

Session title: PREHISTORIC TECHNOLOGY: COGNITION AND THE ACT OF ARTEFACT PRODUCTION

Organizers: George Dimitriadis, DiSA – Department of Anthropological Sciences, University of Genoa, Italy
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Time: Friday morning

Room:

Session abstract:

Archaeological theory and practice are often antagonistic. Nonetheless, despite the pragmatists' reserves, theoretical terms such as 'culture' and 'technology' still stimulate scientific debates and scholarly curiosity.

Though apparently a package in its right, technology is indivisible from the culture in which it is embedded. As embodied in cultural material, objects articulate systems of intangible ideas and can be associated with patterns of behaviour. For example, how did prehistoric peoples act and react in this respect? What are the relations between technological "packages" and the cosmological views of particular actors (technicians) or cultural entities?

Representations result from experience and are guided by perception. Philosophers still ponder over the links between psycho-physical sensations and mental meanings. Social sciences associate patterns of perception and the production of knowledge with the social ordering of a chaotic world.

Interdisciplinary analytical models can help archaeologists to understand technical systems in general and in particular the physical aspects of tools and raw materials, thus furthering the fathoming of symbolic representations and social frameworks underpinning the everyday 'struggle for life'.

This session gathers scholars whose research agenda deals with the study of prehistoric material culture, that although can be deemed merely as a process of economy, has been impacted by socio-political and technological factors.

Paper abstracts:

THE EPIGRAVETTIAN *POINTE À CRAN* IN THE ITALIAN PENINSULA: TECHNOLOGICAL AND FUNCTIONAL ANALYSIS WITHIN THE CONTEXT OF EUROPEAN CULTURES

Paola Gnessuta, Department of Prehistory, university of Pisa, Italy
Emanuela Cristiani, Laboratory of Prehistory & Medieval "B. Bagolini", Università di Trento, Italy

The appearance of innovative tools in prehistoric lithic industries and their diffusion over a wide territory in a long time-frame, suggest significant cultural and economic change in life styles and conditions of early modern human groups. This phenomenon allows us to advance hypothesis about concepts such as contact and acquiring knowledge, even with communities that exist some distances apart. This study explores a group of pointes à cran, a lithic tool typical of the ancient phase of Epigravettian culture, found in Grotta delle Settecannelle, a prehistoric site in central Italy that has yielded a stratified sequence that includes an Epigravettian culture extended from Ancient to the Final phase. The techno-functional analysis of these backed points and blades with a notch near the basis to improve the fixing to a handle or to a spear, is aimed to reconstruct their utilisation presumably concerning hunting activity. The spreading of these characteristic tools within a large geographic area is probably the result of cultural homogeneity that extended from Italian peninsula to Balkan regions witnessed also by spiritual culture manifestations.

ASSESSING THE SYMBOLIC MODES OF PRODUCTION OF MESOLITHIC PORTABLE ITEMS

George Nash, Department of Archaeology and Anthropology, University of Bristol, UK

Within the Mesolithic of north-western Europe are around 500 bone, antler and amber artefacts that were both of utilitarian use as well as [arguably] symbolic value (Nash 1998). Many of these items, mainly axes, picks and pendants possess some form of decoration; many with representative designs. Artefacts are present in both Early and Late Mesolithic contexts and their provenances are well documented (Płonka 2003). It is clear that within today's consumer society the modes of production are mainly based on monetarism and little or no symbolic association is present. However, within the anthropological record commodities are afforded symbolic as well as monetary value. The anthropologist Nancy Munn has considered the modes and means of canoe building in Melanesia and suggests that at all stages of production symbolic value is paramount (1990). This paper will explore the symbolic values to portable utilitarian and symbolic items from the north-western European Mesolithic, suggesting that this repertoire, including Ertebølle pottery was produced using an establish set of symbolic criteria that made each item special. Moreover, as the item moves through the stages of production, so the item becomes more valuable.

THE "OBANIAN" REVISITED: INTERPRETING STONE, BONE AND ANTLER TECHNOLOGIES IN THE MESOLITHIC OF WESTERN SCOTLAND

G. Ritchie and C. Bonsall, School of History, Classics, and Archaeology, University of Edinburgh, UK

The Mesolithic in Scotland has long been dominated by research concerning the ‘Obanian’ problem, where non-microlithic coastal shell midden sites have been regarded as culturally and chronologically distinct from inland hunter-gatherer sites characterized by microlithic technology. However, new evidence suggests this distinction is no longer valid. Stone and bone/antler technologies are commonly found together on coastal Mesolithic sites in western Scotland, and must therefore be considered as integral components within a broader technological complex. This paper will explore the relationship between these technologies and hunter-gatherer settlement–subsistence patterns and mobility. The nature of the available evidence from western Scotland is considered alongside approaches directed towards a better understanding of the relationship between social organization and technology in hunter-gatherer communities.

