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THE HUNTER´S TIME

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Abstract

This paper emphasizes time-awareness as a part of the Upper Paleolithic adaptation system. Focusing on the cases of the Middle-to-Upper Paleolithic transition and the fully Upper Paleolithic Gravettian in Moravia (Czech Republic), it investigates causal relationships between the defined temporal framework and symbolism. Standardization of items of body decoration, images and symbols, and evidence of rituals in the archaeological record of a single site (or group of related sites) is explained as the effect of time-awareness, self-identity, epic constructs, and life and death concepts.

The approaches

The origin of the human mind and the formation of its structure evoke broader questions than archaeology, given its biased record, may answer. Rather, these questions fall into the field of psychological anthropology. Nevertheless, various efforts to use archaeological data to enlighter this provocative problem continue to appear since the beginning of Paleolithic research (Mellars & Gibson 1996; Mithen 1996; Noble & Davidson 1996; Corbey & Roebroeks 1997).

From the methodological viewpoint, three approaches are usually implied: analogies, evolutionary interpolations, and deductions from the anthropological and archaeological record. Analogies were predominantly barrowed from ethnology (Lévi-Straus 1962) rather than ethnoarchaeology (given its orientation on settlement, subsistence and technology, *cf.* Lee & De Vore 1976; Yellen 1977; Binford 1978; Gould 1980), from actual experiments (demonstrating the operational sequences in technology), and even from the behavior of actual children (which, of course, is a more than simplistic type of a parallel), or primates. Evolutionary interpolations are, in fact, combined analogies based on a presumption of linear evolution which tend to place Palaeolithic humans somewhere mid-way between primates and recent hunters-gatherers (fig. 1, Svoboda 2000). Evolutionary determinism contributes to these schemes by underlining the tendency of any organism not to act against its genetic interests (Alexander 1989), but human adaptation, since the very beginning, differs by its intentionality (Gowlett 1995).

Anthropologically focused deductions from morphology may or may not support the idea that language was physically possible (Lieberman & Crelin 1971; Lieberman 1984; Tobias 1991; Wind 1991), a view further completed by the viewpoints of archaeology, psychology, and linguistics (Isaac 1972; Gibson & Ingold 1993; Otte 1995; Wynn 1995; Davidson & Noble 1989; Noble & Davidson 1996; Mellars & Gibson 1996). Of course, symbols such as words and action are time-limited and remain invisible archaeologically. Thus deductions from archaeological record center on longer-term symbols as preserved in durable materials – the "art". These aim to explain ("read") archaeologically visible features, and to look for the presumed underlying systems and structures.

Our actual view of the modern hunter as a highly developed being, and the lack of understanding of the original, archaic hominids, lead us to presume an evolutionary break within the Paleolithic. First, about 200 ky ago, in human physical habitus, and later, between 40 ky to 30 ky, in behavior and thinking. Given the large spatio-temporal dimension of the Pleistocene, however, the variability of past behaviors and minds is so broad that it is difficult to create a unique model of the Paleolithic mind.

As an example, the large hunter´s settlements of the Moravian Gravettian (Předmostí, Dolní Věstonice, Pavlov), with the complexity of the archaeological record (settlement and workshop structures, mammoth-bone deposits, ritual

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Figure 1. Reconstructing the prehistoric mind is - to a large extent - based on linear evolutionary interpolation between simple analogies from recent primates and recent hunters-gathereres. Combining animal and human patterns in reconstructing "strange" beings has a longer tradition in Western thinking.

burials, areas of symbolic meaning…), offer a contextually inter-related and systemic network for analysis, interpretation and deduction, at least within one episode of the Upper Palaeolithic. In this context, we observe symbolic behavior tied to time and memory, such as aspects of communal identity, self-awareness and self-vision, complex ordering and reading of individual symbols, symbolic actions, stories and rituals, and life-and-death concepts.

