders, the circles enclose sacred space of the earth mother or mother goddess. A fuller explanation is given in another paper in *Expression* (Meaden 2020a). The core reasoning is similar to that of Avebury.

A brief summary follows because it is conclusively relevant to the theme and content of the present paper. On midsummer morning in the time of the Early Bronze Age, at sunrise sunshine at first briefly penetrated the great monument to its center. Minutes later (fig. 14) the shadow of the male-principle Heel Stone entered the monument—as it still does—in full view of faithful crowds watching outside.

At the centre, the shadow unites with the female-symbolic recumbent Altar Stone, as witnessed by a privileged few inside the temple (fig. 15 and plan in fig. 16). This is the annual consummation of divine marriage. Just behind the recumbent stone stands another cult stone, Bluestone 67.

Sunrise in midsummer week is the only time of day in the only week of the year when the shadow can enter like this, and the marriage of the gods wit-



Fig. 14. Summer solstice: A few minutes after sunrise, 22 June 2020. After penetration, the top of the shadow is seen withdrawing from inside Stonehenge. Photo: Simon Banton.

nessed by faithful observers. The first ever photographs of the summer-solstice sunrise with penetrating shadow were taken by the author in 1986, 1987, and 1989. The latest were taken by Simon

Banton on 22 June 2020 (fig. 14).

This sublime union was planned to function at midsummer sunrise every year, profoundly demonstrating the meaning of the people's belief in the truth of the *hieros gamos*. For a farming community dependent on the success of the fertility of their crops, their livestock, and their women, the occasion would have been portentous as well as spell-binding. Because the Stonehenge of the third millennium BCE was planned as a functioning fertility monument, it is necessarily a monument to the living, with a dramatic showpiece that is manifestly watchable and enjoyable. It is no more a monument for the deceased than were cathedrals raised for the interment of the dead.

Having also explained the essence of the meanings of dozens of stone circles across Britain and Ireland (Meaden 2020a), the explanation for Stonehenge by shadow-union between two particular stones is fittingly endorsed. The initial hypothesis has been tested, and has evolved into a well-grounded theory about the monument's core symbolism and purpose.



Fig. 15. The shadow of the Heel Stone is shown in union with the focal, female-symbolic, recumbent stone. Behind stands Bluestone 67 with glans.

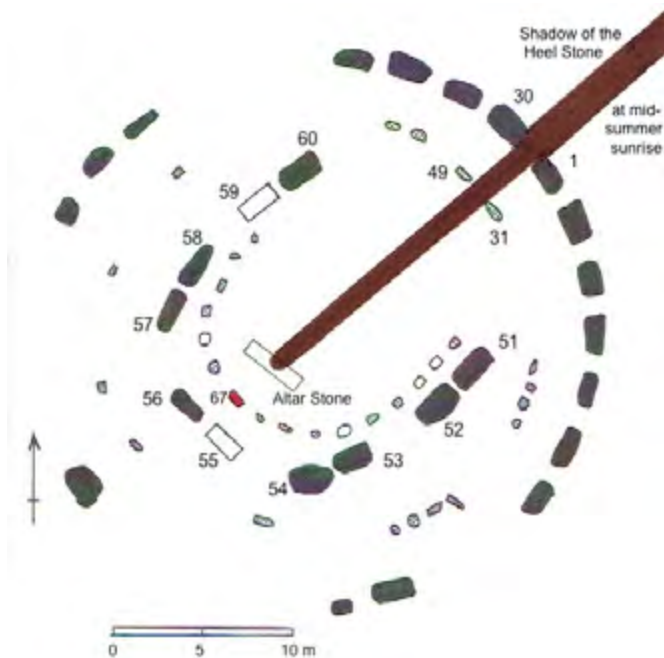


Fig. 16. Stonehenge plan, showing how the shadow of the Heel Stone reached the recumbent Altar Stone. Note also the position of the Blue-stone 67 (cf. Fig. 15).

Kaula temples

As regards the intrinsic philosophy behind the concept of sacred marriage, the Kaula temples of India, like the 64-yogini temple at Ranipur-Jharial in Orissa, are fundamentally similar monuments. This is a stone-built circle of 64 yoginis (representing the 64 kalas or arts). It is centered on a Siva shrine and a cult lingam which represents the Tantric union of the god Siva with Shakti, hence divine marriage. The monument is around 900-1,300 years old, and its purpose is historically understood.

Stonehenge, too, has a cult lingam, namely, a prepared phallus made from bluestone. Numbered Stone 67, it was positioned on the Stonehenge principal axis and stood deliberately just behind the recumbent Altar Stone. Cf. fig. 15 and the plan in fig. 16. Now it lies fallen, hardly noticed by anyone (fig. 17).

What is more, the southwestern side of Bluestone 67, when it was standing, was illuminated in mid-winter by the light of the setting sun at the winter solstice shining through the symbolically-feminine vertical gap between the orthostats of the Great Trilithon. Because of this, if Stone 67 and the trilithon orthostats (Stones 55 and 56) were raised again, no

one standing outside the monument on the Stonehenge axis near the Heel Stone in midwinter week would ever witness the sun setting in this direction. Stone 67 would block the view.

Another Kaula center is at the Mahamaya Temple on the banks of the sacred Bhargavi river at Hirapur, 15 km from Bhubaneswar, Orissa. This is one of only four examples of the roofless or hypaethral temple still standing in India. At its center is a three-faced Siva embracing Parvati. This distinctly transcendental rite reveals again the ideology of the sacred marriage. Particularly note that this site is also understood and rationalized in a fully known historical context, by which it too adds support for the prehistorical context deduced for Stonehenge. *Vincit omnia veritas.*

In Wessex, south of Bristol in England, are three much damaged big-diameter stone circles at Stanton Drew, to one of which a strong legend and hoary folk memory are attached (Grinsell 1973). The stones are known as wedding stones, being a folklore survival from ages ago but which has been neutered and purposefully modified into a petrified-dancer tale that could be used by Christian ministers to frighten churchgoers from ignoring the strict rules of the Sabbath.

Rising sun at Knowth

The megalith complex at Knowth in County Meath in Ireland comprises a vast array of kerbed mounds having a total of about 200 shaped and pecked stones arranged supine. The main mound has two passages,



Fig. 17. Stonehenge lingam with glans, the fallen Bluestone 67, was positioned standing on the Stonehenge axis immediately behind the Altar Stone. Photo: Simon Banton. Cf. fig. 15 and the above plan.



Fig. 18. Knowth: The sun rising in the east on 18 September 2017 and shining on the pillar stone.

one each in the east and west (Eogan 1986). Although the directions of the passages do not exactly match the March and September quarter dates, the recumbent kerb stone located at the entrance to the eastern passage does. In front of this kerb stone stands a straight-sided pillar stone (fig. 18), similar in shape and function to the one at Drombeg (fig. 4). Both these stones, at Knowth and at Drombeg, were posi-



Fig. 19. The shadow of the pillar stone on the middle of the waiting recumbent stone.

tioned so that the rising sun would cast a pronounced shadow on to the waiting female-symbolic stone.

Fig. 18 shows the rising sun on 18 September 2017, and fig. 19 the ensuing shadow. It is calculated that on 20 or 21 September in the Bronze Age the shadow would align with the vertical longitudinal hollow in the middle of the stone. It would be the same for the March quarter date. So, again, there is intentional male-female union at sunrise on major quarter days of the farming calendar.

Rising Sun at Newgrange

The great passage mound at Newgrange in the valley of the River Boyne is, like Knowth, another wonder of the Neolithic world. This splendid Neolithic monument is surrounded by an irregularly spaced ring of standing stones. It is well known that the light of the rising sun shines through the roofbox above the entrance in midwinter week and reaches the end chamber of the gallery (O'Kelly 1982). The process takes several minutes before optimization is reached. The morning of the winter solstice, 21 December, is the key moment.

The stones of the circle that are nearest to the winter-solstice passage are marked on the plan of fig. 20.

The threshold kerb stone K1 displays a carefully arranged pattern of symbolic spirals and lozenges divided medially by a vertical line (fig. 21). The two

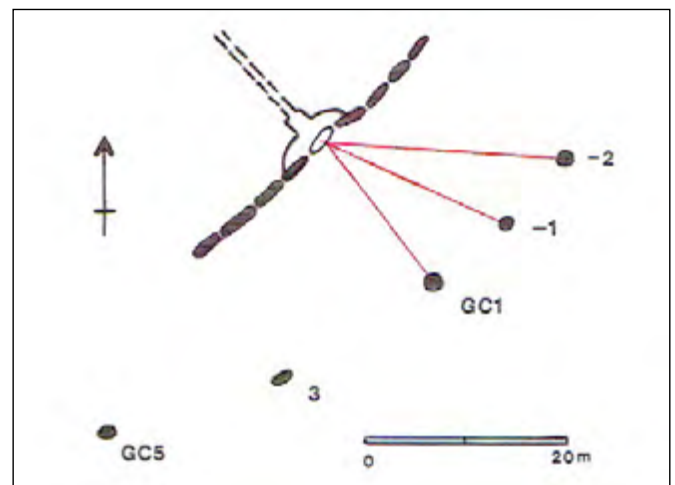


Fig. 20. Newgrange: plan of the stones of the Great Circle GC nearest the passage with lines to kerb stone K1 from GC1, GC-1 and GC-2 (author's drawing after F. Prendergast (1991) and an examination by the author at dawn on 19 September 2017).



Fig. 21. K1: Newgrange has a splendid carved recumbent kerb stone awaiting the arrival of a midwinter shadow from the standing stone GC1 of the great circle. At the center bottom is a fully-pecked, upward-pointing triangle.

complete spirals on the right side, being right-handed, share the value of male solar symbolism (Meaden 1991: 116-120).

On the left-hand side, carved in an anticlockwise direction, are three spirals, pecked so big as to almost fill available space. Left-handedness in symbolism relates to femininity (Meaden 1991). The decoration is completed by a number of lozenges. In the middle below the vertical line, a series of upward circling lines enclose another feminine fertility symbol, a solid triangle fully pecked out. Encircling lines lead from the triangle to the nearest anticlockwise spiral and link with the triple lozenges at the extreme left. By its two-gender symbolism, the stone reveals duality of purpose, as explained elsewhere (Meaden 1989: 4.7; 1991: 116): “The special function of the stone is accentuated by its position which ensures that the midwinter sun casts a shadow from a stone of the external stone circle to the threshold stone.”

Coincidentally, F. Prendergast (1991: 15) examined shadow play for Newgrange using computer simulation for three shadow-casting stones of the great circle using the date of 2015 BCE that was deduced from Sweetman’s excavation of 1984 at stone number GC-2 (Sweetman 1985). The results are significant. The shadows, each one in turn cast by three stand-

ing stones, link with Stone K1 for midwinter sunrise and the March and September quarter dates, and also the mid-term cross-quarter dates near the start of November and February. Shadow-casting for these dates remains untested by direct observation. An attempt by the present author at dawn on 19 September 2017 was foiled by fog. As for the midwinter date of 21 December, Kate Prendergast in 2009 obtained sunrise photographs from which the author reconstructed likely shadow positions and movements (Figures 22 and 23) as they would have been cast 4,000 years ago (Meaden 2016: 109-113).

Summarizing, the aim at the solstice sunrise was that the shadow of the external Great Circle stone GC1 would cross the left side of the stone (which it does) with the carved bottom triangle as its target by way of the symbolism of the Marriage of the Gods. This target zone, at the center base of the waiting recumbent stone, has been noted as the target zone for shadow linkage at the four recumbent stone circles of Scotland that have so far been assessed by fieldwork at sunrise. Two of the latter are



Fig. 22. At the winter solstitial sunrise the shadow of Stone GC1 strikes the southern end of the recumbent stone K1, for which calculations suggest that, when in prehistoric use, it covered most of the engraved lozenges at the left while touching the edges of two of the triple spirals.

Fig. 23. A few minutes later the same shadow is still on the entrance stone K1 when alignment with the vertical groove is reached and the top of the shadow covers the upward-pointing triangle.

introduced below.

It is to be remarked that at Drombeg it was the lozenge megalith that received shadows on the five key dates of the winter half of the year (fig. 4), while at Newgrange carved lozenges and a carved triangle come into play in a related fashion for the same five dates. Meaden (1991: 120): “This shadow [at Newgrange] has the dramatic effect of uniting the male and female divinities in a midwinter Sacred Marriage, a fertility ritual of divinities. At the same time the perfect orientation of the 24-metre length of the passage and end-chamber at Newgrange with the midwinter rising sun was a deliberate, highly meaningful act on the part of the designers and builders. Their ingenuity extended to installing a letter-box opening above the entrance doorway, to permit a narrow beam of sunlight to penetrate the monument to its innermost back wall and there illuminate its presumed contents for a few minutes each year. ... It is as though the Sky God, represented by the sun and its beam of light, had mated with the [Mother] Goddess, embodied in the tumulus. The letterbox opening and passage become vulva and vagina. The central end-chamber is the cavity that is the womb. The whole is a vivid re-enactment of the Marriage of the Gods, and the spiral-covered entrance stone, K1, glorifies and tells the whole story in the medium of carving. Newgrange is more than a passage-grave; it is a temple to the Goddess of a lost age. Moreover, being a solar-orientated device, it still works.”