TECHNOLOGICAL ASPECTS OF THE “LABRETS” IMPACTED BY FUNCTIONAL AND “RELIGIOUS” FACTORS

N. Elenski, Veliko Tarnovo Regional Museum of History, Bulgaria

This paper discusses an artifact type from the earliest Balkan Neolithic, which is characteristic for this period. This artifact type has been defined as “zoomorphic amulets”, “labrets” or “bucrania”. The paper focuses on one of the lesser known type - “labrets” with their V-type profile. Other characteristics include a semicircular body with two “horns” and a specific “groove”. We suppose that these artifacts are part of an object built of two labrets united together with twine or string. The “groove” was intentionally designed to assist in attaching the labrets together. Furthermore, when united in this way the labrets may be seen as representing the rear view of a female figurine. From, this point of view these “figurines” can be considered as parts of assembled necklace. For testing this hypothesis, experimental models-labrets were made in order to reconstruct a necklace. Consequently inferences about cognitive skills of ancient necklace makers were presumed. The hypothesis for the two united labrets transformed into female figurine a prototype of Mother-Goddess reflects the idea of the Neolithic cult.

RESILIENCE AND REVIVAL OF TRIBULUM INSERTS PRODUCTION: COGNITIVE INSIGHT OF THE PREHISTORIC TECHNOLOGY

M. Gurova, National Institute of Archaeology and Museum, Bulgarian Academy of Sciences, Bulgaria

Threshing sledge (tribulum) is one of the most long-lasting agricultural tools and has been widely presented in the specialized literature. The historical and ethnographical ‘diaspora’ of this instrument is importantly vast in the frame of Mediterranean koiné – from Iberic peninsula to the Levant. Nevertheless, there is a significant difference between the presumed prehistoric tribulum construction and its use in the Mediterranean zone and those from Northern Mesopotamia (according the last

scientific reconstruction). Significant evidence of ethnographic tribilums (and particularly their inserts) from south-eastern Balkans are presented and commented as referential corpus with regard to a series of contextual archaeological tribulum inserts identified by the author and coming from Late Chalcolithic site in Bulgarian Thrace. Their careful study and interpretation is useful for tracing back the history and evolution of this agrarian tool and to evaluate the possibility to reconstruct adequately the prehistoric threshing sledge. This paper is concerned with aspects of 'cognitive archaeology' dealing with tentative approach to the prehistoric skills and decision-making via reliable comparative study using in part archaeological and ethnographical data.

IDENTITIES FORMED FROM TECHNOLOGY: THE CASE OF THE LATE BRONZE AGE MEDITERRANEAN

A. Vianello, University of Oxford, UK

Technological progress has been a constant of human history, to the point of being considered a defining aspect of human beings. Production technologies in some of the oldest cultures could provide immediate advantages that could result in social power as technological products would carry embedded meanings and symbolisms. As more cultures emerged and contacts among different societies increased, technological advances often became expected and inserted in economic strategies. Social power could be obtained by wealth (existing economic advantage) or political reasoning (prospected welfare or economic advantage). Yet, in the Late Bronze Age Mediterranean the transition to an economic world was not completed and socio-political agency can be recognised in material cultures. In particular, the production of technological artefacts helped in constructing social identities; controlling the production meant gaining social power.

RUNIC INSCRIPTIONS AS INSTANCES OF PROTO-BOOKS

P. Chruszczewski, University of Wroclaw, Poland

It seems that Viking Age Scandinavia emerged as a relatively distinctive ethno-linguistic entity at ca. A.D. 800. From that time the Viking Age is said to mark a period of transition from prehistoric to historical times. Viking Age culture started to be reasonably well documented owing to travelling foreign diplomats, monks and tradesmen who described their ventures into the north of Europe, and last but not least, to a number of runic inscriptions documenting the life and ways of the Vikings. Archaeological sources show that "the heart of Viking lands" – Jutland – was flourishing at that time. The number and size of its forms was growing and its inhabitants were making ready for offensive combat in order to capture new lands. By the year AD 800 Scandinavian speech communities were forming a new cultural and linguistic entity which had fossilized and considerably expanded by the end of the Viking Age. The conversion to Christianity was connected with abandoning the worship of pagan gods and the acquisition of new cultural values which at that time could not have been more foreign to the mainstream Vikings. Nevertheless, conversion to Christianity significantly strengthened Scandinavian royal powers and

their links with the rest of southern Europe, which resulted in changes in the social reality and construction of Scandinavian speech communities. There is only one way of showing the above, namely by an analysis of the linguistic records of the society in question. These records are in the form of runic inscriptions which can be perceived to be instances of proto-books.