Creating temporal frameworks: The dispersal of Modern Humans

Between 40 – 30 ky, the already completed formation of modern human anatomy was succeeded by the formation of modern behavior (Mellars & Stringer 1989). Patterns of this change are visible in the archaeological record, but a debate is being raised about what lies behind them (e.g., d´Errico *et al*. 1998, with discussion). Some of the authors seek for rather materialist explanations of this change that would lie in diet, storage and sedentism, hunting strategies, lithic raw materials and technologies, while others center on cognition and the human mind: the emergence of self-awareness, language and symbolism, as reflected in images, body decoration and use of ochre. This paper argues that defining time and temporal sequences may be one of the important Upper Paleolithic innovations which, in consequence, provided the dimension in which symbols gain meanings and symbolic behavior is realised.

Part of the theoretical literature rightfully emphasizes the social effects of different constructions of time (Leone 1978; Shanks & Tilley 1987; Adam 1990; Gell 1992). Ingold (1993), based on Sorokin and Merton, mentions the distinction between astronomical and social time, while others distinguish cyclical and linear time. In agricultural societies, cause-and-effect relationships are understood in a longer, at least several-years, scale of cyclical time, while our own modern perspectives are typical for further, linear expansion of the mind between past and future. Generally, all these distinctions lead to question about where does time-awareness begin, what consequences the once established temporal contexts had on the mind, the activities and the technologies of archaic and modern populations, and how would these be reflected in the archaeological record.

Due to the nature of the archaeological record, recent archaeology (settlement archaeology in particular) investigates rather past approaches to space than to time. It focuses on changes in spatial patterning of landscapes, clearly visible from the archaeological record, rather than on underlying temporally structured frameworks which are readable only from random results of past actions. These sequences and processes are natural, but the concept of time is a construct of social convention.

After Binford (1989), many of the differences observed across the Middle-to-Upper Paleolithic transition may be understood from the point of view of different planning depth. However, the structure of planning lies not only in the mind of the producer, but in mutuality between the actor, his materials and landscapes. A number of analyses investigate Lower and Middle Paleolithic evidence in terms of plans, intentions, and knowledge of the cause-and-effect relationship (Leroi-Gourhan 1964-65; Binford 1989), but the archaeological record does not give us these plans, only the results of past actions: site-location patterns, hunting and flint-knapping technologies ("chaînes opératoires", fig. 2a). In addition, the Lower and Middle Paleolithic record should be evaluated together with the rather negative evidence concerning symbolism. The human brain certainly developed towards a time-determined and time-determining organ, but the biased Middle Paleolithic record on the one side (Chase & Dibble 1992) and the sudden appearence of fully developed Upper Paleolithic art on the other (Clottes *et al*., 1995) suggest that this process was punctuated.

Another group of studies addresses the problem of time during the Upper Paleolithic from various other viewpoints. Torrence (1983) showed how tool curation is associated with overcoming problems to do with time, Marshack (1991) accentuated the place of images and symbols within seasonal and other temporal cycles, Svoboda (1976) differentiated the "long-term art" and "short-term-art", and Ingold (1993) correlated time and landscapes, or, rather, "taskscapes". In all these cases, placing an object into a process or action and ascribing it a meaning in such a process, presupposes that a temporal framework existed in the society under study.

There is even "hard" archaeological evidence for awareness of rhythmical sequences, supplied by regularly ordered symbols or notations in bone and stone (fig. 2b, Absolon 1957; Chollot-Varagnac 1980), but the interpretation as lunar