K. Prendergast (2010) has written about the womb that is Newgrange. “The womb-like qualities of the place are inescapable. Certainly, the penetration of the inner chamber by the sun and of the entrance by the shadow of the standing stone invoke sexual associations on a cosmic scale—the Marriage of the Gods.” In another paper K. Prendergast (2012: 57-64) “argues that the Neolithic monument of Newgrange, in common with comparable monuments known as passage-graves, functioned to facilitate womb-like ritual experiences and birth-based cosmological beliefs. It explores the evidence for the design, material deposits, astronomy, rock art and associated myth at Newgrange to suggest the myriad ways that birth-based ritual and cosmology are invoked at the site.” See also Prendergast (2017) on these matters.

The target at Newgrange for the shadow cast at the winter solstice appears to be the central-base region where the fully-pecked female-symbolic triangle is located (Figures 22, 23). This recalls a near similar situation regarding the recumbent stone circles in Northeast Scotland.

Loanhead of Daviot and Easter Aquhorthies

Sunrises have been photographed on several of the ancient agricultural dates at five of the recumbent stone circles near Inverurie in Aberdeenshire. At Loanhead of Daviot an example is given for the summer solstice sunrise (fig. 24). The sun rises in line with Stone 9 and soon the shadow is visible at the central-base of the great recumbent stone. It is relevant to say that it would have been easy for the planners, if they had wanted, to position a much taller stone to achieve union higher up with the middle of the stone. Instead, they clearly wanted the union to be at the centre base of the waiting stone, because this is what they also did for other tested sunrises. Fig. 25 shows how the winter solstice works similarly at Easter Aquhorthies. For the agricultural dates in the winter half-year from September to March the target stone is the lozenge-shaped Stone 6. Again, the moving male shadow is directed at the center base of the passive waiting stone.

The thinking on female symbolism in stones may be similar to that of Avebury, where two surviving stones owe their feminine attribution to a symbol-



Fig. 24. Loanhead of Daviot Stone Circle: At sunrise the first gleams on 20 June 2017 were at 0422. In the photograph, at 0426, the sun is shining at half-orb. The author's shadow (with left arm raised) shows alongside.



Fig. 25. Easter Aquhorthies Stone Circle, winter solstice, 16 December 2017. The lozenge-shaped Stone 6 is united by a shadow cast from Stone 12. Photo: Austin Kinsley.

ic vulva at their center-base. These are Stone 4 and Stone 32 of the Great Circle (Meaden 1999: 8, 49, 50, 57) (cf. fig. 26). The suggested vulva gets to be illuminated obliquely at the summer solstice sunrise for nearly an hour. The eastern side of Stone 32 has been deliberately smoothed and the area of the hole has been slightly worked.



Fig. 26. Avebury, Stone 32 of the Great Circle.

Synthesis and conclusions

The ancient worldview of the *hieros gamos* between fertility divinities of sky and earth (or heaven and earth), was a gratifying, widespread, spiritual concept with a bold spectacle performed for the benefit of the community. As historically known, countries of the Fertile Crescent and Egypt led the way by virtue of their contemporary written records, but they were not the first to present the concept as a dramatic deified spectacle. The sacred fertility myth was conceived in prehistory. Whatever the exact religious details, humans were blending definitive images of male and female into a coherent whole that was symbolically related to sky and earth and which focussed attention on their perennial fertility aspirations. Such beliefs persist to this day in Hinduism, Tantra, and the ideology of a number of contemporary tribal communities across the world, as in Jharkhand and Bengal, where these notions continue to be ceremonially ritualized at festival times.

The principal advances presented in the current paper are twofold. Both are based on findings synthesised from prehistory regarding the study of stone circles of the early British and Irish farmers. There is now considerable secure evidence at numerous sites for the intelligent planning and positioning of circumferential stones in relation to one another and to sunrise directions that together display features of an operational calendar. This is the first point. Photographs illustrate how preselected pairs of stones are linked at sunrise by shadow, besides demonstrating that every shadow is cast by a symbolically male stone on to a female-symbolic stone. This union on eight prearranged dates of the year engendered a series of captivating, watchable spectacles for the communities. They provided reassurance concerning the farmers' fertility needs for their cattle, grain, and women.

The second point is that the male-symbolic shadow was more than simply a link between male and female genders; it was, rather, likely viewed as an enjoinder on earth between divine megalithic representatives of sky and earth. The idea of divine matrimony explains why the archetype is so compelling and pervasive, and why it so gloriously enriched sacred symbolism from the Neolithic to the Bronze Age, and often beyond, worldwide.-

The theme of spring and seasonal renewal dominated people's minds. For archaic agricultural societies it was

consequential and natural that the *hieros gamos* developed into an auspicious rite of spring: the spring wedding, the May wedding, the sacred wedding. This paper indicates how an elaborate scenario using stones, shade and sun played their various parts.

Henderson (1964: 134) discerns the rite of sacred marriage as an archetypal form at all levels of experience, for it resolves a primeval psychological dilemma regarding opposition between male and female. Henderson (1972) expressed it this way: “Man’s knowledge (Logos) encounters woman’s relatedness (Eros) and their union is represented as that symbolic ritual of a sacred marriage,” and that is what makes the union harmonious and fruitful.

The non-literate Britons of those far-off days left us nothing in writing. By reading the symbols in the stones and interpreting their monuments, we perceive something of the manner in which these peoples recognized the wonders of nature and viewed the sacrality of life. It is as if those distant, cultured communities are engaging with us through their stones. The people rise in our esteem. The monuments emerge from the mists of time and stand more imposing than ever.

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IDIOSYNCRATIC PAINTINGS FROM A DISTANT PAST IN SIVRÉ I (ENNEDI, CHAD)

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Introduction

Despite the variety of motifs documented in the Ennedi rock art tradition, dating from the mid-Holocene to the present day, representations of fantastic entities seem extremely rare. The pre-Islamic beliefs in an impersonal creator god and ancestor worship (Fuchs 1961; Tubiana 1964), along with an overt veneration for cattle, explain the rock art's secular appearance, referred to as the pastoral period (Menardi Noguera 2018).

The much older paintings from the pre-pastoral period (the archaic period in the local rock-art terminology (Bailloud, 1997)), include representations of humans and a selection of African fauna, exceptionally extended to the aquatic realm (Gauthier and Gauthier 2019). At first glance, this ancient art seems primarily motivated by interest or fear. The represented animals are the best possible game, like the elephants and giraffes, or the most dangerous, like the big cats, as expected from ecological studies of ancient and contemporaneous hunter-gatherers' behavior (Halfon and Barkai 2020, Bugir et al. 2021).

Prey preferences by body mass and risk avoidance explain how few species dominated the ancient hunter-gatherers' visual memory but say nothing about the

emotional connection between the hunters and the animals, the stories and myths that motivated their transposition into artistic expression.

Humans commonly exploit animal figures to image themselves, convey information, evoke emotions, carry myths and legends, and use as symbols in religion (Baker 2001; Daston and Mitman 2005).

Without an informed approach, it is impossible to deduce the full range of stratified meanings that the animal depictions might have. From the ethnographic data collected among South Africa's hunter-gatherers, we know that the anthropomorphized animals of their myths and legends may appear in rock art both as purely naturalistic depictions or human-animal hybrids (Gunther 1991).

In the Ennedi, the archaic period's painted scenes and compositions consist of a small number of motifs, often reduced to faint fragments because of the region's rapid geomorphic evolution during the Holocene (Menardi Noguera 2014; Gauthier and Gauthier 2017).

Curiously, the ancient world of hunter-gatherers and fishers once thriving in northern Chad produced only a few idiosyncratic fantastic paintings. These paintings represent evidence for a system of beliefs transcending

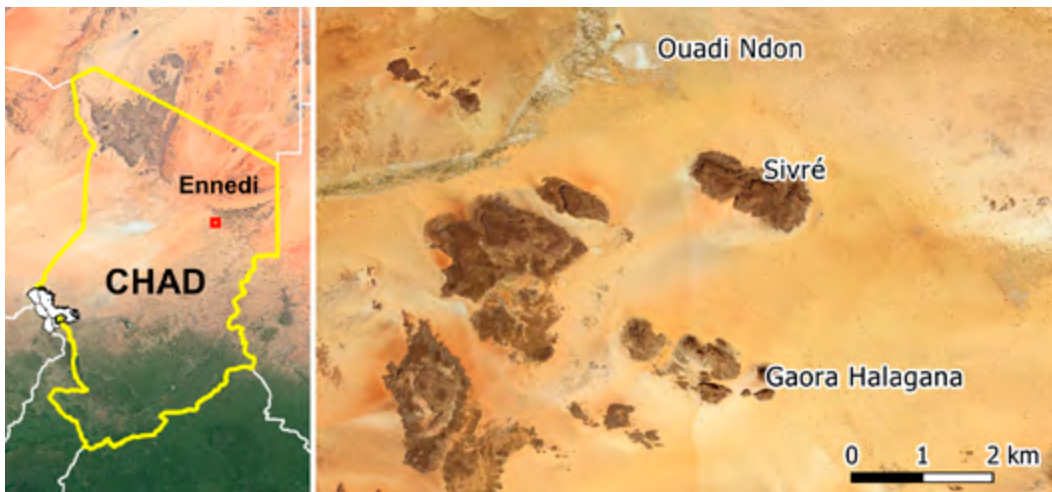


Fig. 1. Location map of the Sivré hill. The satellite image in the background is from Digital Globe (Westminster, CO, US) and Google Earth (Google, Inc., Mountain View, CA, US).



Fig. 2. The Sivré I site corresponds to the eastern sector of an extended terraced shelter exposed due south, characterized by a back-wall with re-entrants and protrusions.

the representation of favorite prey or feared animals originating in the mere persistence in the mind of a crucially important visual stimulus. They are unique by location: the Sivré hill (Figs. 1 and 2), an important site for the rock art chronology of the Ennedi (Bailoud 1960, 1997; Menardi Noguera 2017b).

Methodology

In rock art, artists often exploited the natural shape of rocks according to their particular pareidolic vision, a phenomenon that requires special attention (Bednarik 2016). Close range photogrammetry is the standard technique now applied for investigating this phenomenon. The photogrammetric 3D models of the rock art studied made available online (Menardi Noguera 2021), compiled in Metashape® (Agisoft LLC, 2020) and Meshlab® (Cignoni et al. 2008), represent the necessary supplementary data. In addition to photo-scanning, the DStretch® software (Harman 2020) was routinely used to enhance the ancient paintings, generally faded to the point of being nearly invisible to the naked eye. The adopted workflow proved particularly beneficial for understanding the large zoomorph from Sivré I, discovered in January 2016 by Els Vandecruys and András Zboray, subsequently published in low-resolution images (Simonis et al. 2018).

The large zoomorph of Sivré I

The large zoomorph of Sivré I (fig. 3) is the most disconcerting motif found to date in the region. At first glance, it looks like a quadruped with stocky legs shown wide apart. The assumed head is the same size and shape as the alleged limbs. However, this bizarre quadruped lacks a well-defined contour line since part of its profile is made up of implicit lines. Thus, the perceived zoomorphic shape is the envelope generated by the perceptual closure and automatic visual grouping of disparate elements into a configuration, according to a well-known effect leading to the recognition of entirely non-existent objects (Deregowski 1984; Gillam 2014).

The presumed body parts are distinctly not biomorphic. Wavy, dotted, dashed, and hatched lines, plus chaotic patterns of discontinuous curved lines, involute rounded shapes, and mesh-like patterns make up the anatomy. These elements are distinguishable only at close range as if this painting were conceived for viewing at two widely different distances. It is impossible to say whether they are purely geometric abstractions or depict an assemblage of natural or artificial entities drawn from the real world.