COGNITION AND PALEOART PRODUCTION

R. Bednarik, AURA, Australia

To what degree the production of primarily technological artefacts such as stone tools can yield valid information about the cognition of their makers may be debatable, but there can be no debate that products of palaeoart, such as rock art or portable art-like objects, offer access to human cognition. A number of examples from the Pleistocene are cited and briefly discussed, ranging in age from the Lower Palaeolithic to the end of the Upper Palaeolithic. It is shown that the application of principles imported from the forensic sciences is greatly superior in this quest than traditional archaeological interpretations. Such applications are illustrated with specific examples, providing considerable resolution of questions of human cognition at given points in time.

HEADREST: FUNCTIONALITY, ART AND SYMBOLISM

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The headrest, to the experienced researcher appears to be in use towards the end of the prehistoric period and is certainly found in the tombs of ancient Egypt. This object has always been an enigma to scholars who suggest that such items are uncomfortable. Interestingly variations of the headrest appear to transcend continents and are found within a world context. Furthermore, the technological development of the headrest can be traced; though probably not through diffusion. The author, after examining the limited prehistoric evidence, has also analysed the headrest concept from ancient Egypt which was used for the living rather than the dead. In order to make some sense of this concept the author has used ethnographic examples to reach some interesting conclusions. It appears to be clear that these objects are not just functional items but they also a spiritual use as well; hence their presence within the tombs of Egypt. I ask the question: Is the headrest a metaphor for the sleeping [dead]?

SIGNS AS ARTIFACTS: AN EXAMINATION OF THE PIETTE COLLECTION

P. Bouissac, University of Toronto (Victoria College), Canada

An examination of artifacts from the archaeological record can yield interesting inferences concerning the cognitive competencies and the culture of their makers. This can be complemented by replicating these artifacts and uncovering the “chaînes

opératoires” they presuppose as well as the socio-political structures they imply. This paper will focus on the geometrical or abstract signs (engraved or painted) which are found on many artifacts (made of stone, bones, or ivory) from the Upper Paleolithic and Mesolithic, and which form a “technological package” embodying a system of elusive ideas and behavioral patterns. The data base for this research will be the 500 page volume of photographs of artifacts from the Collection Piette that was published in 1964 by the Musée des Antiquités Nationales (Saint-Germain-en-Laye, France). All the objects published in this volume bear some abstract signs which are found either in combination with identifiable representations of animals or displayed by themselves in a variety of combinations. While they are undecipherable in the absence of sufficient information concerning their meaning and use, their formal properties (geometrical and topological morphology and syntax) can be the object of an analysis from which a general cognitive landscape can be inferred. This paper will specify some of these cognitive and cultural inferences, and Edouard Piette’s (1827-1906) early tentative interpretations of these signs will be critically examined in the conclusion.

CERAMICS FROM MIDDLE AND RECENT BRONZE AGE IN LIGURIA: PROPOSAL OF AN ANALYTICAL MODEL, FORMAL TYPOLOGY AND “CHAINE OPERATOIRE”

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Current studies in prehistoric pottery are developing essentially in two directions: techno-petrographic analysis and morphological-stylistic examination. In the present paper the author proposes an alternative model based on the implementation of both scientific tools, as considering culture transmission and technology matched cognitively. An analytic model has been tested in the archaeological context of a segmental society with domestic production of ceramics (Middle and Late Bronze Age, Liguria-Northwest Italy). In such a case we annotate that past methodologies collapse with the application of the combine new model when considering production, technology and culture relationships linked with ceramic material coming out from Bronze Age contexts in piedmont Tuscany, Terramare area, Provence and Corsica isle.

“DOING” MUSIC WITHOUT “MAKING” MUSICAL INSTRUMENTS: A PREHISTORIC, ACTUALLY CONTEMPORANEOUS, CONCEPT

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No other human activity can be so intense and real as “doing music”, and at the same time, leave so little trace. The various sonorous events that pervade any moment of life’s flow, ever since the times of our more distant ancestors, cannot be attested too merely by material evidence. People “did music” evidently utilizing not only tools especially crafted for, but also objects created for other goals, raw materials, the human body and voice itself.

This statement, if on one hand pointing out how hard it is to carry out research in this field, on the other opens an attractive reflection about important

issues that relate to the development of the “idea” of music, from ancient times up to the present.

The positivistic and “western” view, that narrows the concept of music and associates it exclusively in connection with musical instruments, appears obsolete. Reflecting on prehistoric sounds becomes therefore very significant in order to understand, in more general terms, how the relationship between mental meanings and technology can be complex.