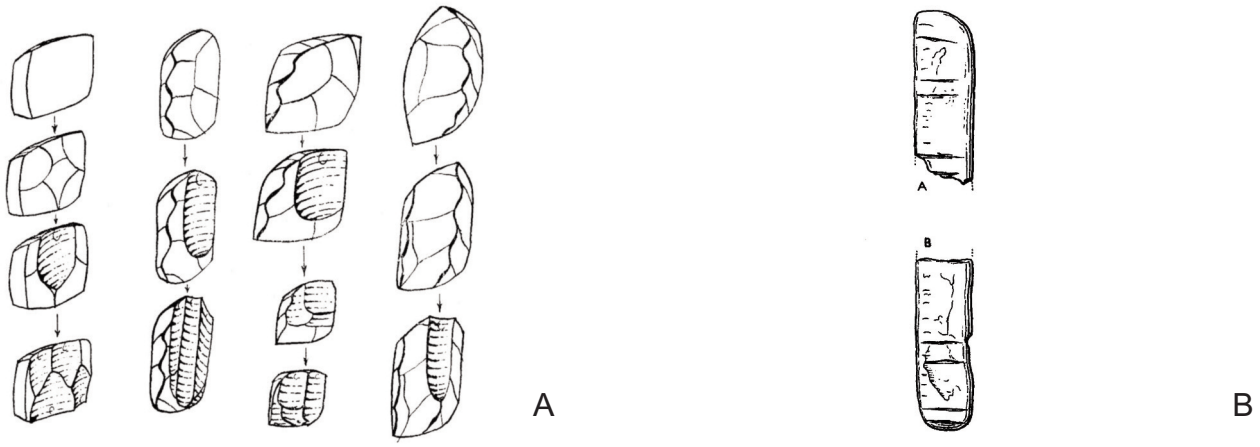

Figure 2 (a et b). Time? The pattern of sequences and planning is visible in many aspects of archaeological record, most clearly as the "chaînes operatoires" (Ondratice I). More problematic is interpreting regular (rhythmical) patterns engraved in bone or stone as calendars (Dolní Věstonice II).

or other calendars remains rather "soft" (Marshack 1972; Frolov 1974, and, for the Dolní Věstonice case, Emmerling *et al*. 1993). Marshack´s approach was empirically based on microscopic the method, while Frolov´s approach is more influenced by recent Siberian mythologies, but both are united by a common, time-factored perspective. Naturally, formal analyses of engraved sequences alone are insufficient as proof of temporal systems and evoke formal criticism (Elkins 1996).

Thus, we are unable to date the „discovery" and definition of time by archaeological means. However, the existence of a temporal construct behind human planning, behaviour and activities may be visible in the archaeological record.

The Hunter's complexity: The Gravettian of Moravia

This paper argues that establishing the hunter-gatherer temporal framework, structured along seasonal sequences and resource availability in the course of a year, may be considered to be a part of the Upper Paleolithic adaptation system. Time-awareness brings along memory and epics, self-awareness and and life and death concepts. Possible effects of these phenomena are searched for in the case of a fully developed Upper Paleolithic site-complex.

In Moravia, the human revolution was fully realised only with the Gravettian. One to a favourable coincidence of circumstances, a group of Upper Paleolithic sites is concentrated in a relatively small territory. These sites provide several findings of importance to the entire world: the largest representative assemblage of modern human skeletal remains within a complex cultural context (remains of dwellings, hearths, mammoth bone deposits, and a specific hunter´s art); the world´s earliest ceramics and textile imprints were discovered at Dolní Věstonice and Pavlov; the famous Venus of Věstonice, an object of deeper cosmological meaning than we normally expect, became a real symbol of early art (see below); the female head from the same site, finely stylised, probably shows the earliest realistic face, while the slim female torso from Petřkovice demonstrates, for the first time, the beauty of the female body in a sense understandable to us today. However, the new technologies only marginally contributed to the efficiency of this system: clay was used for figurines (- instead of pots), and textiles, most probably, for supplementary products (- rather than for clothing). The effectiveness of this complex system was supported not only by the new technologies, but also psychologically, by rituals, where a certain role was played by ceramics, ochre and dead human bodies.

Since the late 19th and over the 20th century, studies of prehistoric symbolism and art passed a long intellectual history, emphasizing a variety of approaches and methods. At present, the predominant position accentuates the contextual approach to symbols and images. In Eurasia, there are few places where contextual approaches may be addressed in full, and the Dolní Věstonice-Pavlov area represents one of them. Images may be understood better if we are able to locate them in their original setting.

Past publications centered on the introductory presentation of Dolní Věstonice and Pavlov art (Absolon 1945; Klíma 1958, 1978, 1988, 1989), chronology (Svoboda 1995), and placing them in broader cultural context (Absolon, Klíma), rather than interpretation (Absolon 1957; Svoboda 1997, 2000). In this paper, we consider the images as symbols that were materialized, be it in clay, bone, ivory or stone, and thus of shorter or longer-term value.