The five appendices corresponding to the “head” and “legs” are each different and not coplanar, as proven

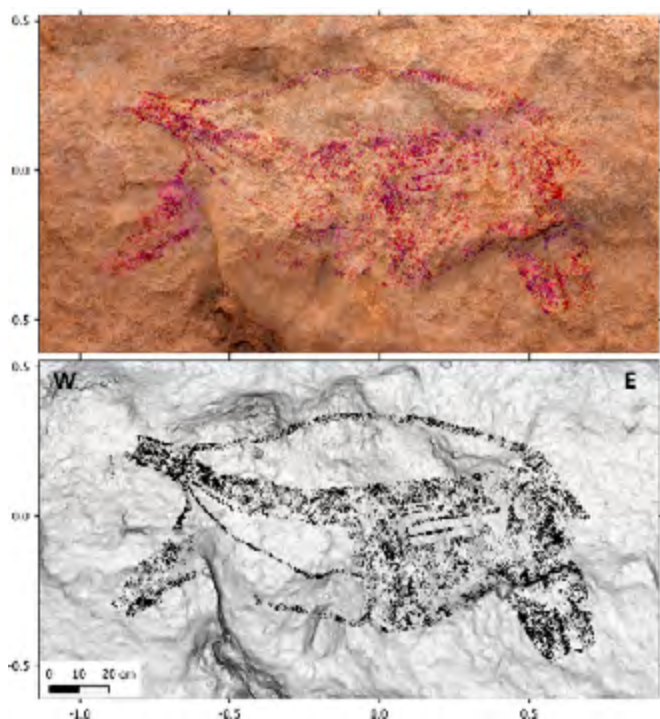


Fig. 3. Ortho-image of the zoomorphic motif (145 x 70 cm) found on the ceiling of Sivré I. Upper inset: RGB composite overlaid by a color selection from the R band of the image processed in *DStretch_LDS*. Lower inset: digital tracing overlaid on the Slope attribute of the ceiling's digital elevation model, shaded in gray. The origin of the reference system is at the geometric center of the painted motif. The shelter brow is on the upper side of the image.

by the 3D model (fig. 3).

In neutral terms, the “head” (fig. 4) corresponds to a trapezoid, with the parallel sides of unequal length constituted by two hatched bands and the oblique sides represented by double lines. A dotted band divides this shape lengthwise, tapering into a triangle towards the longer side (C in fig. 4).

There are no internal details within the “head” that might compare with an animal’s eye, mouth, or ears. Thus, it is impossible to ascertain if this trapezoid represents a headless beast’s neck or the head and neck of an animal combined. However, close-up images show the previously unnoticed presence of a projection formed by angled strokes jutting out from the shorter side of the trapezoid (referred to as B in fig. 4) and an isolated double-dashed line to the left (A in fig. 4). These tiny pictorial details suggest the “head” had a significant extension, not preserved due to the paint decay.

Two wavy lines with spikes, partly adapted to a discontinuity in the rock, represent the join of the “forelegs”

with the “chest” profile (fig. 5). The possible “left foreleg” connects to the “chest” by a narrow stripe with an infill of slanted lines bordered by straight inner lines and outer wavy lines.

The badly-preserved “right foreleg” does not present any visible continuous border. Angled lines segments constitute its upper quarter, while concave downwards arcs form its tapering lower extremity. Although preserved only for a few tracts, a stripe similar to that observed in the upper middle of the “left foreleg” also appears to be present in the “right foreleg.”

The “hind legs” trapezoids (fig. 6), defined by dashed contours, are parallel and terminate abruptly against a rock step exploited as part of the “belly” profile. Exfoliation gaps prevent the observation of the complete filling patterns of these appendices. However, the surviving fragments indicate that they are different.

Three parallel dotted lines constitute the “dorsal” profile of the zoomorph (fig. 3), perceived from a distance as a continuous, convex thick element, best preserved near the join of the “head” with the “trunk” (D in fig. 4).

Four parallel lines superimposed by dotted and hatched lines represent the “ventral” profile. Notwithstanding the large gaps due to paint decay, this profile still looks continuous from a distance, since it is pre-configured in the rock morphology (L in fig. 7).

Tiny red dots scattered over a few isolated strokes of darker paint make up the poorly-preserved “rear” of the zoomorph (fig. 3). These tiny dots likely belong to a decayed superimposed painting.

The complex graphic elements internal to the “body” consist of the following.

A transversal, large band with a sequence of stacked involute rounded shapes separating the “chest” from the “belly” (G in fig. 7).

A loping hatched stripe and an irregular mesh, filling almost entirely the “belly” sector of the zoomorph (I in Fig.7).

A longitudinal, large band extended from the “head” to the “rear” (F in fig. 7). The conspicuous pattern of nested curved segments filling this band (fig. 8) is bordered inwards by thin continuous lines and double dotted lines outwards.

A thick, wavy longitudinal line with spikes (fig. 3), best preserved near the “head” (E in fig. 4), drawn parallel to the lower side of the longitudinal band (fig. 8).

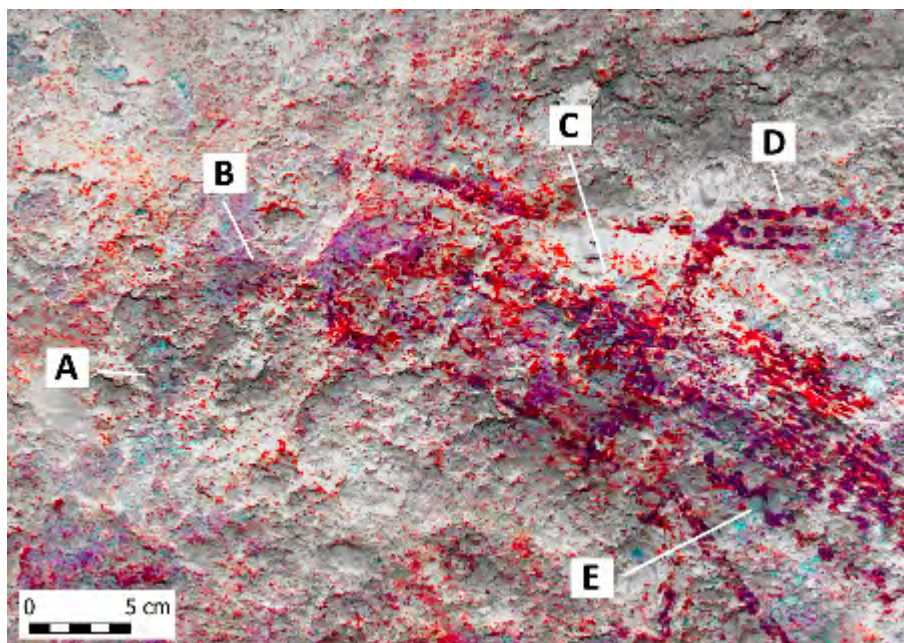


Fig. 4. Close-up of the “head” of the large zoomorph from Sivr  I (processed by *DStretch* LDS, G and B bands in undersaturated colors). Figure letters reference descriptions in the text of this article.

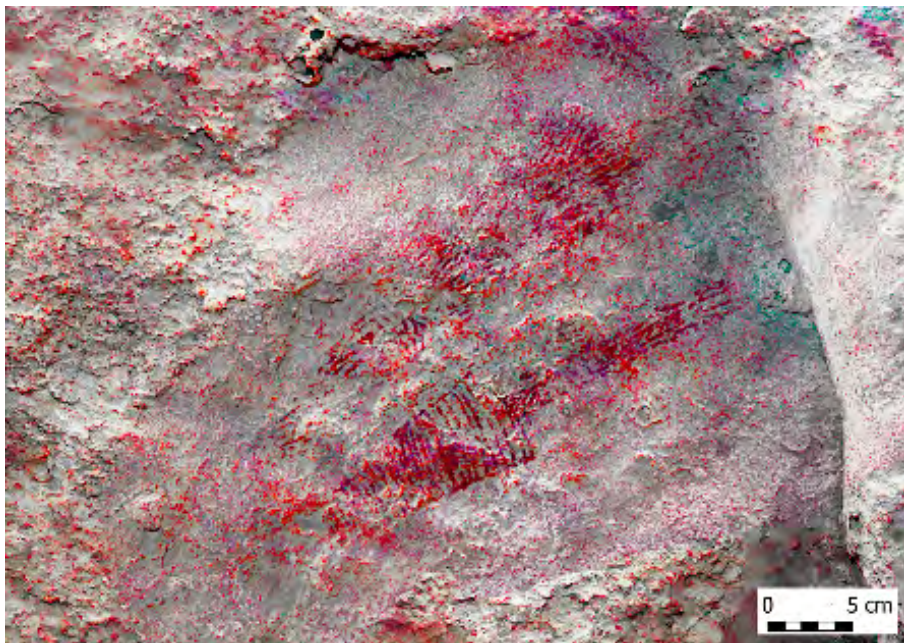


Fig. 5. Close-up of the “forelegs” of the large zoomorph from Sivr  I (processed by *DStretch* LDS, G and B bands in undersaturated colors).

The zoomorph with a tapering neck-head

In the western corner of the Sivr  shelter, human figures painted in white with a cross-hatched infill, attributable to the Checked style, superimpose paintings drawn by a dark ocher outline, attributable to the Sivr  style (fig. 9). The most noticeable of these paintings, first surveyed in 1957 (fig. 35 in Bailloud 1997), is a standing figure, with crossed bands on the chest and bags hanging from the hips, preserved only for the legs and trunk. At the bottom left of

this figure, in the backdrop, there is a reticular motif, probably representing a wicker object, perhaps a basket or a fish trap (Figs. 9 and 10).

To his right, enhanced images reveal the existence of a zoomorph drawn by thin lines, characterized by a long neck and a small head tapering in a pointed termination (fig. 11). An intricate pattern of straight and angled lines fills the body. The long neck suggests that the painting may have been inspired by a giraffe.

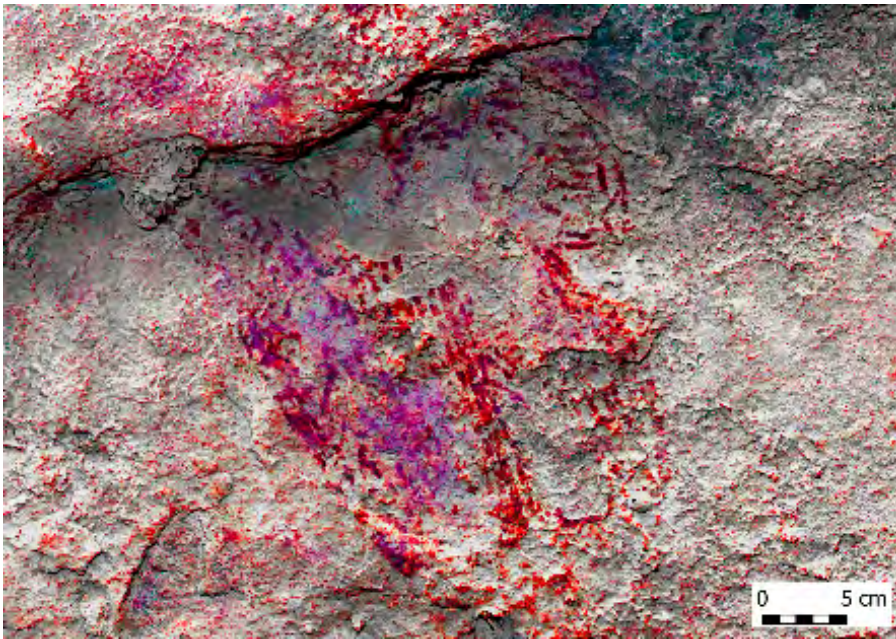


Fig. 6. Close-up of the “hind legs” of the large zoomorphic motif from Sivré I (processed by *DStretch_LDS*, G and B bands in undersaturated colors).

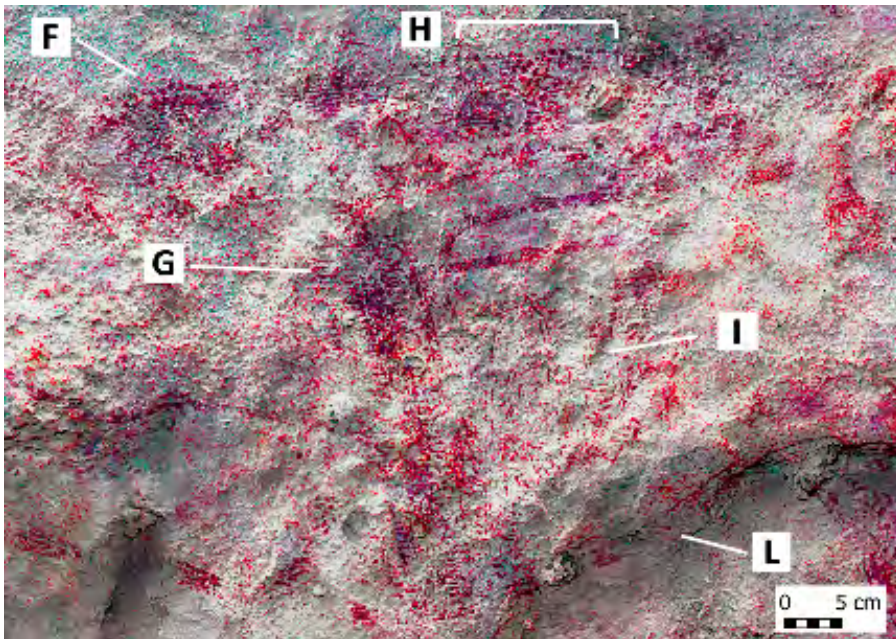


Fig. 7. Close-up of the parallel dotted lines in the “belly” quarter of the large zoomorph from Sivré I (processed by *DStretch_LDS*, G and B bands in undersaturated colors). Figure letters reference descriptions in the text of this article.

