

# Can Archaeology's «Ritualistic and Symbolic Artefacts» Be Interpreted Semiotically?

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## **Abstract**

Archaeologists are often content to leave an interpretation of material culture at the point of recognising symbolic behaviours. However, new archaeological researches are expanding our knowledge of the past towards the non-material and what is not immediately visible in the archaeological record. Phenomenological studies in particular are expanding our knowledge to the perceived human environment. Computer reconstructions expand the architectural and artificial environment while archaeobotanical and archaeozoological researches reveal ancient natural environments. The focus of archaeological research is moving from the study of the materials retrieved during excavations to past landscapes that are being filled with plants, animals, objects and ultimately people in addition to the monuments and geographical features. Linking specific objects to particular functions is a way to reconstruct past activities as well as gestures. The final consumption of an object can also reveal quite specific actions. For instance, the deposition of objects in a grave might be better defined than an offering. Artefacts connected to power or religion will embed symbolic meanings that might be revealed by analysing them as part of semiotically interpretable behaviours. I shall present some examples where semiotics can help archaeologists go beyond explanations regarding ritual and symbolic meanings, in particular taking the Minoan palace of Knossos as case-study.

## ARCHAEOLOGY: WHAT IT IS, AND WHAT IS NOT

Since «New Archaeology» was proposed by Lewis Binford in the 1960s, many archaeological theories have been produced and discussed to a point that it might appear that our knowledge of the past depends upon the latest theory. Post-processual archaeologists criticised the positivist position of processual scholars that thought archaeological interpretation could reach an understanding of the past. The result is that «most archaeologists today would agree that archaeological knowledge is theory dependent and has political implications in the world» (Preucel 2006: 146); in other words it is limited and relevant only to the present time. This perspective has directed many archaeologists to «plunder» other disciplines for theories, and rediscover, complement, or reinterpret past philosophical ideas. Semiotics was one of the disciplines considered and the linguistic theories by de Saussure have been both proposed and criticised. Equating material culture to a language and artefacts to words has been simple enough, but the results have had limited relevance.

In view of the apparent irrelevancy of semiotics for archaeology except for interdisciplinary studies on specific contexts (e.g. rock art), it seems essential to me to define what is, or should be, archaeology. Archaeology is a science that attempts to reconstruct and understand the past from material evidence. It is the materiality of the archaeological record that sets archaeology apart from history: whilst history can only be a social science (Murphey 2009: 181-182), archaeology should aim to be a full science anchored to the material record. When substantial written records are available, history can produce broad narratives that need some testing and confirmation (Murphey 2009: 135 ff.) because both the written evidence and the narrative may be wrong. The material record instead is always true, even if limited or specific to a particular context, and therefore can be used to test historical narratives. Narratives based on the material record when they follow a rigorous methodology can be more simply tested using the material record itself; the archaeological narratives are usual generalisations that apply context-specific data to broader human societies and chronological periods and only this part of the narrative is similar to the historical narrative and needs similar testing. There is however a substantial difference between the two narratives: the historical narrative can be founded on completely fabricated or altered evidence, for example to present only the perspective of the victor as in many cases of Roman historiography and therefore the question of its truthfulness is the most important; in the case of archaeological narratives, when these are strictly built on and develop interpretations founded on the material evidence, their relevancy poses the greatest dilemma.

Archaeological interpretations need therefore to follow a scientific reasoning to answer specific questions that can always be tested on the material record, and eventually change with it as more evidence or better preserved contexts are unearthed. The first step is therefore to collect data in the most precise way possible, augmenting the gathering process with all scientific analyses that may be relevant and available. Only after this data gathering process the interpretation of data should concern archaeologists. The choice of the theoretical model used for the interpretation should be based on the context and the type of questions posed. Whilst the questions posed may be affected by political agenda or personal interests, the interpretation must be data-driven and not point to any particular conclusions.

For example, in the case of Bronze Age trade within the Italic area, the reckless application of theoretical models is posing sometimes questions and surprises that only reveal the weakness of the models applied. Scientific analyses state that many Sardinian copper oxhide ingots were imported from Cyprus (Gale 2001); and copper in the Po Valley was sourced initially from nearby Trentino and then also from Tuscany due to its higher contents of tin (Pearce 2007): in both cases surprise has accompanied the results because materials were not sourced from the nearest location revealing that for ancient economies maximising efficiency was not as important as in contemporary economies. Aegean-type pottery in the West Mediterranean is often locally produced and inserted in local social and economic dynamics (Vianello 2005: 94-101). Political agendas play a role: Sardinian copper oxhide ingots would place Italy as equal partner in Bronze Age exchanges with the perceived highly civilised Greece; northern Italy is perceived as economically independent from the rest of Italy (a modern construct reflecting the contemporary situation); the Mycenaean presence in Italy anticipates the Greek colonisation and the important role that the peninsula played in subsequent history. It is not possible to fail noticing how the three cases, all focusing on Bronze Age Italy adopt apparently random perspectives that however have in common one thing after being deconstructed: they favour the view that Italy was as important as the most advanced civilisations of the time.