Spatial context: the Gravettian landscape

We assume that the hunter´s attitude to space is more or less patterned. Thus by identifying pattern in the archaeological record, and by excluding factors of taphonomy and postdepositional change, archaeologists should be able to reconstruct the patterns of decision making and this thinking. Or so it would seem.

Several previous studies stressed the environmental and economic roles that the geographic corridor of Moravia played within the Upper Paleolithic of Central Europe, and its importance for intergroup communication. The bio-cultural system of the Gravettian is characterized by large settlements following the interconnecting rivers, by long-distance transport of lithic raw materials, and by exploitation of the smallest and largest animals (the mammoths), avoiding, surprisingly, the middle-sized herd animals (such as horses). From the viewpoint of interpretation, we observe a certain contradiction: on the one hand, settlement stability within limited areas of the large settlements, and on the other hand a control over a large territory between the Middle Danube and Upper Vistula.

We expect that this complex of lowlands and natural „gates" through the Central European highlands, uniting the Danube valley in the southwest and the East European plains in the northeast, was structured by patterns of cognitive and symbolic meaning. Gravettian site-location strategies within this landscape follow common patterns such as preference for river valleys, location on the slopes, altitudes (200-300 m a.s.l.), and regular distances between the site-clusters (80-120 km), but also patterns of difference. In contrast to the narrow gates controlled by sites like Willendorf and Aggsbach at the Wachau Gate, or Předmostí and Petřkovice at the Moravian Gate, the sites of Dolní Věstonice and Pavlov are located at the foot of an imposing mountain chain, zoomorphic in shape, dominating the South Moravian Plains). We suggest that morphology of the Dolní Věstonice-Pavlov landscape, and, especially, the characteristic zoomorphic outline of the mountain directly above, is the first mega-symbol to be recognized in the Gravettian symbolic system.

What would be the symbolic reflection of this landscape? A highly complex pattern engraved on a mammoth tusk from Pavlov I has been interpreted in a spatial sense by Klíma (1988), implying a sort of „map" with meandering river and the mountain behind. In the sense of this interpretation, the site itself would be represented only by a small double circle (fig. 3, see also the Ukrainian parallel from Kiev – Kirillevskaya street).

Objects interpreted as symbols are concentrated at the largest Gravettian sites of Moravia, in places where we expect population aggregation during longer time-intervals: Dolní Věstonice I, Pavlov I and Předmostí I. After the C 14 chronology, most of these objects date to a relatively well-defined time-span, the Evolved Pavlovian stage (27.000 - 25.000 B.P.) of the Gravettian.

Symbols and memory

Concepts of time are linked to memory (Yates 1966). In addition, memory and prognosis create a basis for self-awareness. Objects having function, status and roles related to events of past and future ("aide-mémoire") help mechanically to expand temporal frameworks in which the mind operates.

Figure 3. Space. Above: a highly complex pattern engraved on a mammoth tusk from Pavlov I, interpreted by Klíma as a space, a sort of „map" with meandering river (center - left), the mountain behind (center - right) and the site represented by a small double circle (center - center). Below a comparable pattern form Kiev-Kirillevskaia street.

Objects may also inform about function, status and role of an individual, and all this in a longer time-span than just the words and actions. In addition, the items of the Upper Paleolithic material culture may be ordered into sequences, a „language of forms" (Leroi-Gourhan 1964-65). This speech of objects has a kind of rhetoric and it is filled with metaphors, even if we are rarely able to read them (Hodder 1993).

Dolní Věstonice - Pavlov provides few readable synecdochs: the zoomorphic one, which replaces (and multiplies) the upper outline of a mammoth body for mammoth (fig. 4, below left), anthropomorphic ones, centering of sexual organs and stylizing the rest of the body (fig. 6), and multiple arches that separate an inner space, and, perhaps, imply shelters or huts (fig. 4, center; *cf*. an Ukrainian parallel from Mezhirich). By multiplication of these patterns, we arrive back to the above-mentioned complex design on the mammoth tusk from Pavlov I (fig. 3).