The polydactyl being

In November 2019, a thorough search for faded paintings near the large zoomorph of Sivré I led to the discovery of a previously unreported fragment of a biomorphic figure painted in white (fig. 12). This bizarre painting decorates the lowest, sloping sector of the ceiling, accessible only by creeping on one's back. The enhanced images clearly show that it vanishes entirely towards an inaccessible tunnel in the back-wall. This painting consists of two paired convex shapes, in-

ternally filled with thin longitudinal lines, converging into two terminations in solid white, with six rounded appendages each (fig. 13). Slightly pronounced bulges are visible on the sides. These paired shapes could represent the lower legs, toes, and heels of an anthropomorphic figure.

The motif, including a Y-shaped pole

The search for paintings that may have escaped detection resulted in finding another whiteish spot inside



Fig. 8. Digital tracing of a segment of the zoomorph's longitudinal band (H in Fig. 7), showing the minute details visible in close-up. Note the prominent wavy line with spikes below the band.

a rough niche in the back-wall. The enhanced image shows that two distinct but connected parts make up this painting (fig. 14). The right half includes a “Y” shaped pole surmounted on the left branch by an “S” shaped element, with a sort of tail made of thin, curved lines. A rounded, elongated object, resembling a bag decorated with dotted lines, hangs from the pole's right branch. This part of the painting recalls the pole with bags decorating the Sivr  I shelter ceiling (fig. 15), first reported by Bailloud (1960). Two parallel arched lines connect this rounded object to the shaft of the Y-shaped pole, and the unintelligible left part of this puzzling motif, overpainted with red dashed lines.

Relative age of the idiosyncratic motifs found in Sivr  I

In the rock art of the Ennedi, predominantly figurative with very few examples of geometric motifs, the different ways of rendering the human figure are fundamental in defining the styles. The relative chronology established in the 56-57' on stylistic and superimposition criteria (Bailloud 1997) is still preliminary due to problematic paintings in unknown relationships with the most represented styles. The white paintings recently discovered on the Tokou hill, believed to be very ancient due to the depiction of a palm species that currently grows at a much more southern latitude

than the Ennedi (Gauthier and Gauthier 2020), are a further indication of the difficulty of framing the oldest paintings in a coherent scheme. These paintings are



Fig. 9. The western corner of the Sivr  I shelter ceiling. Fragments of white human figures with a cross-hatched infill are superimposed on a standing human drawn in red outline. This human's feet are on the shelter back-wall (lower inset). The reticular pattern to the lower left likely represents a wickerwork object (ortho-image processed by *DStretch*_CRGB).



Fig. 10. Close-up of the reticular object shown in the western corner of Sivré I. This object, perhaps a pannier or a fish-trap, is clearly a backdrop to the human (digital tracing).

similar to the white paintings discovered at Sivré IV-B (Figs. 24 and 25 in Menardi Noguera 2017b).

Sivré is perhaps the place where it is best possible to observe the superimpositions between the paintings of the styles referred to as the archaic period, that is (from the oldest to the most recent), the Mayguili, Sivré, Elikeo, and Checked styles. Sharp stylistic discontinuities separate these styles, except in the case of the Elikeo and Checked styles, which differ essentially in the quality of the cross-hatching technique used to fill the human and animal silhouettes.

Due to the lack of superimposition relationships with any other painting or meaningful association with human depictions, it is impossible confidently to frame the presented singular motifs in the regional chronology. However, these paintings are comparable in execution technique and preservation state with the other paintings attributed to the archaic period documented in the Sivré shelters.

The mesh-like pattern on the “belly” of the large zoomorph from Sivré I (I in fig. 7) closely recalls the mesh-like object associated with the human in the Sivré style visible on the western sector of the shelter ceiling (Figs. 9 and 10). Simultaneously, thick dots and hatched lines recall the human figures painted in the Elikeo style surveyed in Sivré IV-A and IV-B (Menardi Noguera 2017b), and the big cat with a

cross-hatched infill standing out on the back-wall of Gaora Hallagana XIV (fig. 16).

The large zoomorph from Sivré I lacks the continuous contour line which distinguishes most of the paintings attributed to the Sivré style, including the celebrated “two Martians” of Sivré III (fig. 17). These two human figures engaged in a ceremony or religious rite show a realistic sense of depth lacking in Sivré’s large zoomorph, as indicated by the parallel “limbs” of equal length (fig. 3). Therefore, on the dangerous ground of the technical differences and similarities with the other ancient paintings from the archaic period, the large zoomorphic figure of Sivré I seems more in line with the defining features of the Elikeo style than with the Sivré style.

The zoomorphic figure with a tapering head-neck (fig. 11) found in the western corner of Sivré I could be a sketch, perhaps incomplete. Its location within an exfoliation gap suggests a more recent date than the Checked style paintings affected by the rock surface’s rejuvenation.

The polydactyl figure has no whatsoever analogy with the ancient paintings decorating Sivré other than the preference for drawing by thin lines in white, typical of the Checked style (fig. 18). This technique locally peaked to artistic excellence in Sivré IV-B (fig. 20 and 21 in Menardi Noguera 2017b).

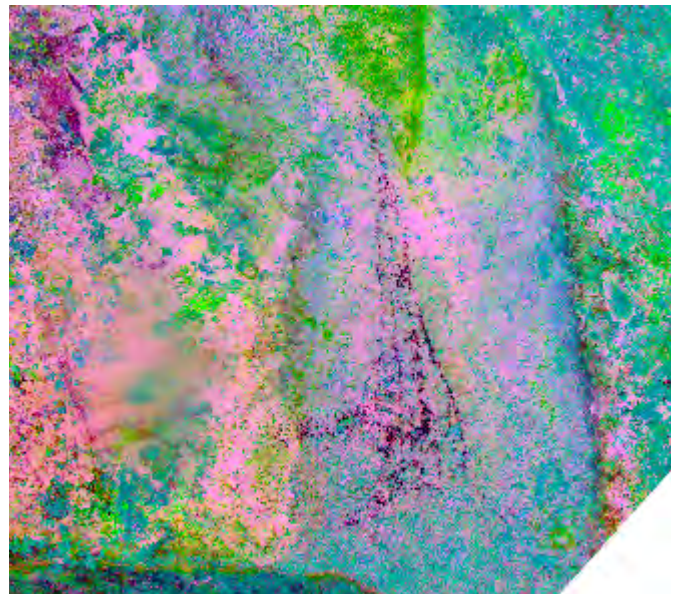


Fig. 11. A zoomorph with a long neck and a small head tapering to a pointed termination. An intricate pattern of straight and angled lines infills the body (ortho-image processed by *DStretch_CRGB*).



Fig. 12. A biomorphic figure painted in white decorates the shelter ceiling down-dip of the large zoomorph of Sivré I. Lower right inset: close-up of the figure's appendages, similar to human feet with an extra toe (processed by *DStretch_LAB*).



Fig. 13. Digital tracing of the biomorphic figure with appendages similar to human feet with an extra toe (black is white in the original image).

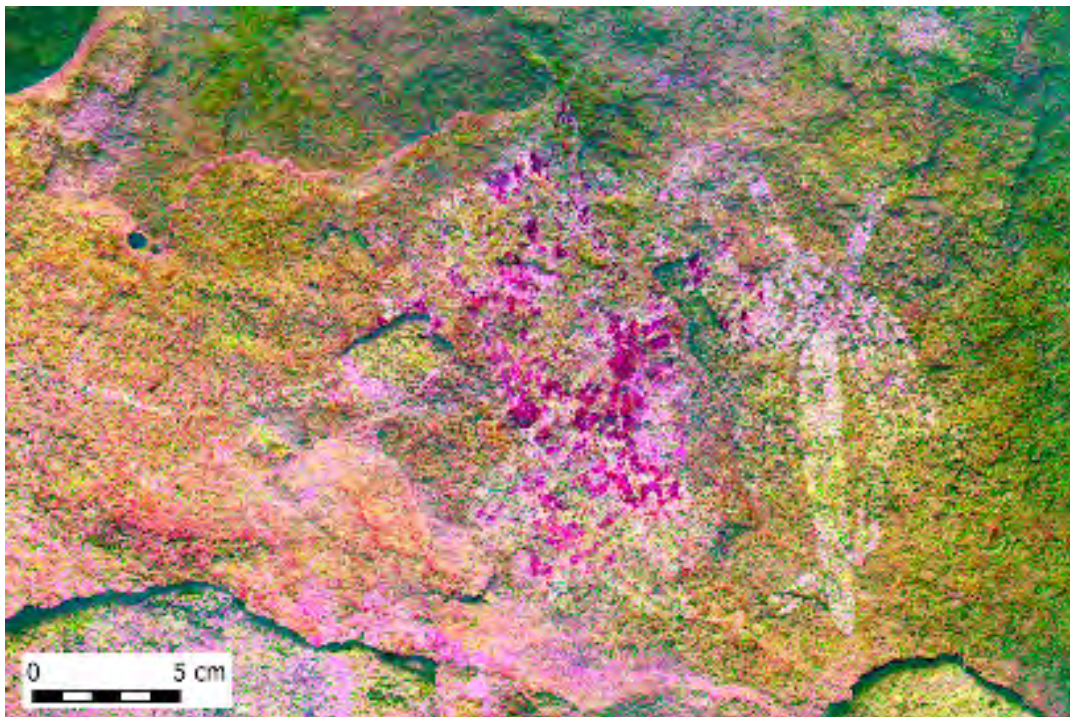


Fig. 14. An enigmatic motif painted in white and red from the eastern back-wall of Sivré I. The right part vaguely resembles a pole shaped like a Y with a large rounded object hanging from the right branch (processed by *DStretch_CRGB*).



Fig. 15. A pole with hanging bags on the western sector of the ceiling of Sivr  I. The neat red contour line and white infill of this motif characterize most of the paintings attributed to the Sivr  style. Lower-right inset: close-up of the rightmost bag showing the suspension strings (processed by *DStretch_CRGB*).

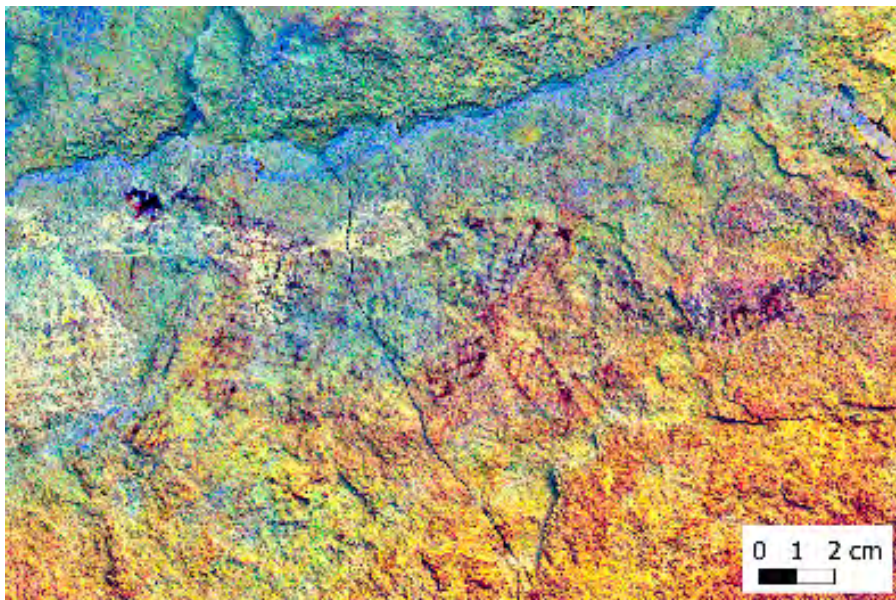


Fig. 16. Back-wall of Gaora Hallagana XIV. A pattern of crossed lines infills the silhouette of a big cat defined by a neat contour line. Faint fragments of human figures in the Checked style are superimposed on the animal (ortho-image, processed by *DStretch_LDS*).