According to Alison Wylie's «tacking process» (Wylie 2002: 163-165), archaeological truths are interpretive statements constructed of multiple strands of evidence and different lines of argument; they are not the product of a single interpretation. In addition to the philosophical foundations of attempting to reach archaeological truths, our own experience also dictates such an approach. For instance, most people have different sets of friends or different habits while working and in their private life; the same people can have different interests at different moments, even on the same day: one can have a hobby, work-related interest or be prompted by a relative or acquaintance. There can be therefore no single perspective in interpreting human beings, but a collection of perspectives and related models mirroring as close as possible the complexity of the individuals and societies concerned. The broad historical narratives once again fail archaeology because the material record most often preserves the history of individuals forming the societies rather than key events affecting the society at large, as a law or epic battle may do.

Furthermore, data provided by scientific observations and analyses can provide more than mere facts on specific, narrow questions that scientific analyses can usually answer. For instance, residue analyses on pottery used for cooking or food consumption «could be a way to reveal ethnic, social and economic distinctions among households whose material culture (including basic ingredients) might otherwise be very similar» (Smith 2008: 120). Archaeobotanical and archaeozoological analyses can reveal the paleoenvironment, and especially the environment that people living at individual households were often in contact with. Osteological analyses can show the illnesses that afflicted individuals and eventual attempts to remedy, even if the ancient individuals had a poor knowledge themselves of their own health. By knowing the context of the artefacts, each analysis can write stories of individual lives and their societies whereas general theoretical models cannot do the same. The collected data may produce multiple interpretations, each answering a set of questions, and therefore complementary interpretations leading, individually or in groups, to possibly even more historical narratives/archaeological generalisations, the third and final stage of the interpretive process.

The problem of reaching truths in interpretations cannot be dismissed by the certainty of the truthfulness of the material record. Both interpretations and generalisations are guided by contemporary questions and agendas as well as by the type of perception that individuals have. Any interpretation and generalisation does not necessarily make explicit some truth valid in the past, rather it presents how modern people perceives and understands ancient societies. For instance, in a simple society, the availability of food and other staples of life will simply demonstrate that such society was winning the «struggle for life», however, the modern perception might add considerations about wealth, deciding that the absence of luxury items affected the life (and perhaps happiness) of those people. It is simply unrealistic to suggest that modern people should not relate with ancient societies, even if such process alters the outcome. Indeed, different individuals may interpret the evidence differently and there is no reason to require a single outcome: as we have seen, human beings are complex enough to pursue different interests and agendas, their actions cannot be reduced to simple universal laws, mathematical formulas, or fixed cause/effect constructs. In fact, a generalisation may provide as much information on who constructed it as on the society it focuses on.

The postprocessual view denying that any truths can be reached in archaeology transforms the archaeological debate into a modern political arena, where models of ancient societies become testing cases of future societies. Positivist perspectives on the other hand fail to determine the validity of the conclusions in archaeology, casting doubts on the viability of archaeology as science and suggesting that collecting data and artefacts is all what can be done. Is archaeology really hopeless? We should never forget that archaeologists are humans studying their ancestors, using the archaeological record that is what survived time, partial and fragmented: archaeological interpretation must be true to be scientific, but it must be also relevant to us to be worth pursuing. There is no doubt that archaeology cannot and hopefully will never enter the mind of anyone, alive or dead. Hence, pursuing an understanding of the past as past people understood it is not what archaeology is for because such view is irrelevant to us. The personal views of each individual of our own contemporary societies could be studied, but in reality only the views that actually affect, or may affect others are important to us. Today's perspective of the world of someone I will see once in my life does not interests me, and probably most readers, and so the perspective of a single individual far in time does not entice my curiosity much more. This is the case also for other sciences, even if it sounds illogic: for example, physicists pursuing the study of particles analyse data from multiple experiments, and therefore different particles, to reach some general law or understanding of the «particle» (singular) as a category of particles; but they do not seem bothered to count how many such particles may be in my tea, because such question has no relevance to them. Thus, if it is scientifically correct to construct a category and pose limited questions about it when particles are concerned, why would the same approach be wrong when humans are concerned? Similarly, as questions about the effects of a particle on something may be legitimately preferred to other possible questions for a variety of reasons, so questions on certain aspects of the past may be legitimately more relevant to us; this does not preclude the possibility for someone else to explore different avenues using the same data. The purpose of archaeological interpretations and generalisations is to guide the reader to the existing material evidence according to a perspective relevant to the reader; to allow the reader to form an understanding

of the past based on true premises. When we accept this, doubts about the truth and relevancy of interpretations can be dissipated.