Communal identity

Repetitive geometric patterns of unknown meaning fill space on objects of various use. Any formal distinction between notation and decoration is impossible in these cases. The Moravian Gravettian, especially the three main sites of Dolní Věstonice, Pavlov, and Předmostí, is typified by geometric parallel and cross-cut patterns, recalling even some textile structures, and covering the surfaces of bones, bone tools and items of decoration (fig. 4). The basic schema seems standardized at the sites, even if their shape is different (the lines are more curved at Pavlov, compared to the other sites). Decoding the meaning requires, first, understanding metaphors of the pattern, second, the function of the decorated objects, and, third, the action in which the object was used and the status of its manipulator. Such a complex of informa-

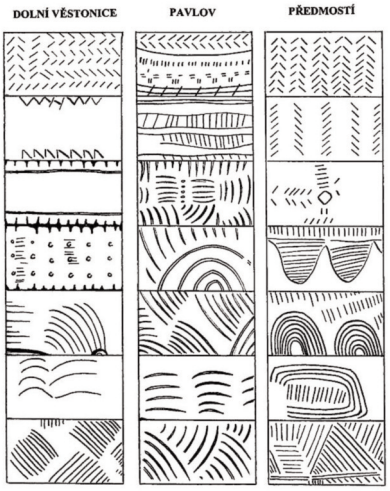

Figure 4. Communal identity. The Moravian Gravettian is typified by complex patterns covering surfaces of bones, bone tools and decorative objects. The basic patterns are identical in all three sites, even if their shape is different (the lines are slightly curved at Pavlov and more rectilinear at Předmostí). At least partly, these patterns are stylisations: some are zoomorphic (the mammoths of Dolní Věstonice) and some, possibly, may represent huts. As a complex, however, the decorative system of the Gravettian represents social unity and awareness of this unity. The table refers to the largest sites, numbered Dolní Věstonice I, Pavlov I and Předmostí I.

tion is hardly available in the archaeological record. For the exterior, however, we may assume that the Gravettian decorative system provides information on a social unity and awareness of this unity and communal identity (in the sense of Wobst 1977).

Self-awareness

The archaeological record suggests certain support to these presuppositions. White (1989, 1993) who collected the earliest sound evidence for body decoration in Europe, recorded the appearence of this activity together with the Chatelperronian and Aurignacian and related it to the awareness of „self“, of individual status and one´s role in a complex society. The Gravettian of Dolní Věstonice and Pavlov already brings a relatively large variability of shapes, but also standardization of some of them, starting with the ivory rings with carved symbols (“owls” in the view of Klíma), simple animal stylisations, geometric forms, and ending with pierced natural objects such as carnivore teeth and mollusc shells. Naturally, there are a number of artifacts where standard shape may lead to confusion of symbolic meaning with an unknown practical function. This is the case for the large, perforated discs of Předmostí I, Pavlov I, Brno II, cut and ground of Tertiary siltstone, reaching 14-19 cm in diameter, and interpreted as a shamanic sign (Oliva 2000). Another example are the numerous objects with carved head ready for fixation as weights, some of them being weights and some pendants, but also interpreted as “anthropomorphs” in the earlier literature (Svoboda 2001).

Hence, we expect that both items of body decoration

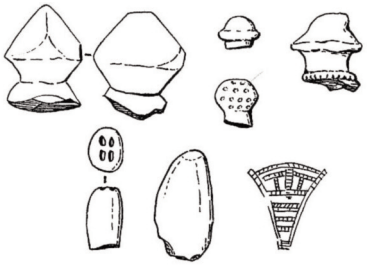

Figure 5. Self-vision. Stylisations of the human head: biconical, or “mushroom” shaped (typical at Pavlov I); globular head covered by a network af small points (also from Pavlov I, but recalling the pattern of the slightly later Willendorf venus); simple protraction, in one case with eyes, and in two cases with four holes on the top (Dolní Věstonice I); and triangle (the engraved female from Předmostí I).

and patterns “decorating” objects and tools document the way a group and an individual presented himself in a social contact. Some of the carvings show a pattern of wear, and thus, a long-term function.