The bizarre motif including a Y-shaped pole presents a weak affinity with the solid-white paintings studied in Sivr  IV-B, superimposed by paintings attributed to the Sivr  style (Menardi Noguera 2017b).

No painting in the Ennedi has been directly dated so far. In terms of absolute chronology, it is only possible to state the ancient paintings described here should predate the introduction of cattle in the Ennedi, which likely occurred in the early fourth millennium BCE, as indicated by the faunal remains recovered in the Ennedi Erg (Jesse et al. 2007).

Discussion

Upon discovery, the large zoomorph of Sivr  I immediately suggested the existence of an ancestral myth shared between a vast Saharan region and its Sahelian periphery, as fantastic animals exist in the pre-pastoral rock art of the Tibesti, Gilf Kebir, and Tassili (Boccazzi et al. 1995; Kuper 2013; Zboray 2018; Soukupova 2020). However, formal analysis shows that the perceived similarities are not convincing. In simplified animal representations, an elongated rounded shape with five appendages is sufficient to convey the idea of a generic quadruped. The straight-legged posture is the simplest and easiest to draw. Any quadruped representation that deviates from a strictly naturalistic reproduction can seem fantastic.

As described, the large zoomorph from Sivr  I consists of non-biomorphic shapes. The bands and geometric

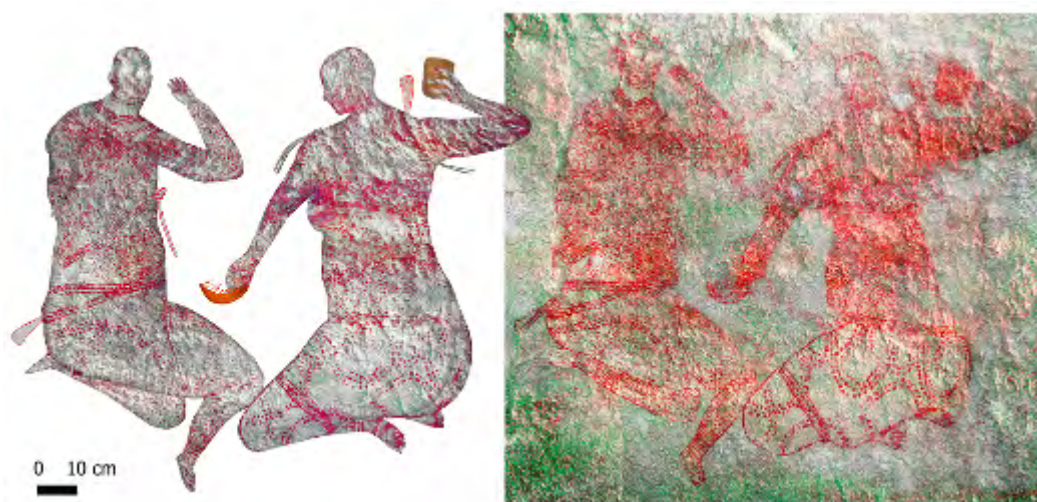


Fig. 17. The “two Martians” from the Sivré III shelter. Right inset: ortho-image processed by *DStretch_LDS* with the G and B bands in undersaturated colors. Left inset: the 3D model of the scene showing that the “two Martians” reproduce the memory of a real 3D visual experience according to a single point of view, with occlusions between body parts realistically represented.



Fig. 18. Archers carrying bows and clutches of arrows decorate the western wall of Gaora Hallagana XIV. These figures, characterized by a finely executed cross-hatched infill, represent a reference for the Checked style (ortho-image).



Fig. 19. The body parts of the fantastic beings present in the Cave of the Beasts (Gilf Kebir, Egypt) are distinctly biomorphic and sometimes even human. Yellow checked stripes decorate the body shape painted in dark ocher, defined by a single closed contour line. The exemplar shown is located at the focal point of the cave.



Fig. 20. Silhouette of one of the “Korossom” beasts from the Karnasahi-06 site in the Tibesti massif (digital tracing from a photo courtesy of Ursula Steiner). The horn and cloven hooves indicate that the beast’s anatomy might have found inspiration in various species of even-toe ungulates.

patterns within its body do not cover any underlying animal shape defined by a closed contour line. The supposed head-neck and limbs do not have any joins or details resulting from observing the natural world, such as eyes, mouth, toes, hooves, and tail. In contrast, the Gilf Kebir beasts have a chimerical nature since they may simultaneously include easily recognizable animal and human body parts, including tails and ar-

ticulated limbs (fig. 19). The Tibesti beasts, informally referred to as the “Korossom Fantastic” (Zboray 2018) have plausible body parts like horns and split hooves (fig. 20), implying inspiration from common even-toed ungulates, wild and domesticated, like antelopes, gazelles, cattle, goats, and sheep. However, these beasts have an unrealistic frustum-conical shape for the head and the back, making their silhouette wholly different from the Sivré I zoomorphic envelope. The wavy line on the Korossom beast’s belly from the Teffi Drossou 01 site (Fig. 7b in Zboray 2018) is the only pictorial element that finds a correspondence in the zoomorph of Sivré I.

In some respect, the zoomorph from Sivré I recalls the 16th-century masterpieces by Giuseppe Arcimboldo (Wikipedia 2020a), which intentionally exploit the automatic visual grouping of disparate components into human portraits. Flowers, fruits, vegetables, or objects piled up in these marvelous paintings are symbolic of the portrayed person or personified entity. The same could happen to the large zoomorph from Sivré I. Its components might stand for something drawn from the real world, related to the zoomorphic shape for symbolic reasons. This hypothesis is worth discussing by considering the possible depiction of elements persistent from prehistory in the present Sahelian natural world and traditional material culture.



Fig. 21. Two fishes (image center) and an undetermined motif (upper edge of the image) from the back-wall of the Gaora Hallagana IV cave.



Fig. 22. Gaora Hallagana IV cave, western wall. The black arrow point to the left extremity of a canoe depiction with a standing human onboard, only partially preserved. The white cows with forward-pointing horns (upper edge of the image) recall the cattle figures typical of the middle pastoral period.

Zigzag lines, widespread in post-Paleolithic rock art traditions from all continents, likely represent semi-naturalistic symbols standing for water (Anati 2020). Zigzag lines symbolize water in Ancient-Egyptian art (Berger 2012), in the “water animals” depicted in the rock art of the San people (Dowson and Holliday 1989), and in contemporary iconography. Thus, it is very tempting to interpret the wavy lines with spikes, especially the one painted on the “flank” of the large zoomorph (Figs. 3 and 7), as related to water symbolism. Interestingly, the longitudinal band of the zoomorph made of nested curved segments, also incorporating a short zigzag segment, is reminiscent of a flowing water stream (fig. 8).

The aquatic context of some of the most ancient rock art of northern Chad is now well-documented (Gauthier and Gauthier 2015, 2017). The paintings preserved in the Gaora Hallagana IV cave, 3 km to the south of Sivré, include fishes (fig. 21) and even a canoe (fig. 22). This previously unreported depiction of a canoe is not a unique find. The canoe with a man paddling on board discovered in the central Ennedi (Jacquet 2011) proves the importance of lacustrine environments even in the region’s elevated areas.

Thus, the five appendices of the zoomorph, reminiscent of wicker baskets (fig. 23), might also represent fish-traps, widely used in the lakes and rivers of modern Chad (fig. 24). They traditionally come in an impressively large number of construction variants (Blache and Miton 1962). In southern Chad, clusters

of fish traps attached to fishing fences are generally installed in large numbers across rivers and in the surrounding lowlands during floods. The vision of similar fishing gear in the now extinct riverine landscapes of



Fig. 23. A pannier made of reeds and fibers from the Congo Basin (Africa Museum, Tervuren). This kind of container has worldwide diffusion across many traditional cultures.



Fig. 24. A fisherman is deploying fish-traps along Lake Chad's shore (photo courtesy of María Gallar Sánchez). These modern traps incorporate a plastic or metallic mesh fixed on a wooden frame. In the past, traditional African fish-traps were made entirely of wooden material and vegetal fibers. Note the pole with suspended containers present in the background, to the right of the fisherman.

the Ennedi might have inspired the symbolic assemblage in a zoomorphic composite figure.

It is noteworthy that an ambiguous motif resembling a fish is present in Sivr  II (Menardi Noguera 2017b), but the pictorial details favor an anthropomorph identification (fig. 25).

The polydactyl figure hidden in the lowest sector of the shelter ceiling is exceptional but possible since an additional digit affects 1% of Afro-Americans and South Africans (Wikipedia 2020b). Ancient depictions of polydactyl humans are rare. The oldest known depiction of a polydactyl human is from a Neolithic site in Jordan dated 7500 yrs BCE (Lange and M ller 2017). Mesopotamian and Ancient Egyptian art includes some other excellent examples (Lange and M ller 2017). However, inferring a physical condition from a half-preserved, stylized painting is a risky endeavor. The alternative interpretation of this fragmentary painting as the tails of two paired fishes requires consideration, given the inclusion of fish depictions in the rock art inventory of the Ennedi. However, the fin shape of the most common species populating the Chadian lakes and rivers, like the African catfish, the *Lates Niloticus*, or *Hydrocynus vittatus*, do not match

the shape of the painted appendices. The same applies to the tails of the relict population's species surviving since the mid-Holocene in the permanent water bodies of the Ennedi, including the famed Arche  guelta (Trape 2013).

The bizarre motif with a Y-shaped pole is very problematic. The best analogs remain the ancient motif representing poles with bags, up to now documented only in the Sivr  I (fig. 15) and Elikeo sites (Bailloud 1997). The suspension of containers and bags on poles to avoid food contamination and to preserve its freshness is still customary in Chad (fig. 24).

The large pole with suspended bags on the shelter ceiling of Sivr  I is isolated from any other painting (fig. 15). However, it looms directly over the sector of the back-wall of the shelter, which received the most protracted attention from artists (fig. 26). This panel includes a couple of humans drawn in outline in the Sivr  style. As noted at the time of the first survey (Bailloud 1997), the figure central to the panel, characterized by a round head devoid of facial detail, is undoubtedly a woman because of the breast depicted under the left armpit. Interestingly, this woman was remodeled and repainted during the middle pastoral period, neglecting the breasts to resemble the portly men painted in the Hohou style, forming a dense group scene on the left part of the panel.

The large pole with bags painted on the ceiling is thus associated by proximity with a woman's depiction, possibly a person of high status considering how she holds her cane and her central position in the panel. This association indicates that the pole with bags is readable as a feminine object, much like bows and arrows are strictly men's items, as shown in the very masculine depictions of Arche  II (Menardi Noguera 2014). In the paintings attributed to the Sivr  style, a more direct hint of large bags as feminine belongings also comes from a scene showing three women carrying large bags, discovered in Ouadi Eli (Menardi Noguera 2017a).

Conclusions

The semi-nomadic pastoralists living in the Ennedi, the Bideyat as known to the Arabs or the Beri as they call themselves, are a blend of clans having mainly migrated in historical times from the Darfur, the Tibesti, and the region of the Ounianga lakes, plus a few clans

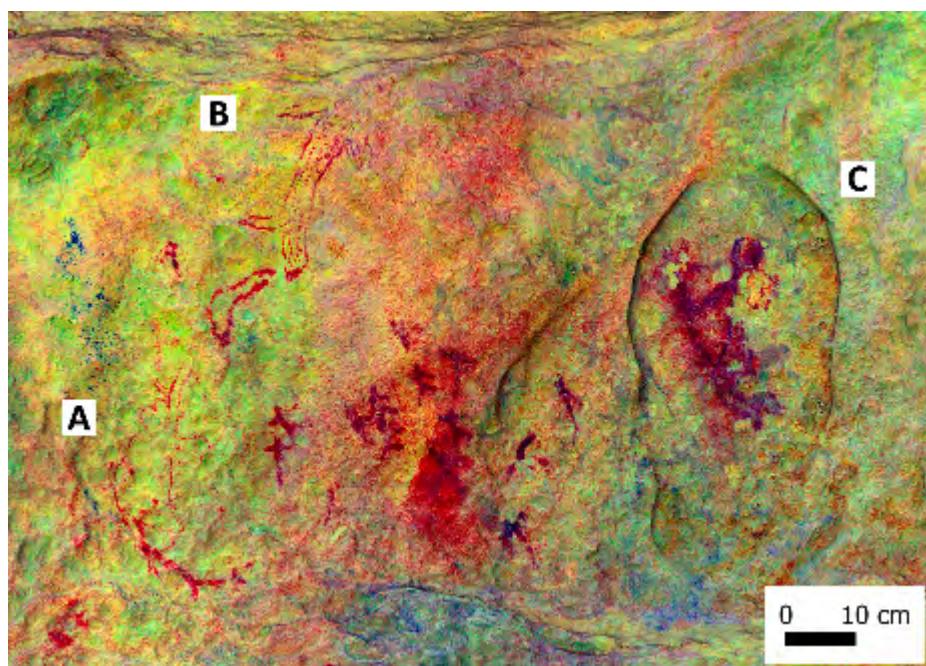


Fig. 25. An elephant (A), an elongated biomorphic figure vaguely resembling a fish (B), and a crouching human (C) decorate the eastern ceiling of Sivré II. The short traits on the lower right appendix of the biomorphic figure favor an anthropomorph identification since this is the usual way to represent toes in the Sivré style. These paintings are superimposed upon small anthropomorphs in solid colors attributable to the Mayguili style (ortho-image, processed by *DStretch_LDS*).

claiming to be autochthonous (Le Rouvreur 1962; Bailloud 1997). The migrated clans consider the land where they settled as their forefathers' land. This belief is nothing strange as transhumance routes of the Sahel pastoral peoples cover long distances, and the principal centers of settlement may shift from one place to another over time.