Anthropomorphs: the self-vision

There is a paradox, however. The definition of self through items of body decoration is contradicted by the anonymity of most of the anthropomorphs, as recorded in Upper Paleolithic art. An explanation offered by McDermott (1996), suggesting that this art reflects the perspective of a self-viewing women, is an elegant one but is generally not accepted because it does not reflect the complexity of Upper Paleolithic anthropomorphs, females, males, and intermediates. Nevertheless, head and face as an expression of individuality is usually reduced in the Gravettian of Moravia (fig. 5), following several rules: a biconical or “mushroom” shape (typical at Pavlov), a globular head covered by network of small points (also from Pavlov, but recalling the pattern of the slightly later Willendorf venus), simple protraction, in one case with eyes and, in two cases with four holes on the top (the Black Venus of Věstonice), and, finally, a triangle (the engraved female from Předmostí). Thus we may conclude that these reductions have a stereotypic range of shapes derived from geometry (similar to the geometric masks documented by ethnology). The only more important detail, visible in the Pavlov ceramic collection, are belts or cords depictded in various places on human bodies, and these may add a meaning to the images (as an “adjective”), but hardly refer to an individuality. Similarly, as the zoomorphs of Dolní Věstonice and Pavlov are not expected to represent a particular animal, the anthropomorphs are understood as symbols tied to their contexts.

Apart from stylizations, however, the relatively realistic female head of ivory from Dolní Věstonice (and a rough mask with similar pattern of facial asymmetry) suggests that in this particular case we meet a concrete individual. Absolon (1945) mentioned „breaking tribal rules“ in this context. After Klíma, this feeling is supported by analogy between the facial asymmetry of two carvings, and also by the pathology of the female skull found by him in 1949 and numbered DV 3.

Nevertheless, the identification and presentation of an individual, even if unusual as a practice, fits into the temporal framework and the ego concept we propose to have already existed on the basis of the body decoration.

Figurines

The most frequent anthropomorphic representations are the Gravettian female figurines, interpreted in the rich literature either as depictions of living females, long-dead ancestors, mythological goddesses, or as symbols of fertility, life, home and beauty. Cross-European comparisons (Abramova 1963; Leroi-Gourhan 1965; Delporte 1993) usually led to statements about similarity of the design, which, after Gamble (1982), may reflect long-distance interaction and alliance networks. Between Central and Eastern Europe, for example, surprising morphological analogies are attested by cases such as Willendorf - Gagarino or Moravany - Kostenki (all from the Upper Gravettian; Svoboda 1995: figs. 22-23). On the other hand, one-site focus on sites where female figurines are found in groups and in a context of other anthropomorphic symbols (Brassempouy, Grimaldi, Dolní Věstonice - Pavlov and some East European sites) reveals more closely patterns of local variability. Therefore, suggestions based on the Dolní Věstonice and Pavlov assemblages are not to be generalised at an European level.

Double readings

Reading the simplified anthropomorphs and derived synecdochs, in the lack of parallels and keys, was equally based on continental comparisons, and influenced by different intellectual traditions of the west and east. The bipolar division of symbols into male and female groups on the basis of their morphology is rooted in the western structuralist approach (Leroi-Gourhan 1965), while the eastern, Russian view, traditionally more closely related to the Eurasian ethnographic record, is ready to accept a dual meaning of certain symbolic objects, such as the „transitional“ bird-female or phallic-female carvings from Mezin (Shovkoplyas 1965).

The anthropomorph symbolism of Dolní Věstonice and Pavlov has traditionally been explained as predominantly female, centered on stylizations of breasts and vulvas (Klíma 1989). The fact that both symbols may be combined - i.e., a vulvar symbol may placed between the breasts (fig. 6, above), led researchers to conflicting determinations rather than to a more synthetising, or metaphoric, view of their meaning. However Kehoe (1991) suggested the possibility of double reading of certain objects, where the breasts may change to testicles and the stylised body to penis.

Figure 6 orders the symbols of Dolní Věstonice along the bipolar reading: above, the breast-or-penis symbols, and below the typical triangular symbols of the vulva. In the light of this reading, image of the famous Black Venus of Věstonice becomes, in fact, a sophisticated cryptogram, a synthesis of the female organ below with a male organ above, in the shape of a female figure. This way of double reading a female figurine is related to symbolic context of this particular site, and should not be applied to figurines of Eurasia in general. It may symbolize cosmic unity of the opposed symbols, as well as be a joke.

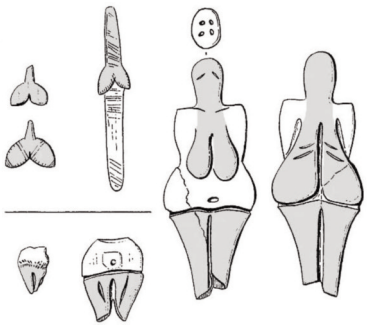

Figure 6. Double readings. Above, the breast-or-penis symbols; below, the triangular vulva symbols. In the light of this reading, image of the famous Black Venus of Věstonice becomes a cryptogram combining the female organ below with a male organ above into the shape of a female figure (all objects are from Dolní Věstonice I).

Symbols in action: Stories and rituals

Time-awareness not only creates individual symbols, but also orders them in epic sequences. Contrary to certain deep-cave sites of western Europe, the Pavlovian settlements do not provide evidence for the separation of “sacred” and “profane” lives. The occurence of ceramic figurines and fragments, as the most typical example, correlates with the central settled areas, around hearths, and, presumably, inside the hypothetical dwellings (fig. 7). There are either fragmented heads, extremities, or bodies of mammoths, of other larger herbivores, carnivores (mainly felines), and humans (mainly females). Some of them display intentional incisions, done while wet, or deformations caused by thermal shock during and after heating (Absolon 1945; Soffer *et al*. 1993). What does all this damage mean ?

There is a sort of story in this action, and earlier Central European literature supposed a simple hunting magic scenario. However, similar to other areas of European hunters’ art, the subjects depict important and imposing animals (mammoths, carnivores, Klíma 1978) and humans (Klíma 1989), rather than the smaller animals that formed the real subsistence base. Therefore, we agree that these symbols entered in ritual actions, but the story behind these rituals was probably more complex and more „mythological“ than we expected. One of the interpretations is a deliberate process of formation and destruction, a process which evidently had a ritual character and a symbolic meaning.

In relation to time, it is important that the objects were left in place. It appears that meaning of the story (and the value of the objects) was directly connected to the act of their

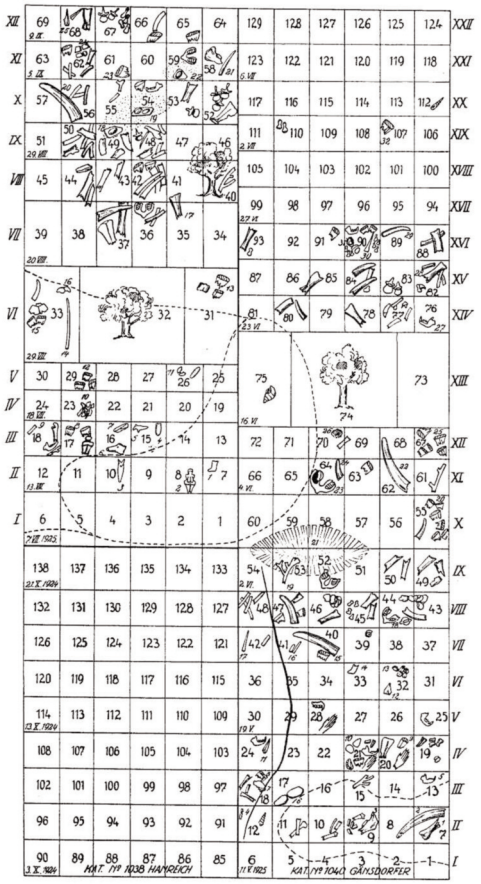

Figure 7. Symbols in action. Accumulation of ceramic figurines and fragments around a hearth where they were made and destroyed (Dolní Věstonice I, after Absolon 1938). Note the location of the Black Venus in square 8.

production - destruction, and thus time-limited.