It is not possible to project without some caution the worldview of the present-day inhabitants of the region too far back in time. However, some traits of the pre-Islamic beliefs recorded by ethnographers (Fuchs 1961; Tubiana 1964) correspond to the traits shaping the religious background of the modern hunter-gatherers across the continents, considered of deep ancestral origin (Anati 2015; Herve et al. 2016). These common traits, including animism, belief in a personal soul and the afterlife, and worship of ancestors active in human affairs might have been inherited from the hunter-gatherers roaming northern Chad during the mid-Holocene when the climate was much more humid than today (Kröpelin et al. 2008).

Animal migrations and variability of natural resources dictated by seasonal rainfalls brought by the African monsoon easily explain the intuitive symbolic association between a big generic animal representing the fauna as a whole, and water, as proposed for the interpretation of some particular animal depictions

in the Round Head paintings of the Tassili (Soukoupova 2020). It does not seem necessary to postulate direct cultural relationships between distant rock art traditions to observe this water symbolism, but only a common animistic mindset in comparable environmental conditions.

Nevertheless, ethnographic studies attest to pronouncedly similar pre-Islamic beliefs and religious ceremonies related to rain-making in the vast area encompassing northern Chad and Sudan (Tubiana 1964). The recorded correspondences are difficult to explain by cultural affinity only. Thus, direct relationships between prehistoric societies over the distances separating the most significant rock art traditions in the Sahara and Sahel are a possibility.

The large zoomorph from Sivré I is undoubtedly a fantastic beast since it is composed of implicit lines and non-biomorphic shapes, which could equally be abstract or figurative. In this respect, it is different from any other fantastic animal known in the Saharan rock art documented to the north of the Ennedi. The longitudinal wavy line with spikes on the side and the intricate patterns within the body parts of the zoomorph are indications of a pervasive symbolism not limited to water. The pannier-like "head" and "limbs" of the large zoomorph from Sivré I likely symbolize an abundance in gathering food, hunting, or fishing

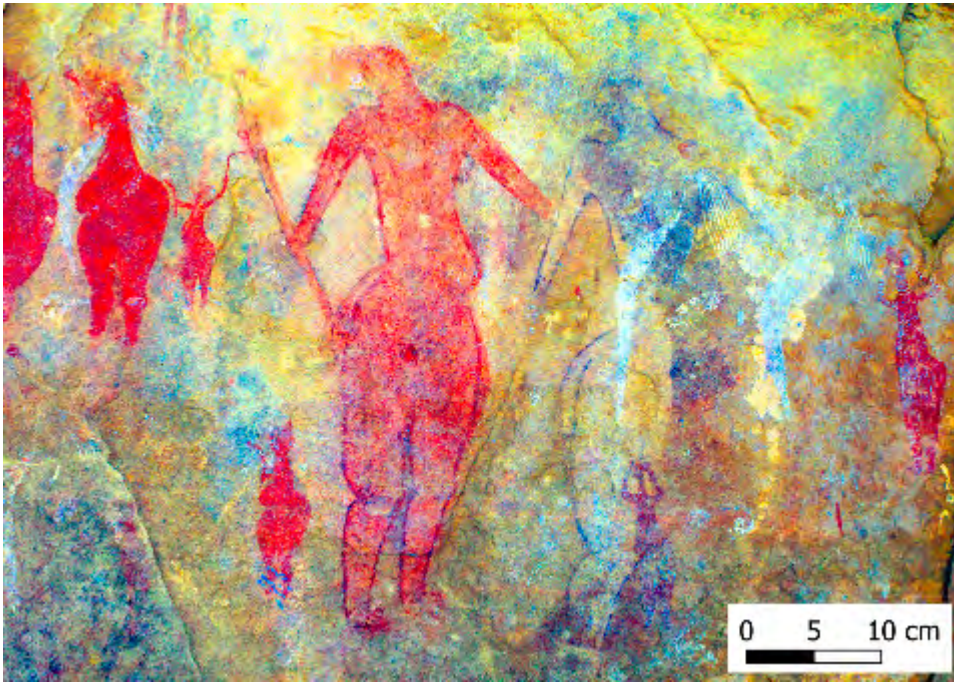


Fig. 26. The main panel of the back-wall of Sivré I showing two large figures (image center) in the Sivré style, typically drawn in contour. The one to the left has been repainted to look similar to the overlaid Hohou-style figures, dating to the middle pastoral period, leaving the breasts under the left armpit identifying a woman unfilled. The gender of the figure to the right is undeterminable due to the poor preservation conditions (processed by *DStretch_LDS*).

after a bountiful rainy season. As if experiencing a hierophany, the hidden meanings are revealed when the symbolic components of this painting are in the foreground and the perception of the zoomorphic envelope vanishes. Thus, the Sivré zoomorph might be just an amazingly elaborate example of an animal depiction propitiating abundant resources which may suddenly appear or disappear due to the vagaries of the summer monsoon.

Collecting plant food is a gender role for women among the hunter-gatherers of the ethnographic present, and they sometimes provide more than half of the total food supply (Testart 1982).

In much of the Sahel, including the southern Ennedi, the gathering of wild seeds is fundamental for the survival strategy of the natives and is the exclusive task of women, who use big leather bags for harvesting (Tubiana and Tubiana 1977).

In the light of the ethnographic data, the pole with bags decorating the Sivré I ceiling and its complicated small-sized variant found in the back-wall might stand for the blessing represented by the food gathered and stored thanks to female industriousness. Thus, it is not strange to recognize a woman performing a ceremonial libation with some granular foodstuff and possibly a beverage in the “two Martians” scene from Sivré III.

Propitiatory libations and offerings of food to the deified ancestors, or the local spirit in the form of an animal, a tree, or even a rock were commonly practiced up to very recent times in the collective or private ceremonies held by the inhabitants of the Ennedi and Darfur (Tubiana 1964).

Long-distance correlations between different, undated rock art traditions are not permitted by formal analysis alone since stylistic similarities may arise from perceptive phenomena common to humankind (Deregowski 1984). However, the early noted similarity (Bailloud 1960) in gesture and posture between the “two Martians” from Sivré III and the couple documented in the Round Head paintings decorating the Techakelaouen site (fig. 14 in Soukopova 2019) is hard to explain by a mere coincidence.

The polydactyl figure, the latest in time of idiosyncratic motifs added to the Sivré inventory, is perplexing due to its fragmentary state and the lack of possible interpretative clues in the legends collected by ethnographers. However, we can imagine that a person with an obvious malformation could be looked upon by his community as a person with magical powers or the bearer of a curse like the people with albinism discriminated against and persecuted in most East Africa (Wikipedia, 2020c). Therefore, by its mere existence,

this painting confirms the importance of Sivr  as a space destined for the memory of beings or entities that manifest the intervention of the mysterious powers of nature in human destiny.

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NOTES AND NEWS

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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. In the CISENP session, 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 three months before the opening of the Congress (1 June 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 articles. 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 in 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.

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 of human society.

It is a meeting place for the humanist sciences, where artists, philosophers, anthropologists, semioticians, psychologists, and students of other disciplines find a common language. Atelier organizes meetings, seminars, and exhibitions, and has a publishing department, a space for exhibitions, 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 robots, 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 broadminded 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 innovative, 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. In seven years, the output consisted in some 60 books, printed in Italian and English, and the first 30 issues of the e-quarterly journal **EXPRESSION**, in English, which reaches researchers, institutions, and other motivated readers in 80 countries. The over 200 authors are located in 44 countries of five continents.

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

For further information, ask for the updated catalogue: atelier.etno@gmail.com.

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>](mailto: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>](mailto:atelier.etno@gmail.com) to be registered in the list of members. Members receive the **EXPRESSION** quarterly journal for free. Membership ceases if inactive for two years. Membership is free: no formal charges of fees are imposed. Donations are gladly accepted.

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.

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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 academic institutions, libraries and individual readers in over 80 countries on five continents. Both, your text and your illustration should appeal to a variety of readers, 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 one to enjoy what you are writing. Be simple and express clear ideas. Be stimulating and awaken curiosity and 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 to 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. Both text and illustration 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.

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COUNTRY	NUMBER OF AUTHORS	COUNTRY	NUMBER OF AUTHORS
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Armenia	3	Malta	1
Australia	9	Mexico	4
Austria	3	Morocco	1
Belgium	6	Namibia	1
Botswana	1	Netherlands	1
Brazil	17	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

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N°31 March 2021



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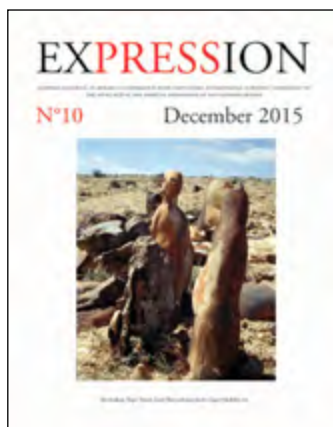
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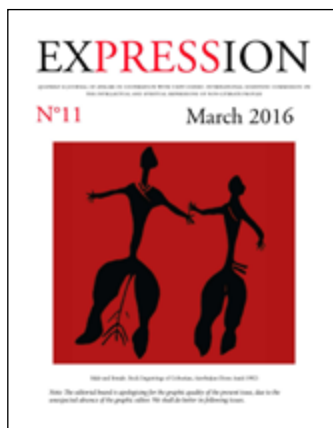


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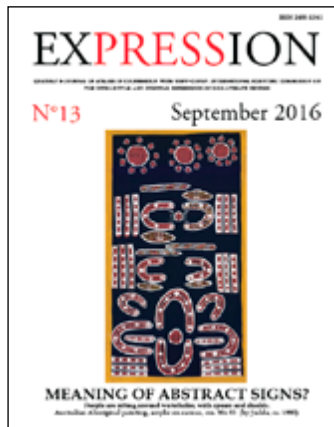


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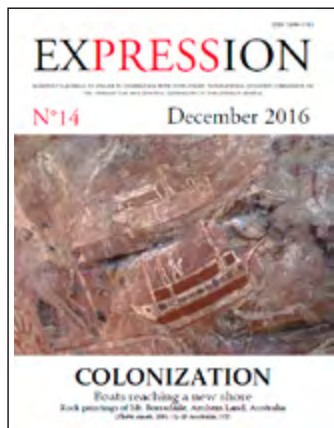


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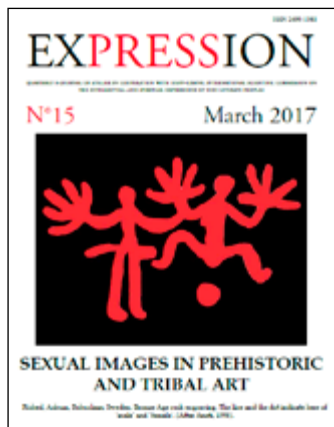


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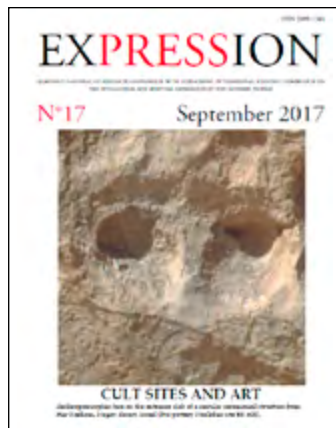


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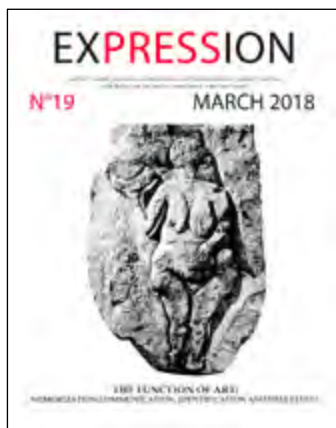


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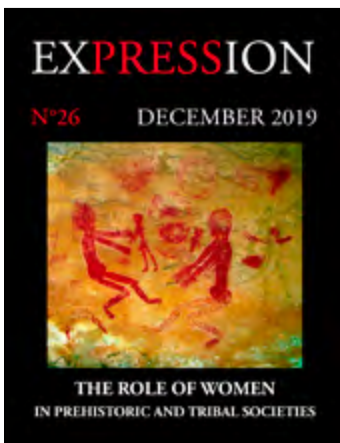


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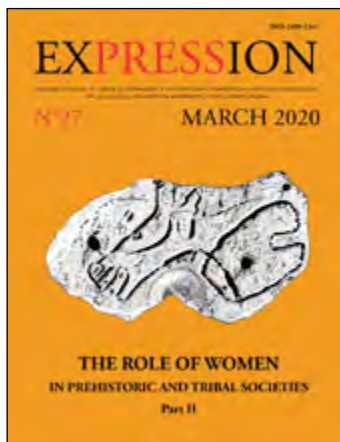


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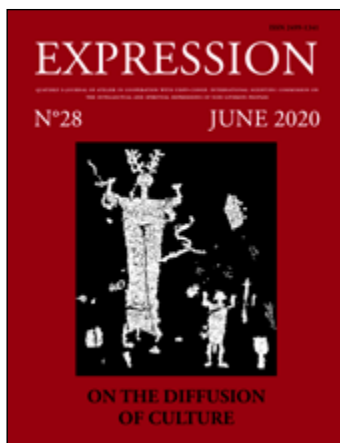


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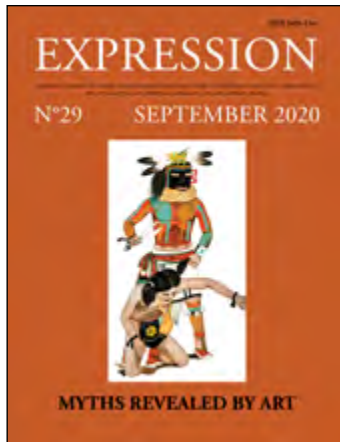


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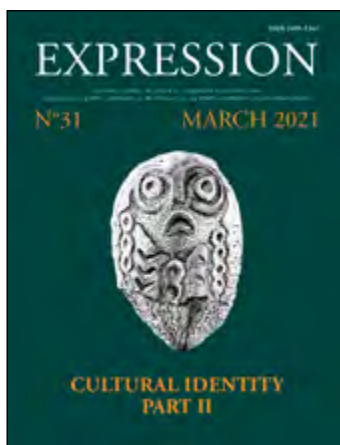


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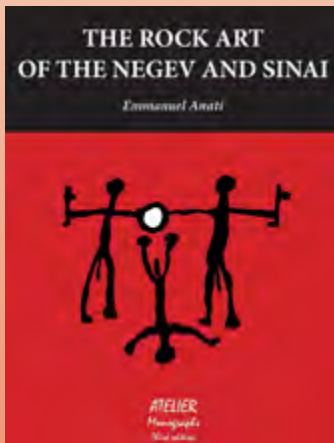
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Anati, E., 2015, *The Rock Art of the Negev and Sinai*, Third English edition
Capo di Ponte (Atelier), 248 pp.248; 196 ill., €20,00

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

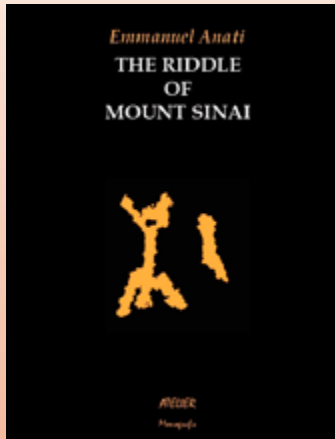
Capo di Ponte (Atelier), pp 220; 138 ill., €30,00

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.

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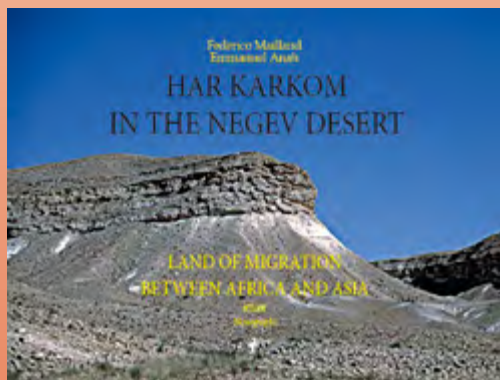
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Anati, E. 2017, *The Riddle of Mount Sinai*, Second English Edition

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

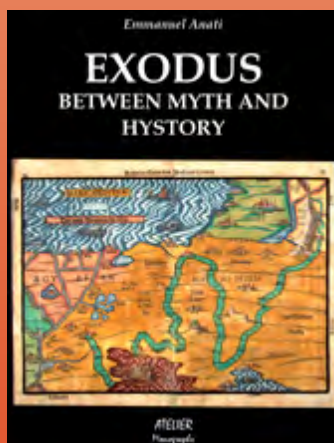
What is the true story behind the biblical narration of Exodus? The discoveries of the Italian archaeological expedition at Har Karkom, in the Negev Desert, tell the hitherto unknown story of the sacred mountain in the heart of the desert of Exodus, reflecting surprising similarities to the events and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

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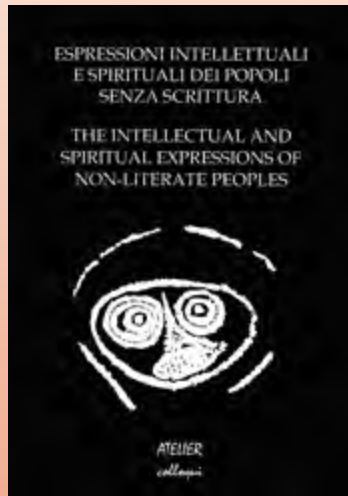
ATELIER' PUBLICATIONS

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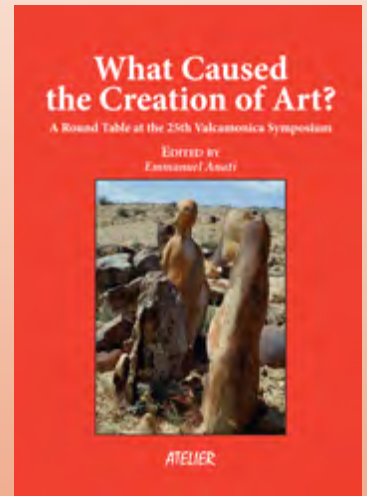
Il segni originari dell'arte (In Italian)

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.



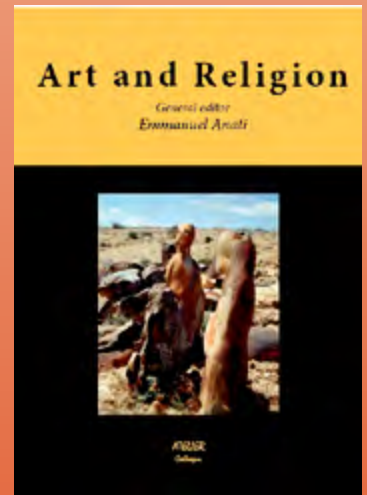
Sogno e memoria: Per una psicoanalisi della Preistoria (In Italian)

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.



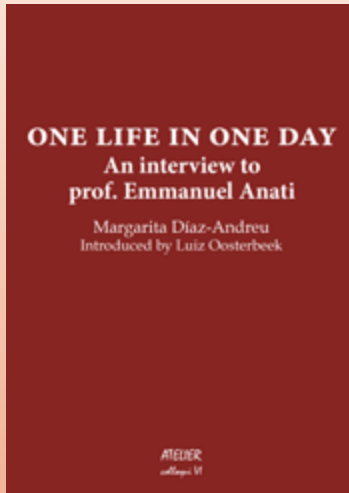
Art and Religion

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.

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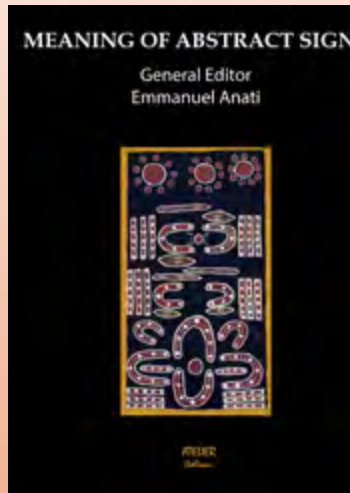
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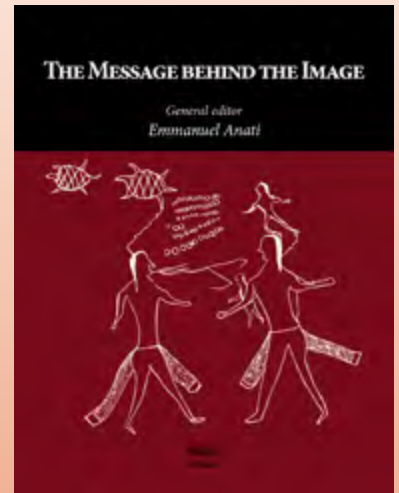
One Life in One Day. An interview to prof. Emmanuel Anati

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

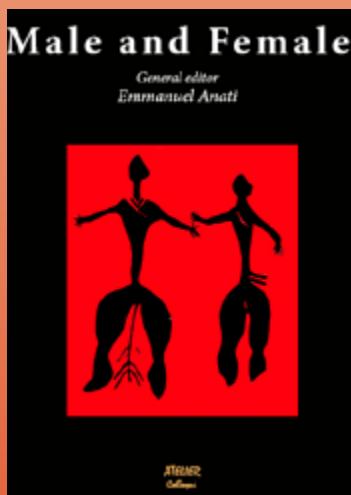
The clan was planning a fight against another clan that had abused hospitality hunting kangaroos in a reserved ground. The painter recorded the gathering of the elders to decide the expelling of the guest clan. He represented the elders and the warriors by standard signs. The art-dealer sold the painting 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.



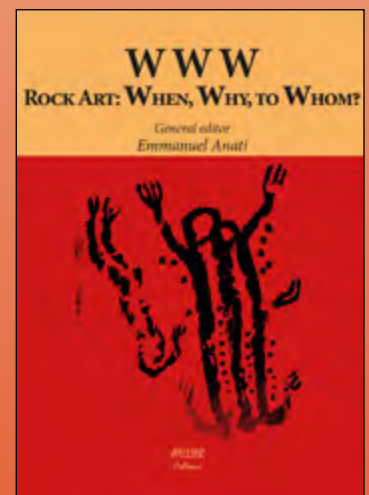
Male and Female

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?

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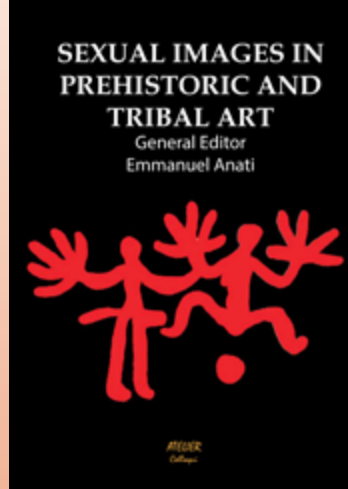
ATELIER' PUBLICATIONS

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.



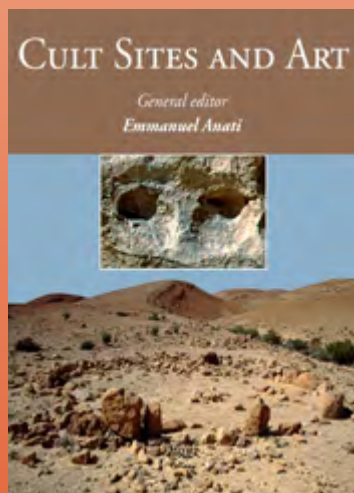
Sexual Images in Prehistoric and Tribal Art

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.



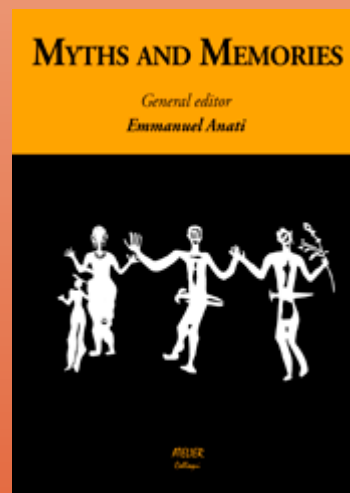
Etnogastronomia La cucina dei popoli (In Italian)

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.