Life-and-death concepts

Another consequence of defining the temporal framework, and of self-identification of an individual in it, is understanding the life cycle. With time-awareness, death appears mostly as a negative phenomenon, and humans try to oppose it, usually by means of a ritual. Some interpretations of mortuary rituals may be derived from archaeological records.

Burials are events where ritually lain human bodies and artefacts of symbolic meaning may be associated. This aspect is important even in cases where the burials are „poor“ or totally lack all items of body decoration.

On the evening of 13 August 1986, skeletons of three young people were discovered at the top of the site Dolní Věstonice II. The central individual, of still unknown sex, was lain on the back, the right male on his belly, and the left male also on his back, but sligtly inclined towards the central person, with both arms directed to his or her pelvis. Given the good state of preservation of the whole situation, it was immediately clear that the strange position had a meaning, and a number of possible answers were suggested. One of the questions was about deliberate violence as a cause of the three simultaneous deaths, which, however, remains unprovable. Of more interest is the central position and the still unknown sex of the individual in the middle, which may even point to a "between-sex" personality, and where *just* this uncertainty may have provided a special social statuts of such a person (e.g., Hollimon 2001). Whatever the meaning, there is a story behind, so that some colleagues even talk about "paleotheatrology" in this context.

Let us summarise the situations at certain Czech Upper Paleolithic sites which imply ritual actions: human skeletal remains, found dispersed in debris cones in deep parts of the Mladečské Caves (Moravia) and Koněprusy Caves (Bohemia), together with a few tools and decorative artifacts, have probably been intentionally thrown inside the caves. In the Gravettian (Klíma 1990, 1995; Svoboda 1991), skeletons were ritually deposited in central, densely settled parts of the settlements, partly or wholly covered by ochre, and protected by mammoth bones, stones or, possibly, wooden structures, but still damaged by postdepositional disturbances. In addition, Gravettian human bones display postmortum cutmarks and other artificial modifications (Předmostí I, Absolon 1930; Dolní Věstonice I and II, Vlček *et al*. 1993).

Compared to the Aurignacian, the Gravettian evidence suggests that there was more complex ritual behavior, and that it was organised in places of population aggregation rather than in deep cavities. In this context, position of the bodies and their gestures, or position of the deceased in relationship to the nearby central hearth, and, especially, all post-mortum activities with the corpses, may have epic meanings and may be related to memories. Compared to burials from Italy and Russia, the equipment is rather poor, and limited to ochre and a few pendants, especially in the area of the skulls.

Conclusions

Archaeologists do not touch past time-constructs, but only a few of their possible effects. In addition, they tend to apply our own, actualistic definition of time on the hunter-gatherer societies of the past.

Concerning our own way of thinking and behavior, as reflected in symbolism and namely in communication through symbols, the archaeological record is unable to follow it down to the presumed modern human origins during the Middle Paleolithic, but only to the Early Upper Paleolithic. This suggests that the nature of this change was not primarily biological, but rather social and psychological.

It is well known that the emergence of artefacts with regular notations, items of body decoration, images, symbols and archaeological evidence of rituals is correlated in time and space with the Eurasian Upper Paleolithic, but contextualization of these features, and seeing them from the temporal-frameworks perspective, may expand the level of interpretation. The sites of the Dolní Věstonice – Pavlov area offer one

of the cases where continuous excavation recovered all these categories of objects in context. Their co-appearence at a single site, or group of sites, seems not accidental, and it is suggested that time-awareness, communal identity, self-identity, epics and life and death concepts under lie these objects and actions.

The origin of symbolism is in fact a technological process, a kind of "domestication of features", including the deformations that are usually related to domestication. It is not decisive whether communication is realised by means of words and gestures or by objects. However, "art", with its capacity to express and conserve meanings by objects, credits a more permanent character to the transmitted information. Somewhere beyond these changes lie deeper structural changes in the human mind, including definitions of time and temporal sequences. Defining time and space creates the dimensions in which the formation and development of symbolic meaning may take place.

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