Cult Sites and Art

The volume is the printed version of number 17 (2017) of *EXPRESSION*, the quarterly online journal on conceptual anthropology. Sites of worship have had religious images and symbols since prehistoric times. The relationship between religion and art emerges in its variants and in its purposes. Significant examples are presented by the authors, in Israel and the Middle East, in Armenia, Tunisia, Europe, Central Asia, Kazakhstan and Kyrgyzstan, showing a conceptual archetype that has persisted since distant prehistoric times.



Myths and Memories

Was the mind of early man much different from ours? Decorated caves, megalithic monuments, early shrines, sites of rock art, are the containers of myths and memories, the testimony of the immense variety of beliefs and habits, the source for an as yet unwritten history of mankind: the existential expressions of people's real and imaginary, myths and memories. Different facets of the theme are considered by nine authors of nine different countries of three continents.

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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.



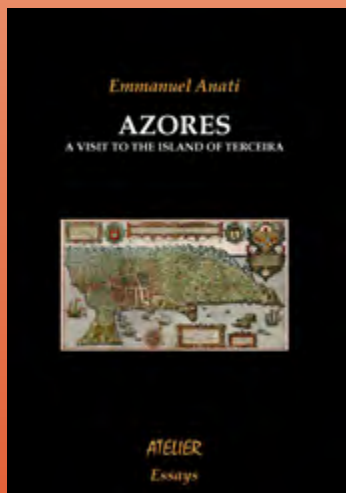
Chi sei? Chi sono? Alla ricerca dell'identità (in Italian)

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?



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.



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.

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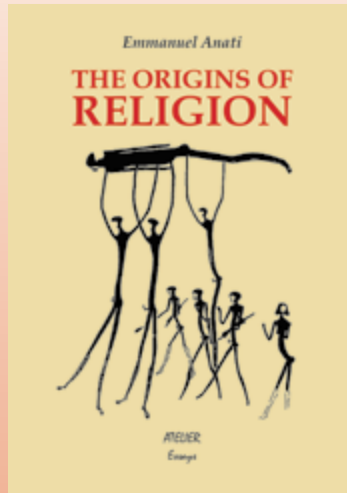
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Essays



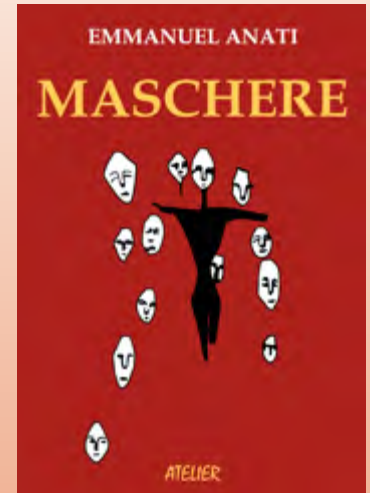
Mito tra utopia e verità (in Italian)

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.

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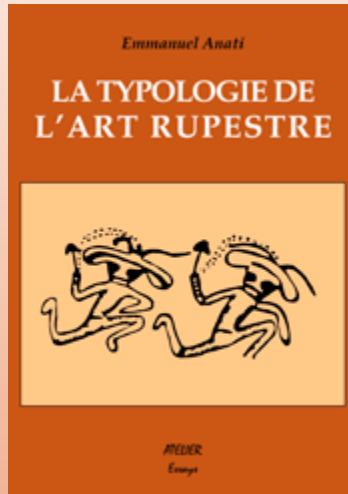
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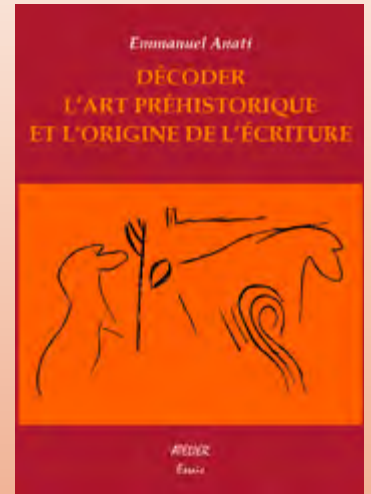
Ordine e Caos nelle società primarie. Uno studio sugli aborigeni australiani. (in Italian)

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?



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.

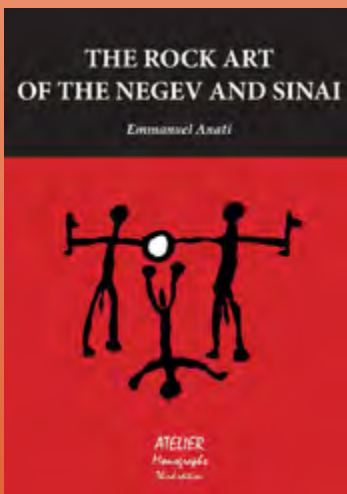


Décoder l'art préhistorique et l'origine de l'écriture (In French)

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.

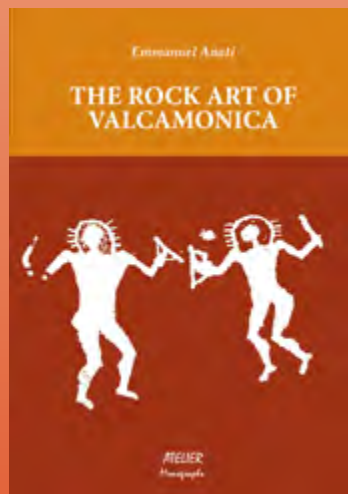
ATELIER' PUBLICATIONS

Monographs



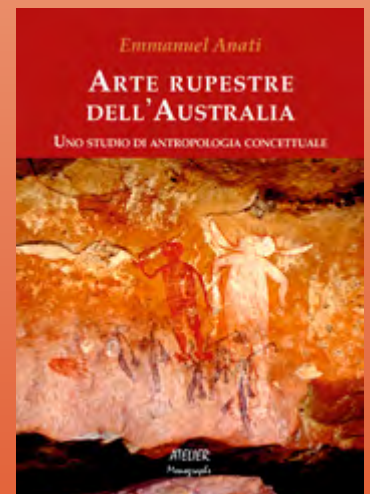
The Rock Art of the Negev and Sinai

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.



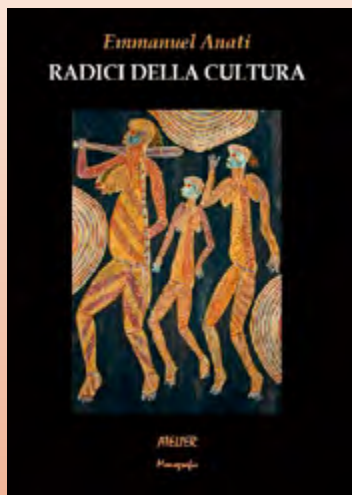
Arte rupestre dell'Australia (in Italian)

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.

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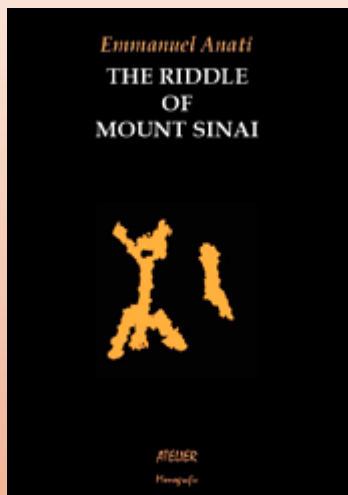
Monographs



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.



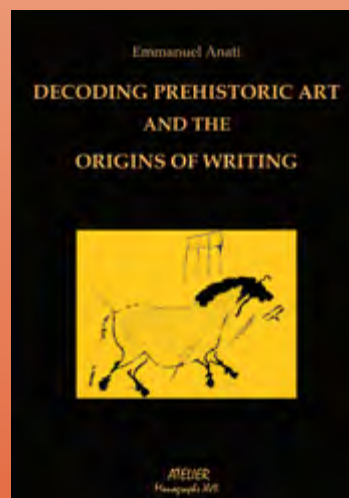
Har Karkom e la questione del Monte Sinai (in Italian)

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

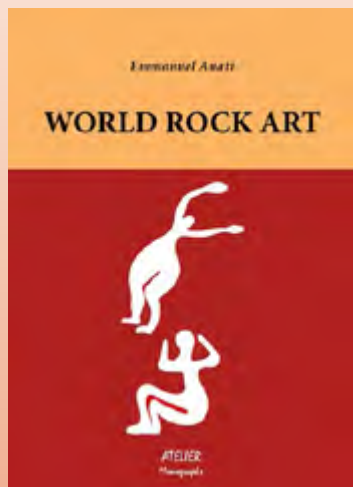
This text examines the cognitive process that led to the invention of writing and highlights constants of memorization and associative synthesis held in the mind of *Homo sapiens* for thousands of years.

Some examples of decoding prehistoric art give a new vision for the beginning of writing.

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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.



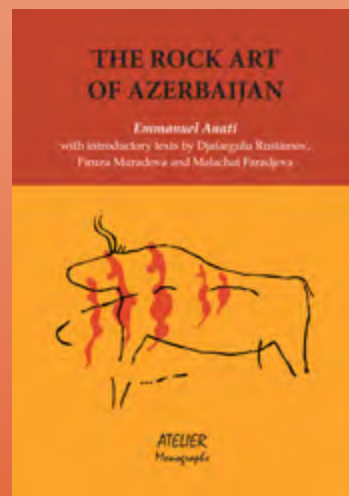
The rock art of Spain and Portugal

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.



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.



The Rock art of Azerbaijan

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

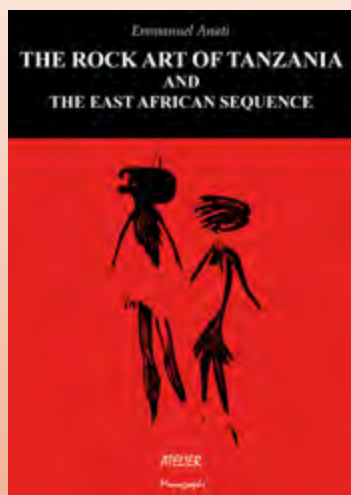
This gateway of Europe, between the Caucasus Mountains and the Caspian Sea, was a major way of migrations from Asia to Europe.

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*.

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ATELIER's PUBLICATIONS

Monographs



The Rock Art of Tanzania and the East African Sequence

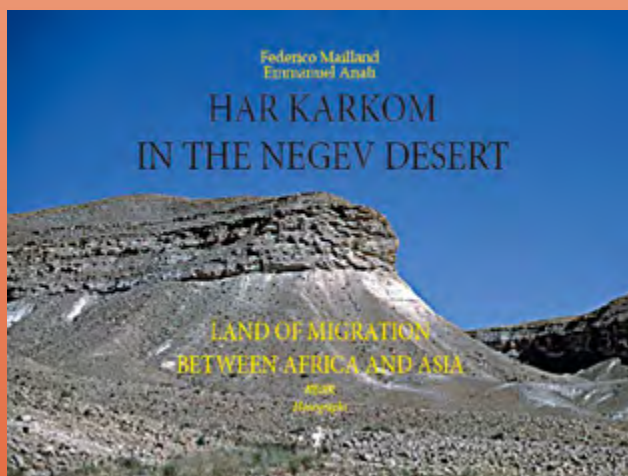
The rock art of Tanzania, in over 200 caves and rock shelters, is presented in this book using the analytical method of Conceptual Anthropology. Stylistic phases and periods are covering millennia.



Exodus

Between Myth and History

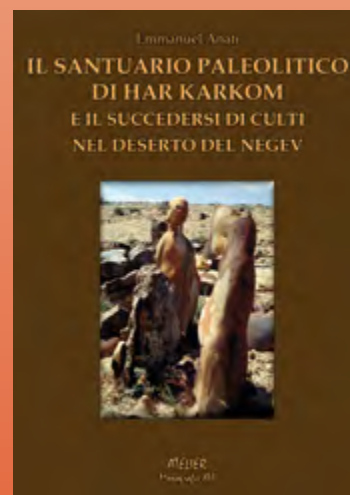
The epic of Moses: is it myth or history? The Biblical narrative of the exodus and the revelation of Mount Sinai are a monumental literary work that has been passed down for well over two millennia, after being transmitted orally for centuries. What would have really happened during the Exodus? How did 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.

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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.

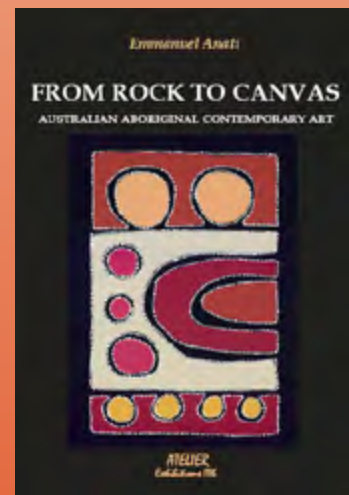


Exhibitions



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.

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