## COGNITIVE ARCHAEOLOGY

Cognitive archaeology is one of the most recent sub-fields in archaeology that aims at becoming some general theory for archaeology. Inspired by evolutionary theory, the «only viable unitary theory in the human sciences» (Preucel 2006: 152), its aims are still not fully defined among archaeologists, but there is agreement on its focal areas: intelligence, language, tool use, and art. This delimitation is already important because archaeologists have been tempted by holistic approaches, typical of anthropology, which after abandoning the possibility of understanding the past would also let the archaeological focus on material culture out of sight, effectively transforming archaeology in an anthropological approach, blending archaeology and anthropology. The focus on «intelligence» however could appear far too generic if not defined: it is usually perceived as symbolic behaviour, especially in the case of consciousness (and human intelligence) being recognised by symbolic behaviours.

Cognitive archaeology or the «archaeology of mind» in Renfrew's (1982) words and its potential to affect all future archaeological research, it has to be stressed that so far it remains a sub-field of archaeology. Two main areas of research concern cognitive archaeology: «evolutionary studies» and «cognitive processual studies» (Nowell 2001; Renfrew 1994). The first focuses on the Palaeolithic period and the emergence of cognitive abilities through the development of increasingly sophisticated tools and symbolic behaviours, especially art. The second area focuses on cognitive processes that can be inferred from material culture and especially its symbolic role in processing, storing and communicating information. The principal criticism is in the artificial temporal division of the two areas of focus: is there really a point of time when human consciousness stopped evolving, as it is assumed? Although the difference between contemporary people and people that lived just a few thousands of years ago might be negligible in evolutionary terms, enough to suggest that our biological brains work similarly to those of our ancestors, the culture and ultimately the mind of people has changed much, or there would not even be the need of accepting archaeological interpretations as continuously changing due to our changing relationship and understanding of the past, which is fast enough to be measured along within the time span of individuals. Renfrew (2001; 2004) has attempted to address the issue by proposing the «material engagement theory».

Renfrew (2001) concludes that the emergence of key cultural aspects of modern humans such as language did not provoke sudden changes in the archaeological record. Some materials acquired symbolic power and only then «the process of engagement became a powerful driving force for social and economic change» (Renfrew 2001: 127). Both material culture and ideas affect the cultural development of humans; one is not necessarily the by-product of the other.

Symbolism becomes critical for cognitive archaeology and with it the role of semiotics plays a major role in constructing and testing valid methodologies. Due to the temporal separation between the foci, however, symbolism is often reduced to signify language, art,

consciousness or stone tools. The Palaeolithic material culture is seen through semiotic lenses that transform any evidence of human intelligence into a symbol, which is directly mapped onto a virtual map of cognitive development. More complex semiotic analyses are only attempted for rock and cave art or more rarely some specific religious beliefs that can be recognised in the archaeological record. Overall this represents the bulk of semiotic analyses used in archaeology. For the «cognitive processual studies» of cognitive archaeology material culture is recognised as such, often stripped of any understandable symbolic behaviour and is analysed differently, as progressive cultural development detached from the evolutionary studies of the Palaeolithic that are so closely linked to biological developments. Renfrew correctly confirms the evolutionary basis of cognitive development and the fact that biological and cultural advances share the same general evolutionary model even if with different timings, but he does not bridge the temporal divide, at least in methodological terms. This is largely due to the refusal by most archaeologists of accepting material culture as symbolic expression as it would be the case for the whole Palaeolithic material evidence. Renfrew quite rightly goes one step further and proposes that material culture is not always the passive materialisation of ideas («substantialization» in Renfrew words), and instead sometimes it becomes a cultural agency similar to consciousness affecting the processes of the mind as much as ideas can do. The only conclusion that can be reached from the current state of research is that the research on the origins of consciousness fails to detect the emergence of material culture as an alternative «cultural mind» working in parallel with the abstract ideas and memories in the «biological mind». In addition, it remains unclear how symbolic behaviours suitable for revealing the cultural developments through semiotic analysis can be found in the post-Palaeolithic record or if they can be found at all. The one thing that has become clear after all is that material culture does not translate easily into symbols, and when attempts are made, such as by Preucel (2006) in his «archaeological semiotics», material culture becomes «materiality», a philosophical variant that regrettably tries to avoid confrontation with the hard material evidence, the very core of any archaeological study, the one evidence that is not dependent upon any theory.

### 3. THE ROLE OF SEMIOTICS IN ARCHAEOLOGY

Semiotics is currently little more than the last escapade of archaeologists in the domain of some other discipline to enrich the rich theoretical debate, but semioticians can establish a solid interdisciplinary partnership with archaeologists and others if semiotics is found to provide the best methods to study some evidence or provide answers to some questions. Identifying symbols in material culture through some coherent and reliable methodology is the primary problem for archaeologists to accept a meaningful role of semiotics in archaeology. Bouissac (2003) has attempted to address this specific problem by recognising internal and external properties of artefacts. The division of properties is based on context: internal properties describe the artefact in general terms, classifying it; external properties describe the context in which the artefact is inserted and identify it univocally. He correctly recognises that the symbolic meaning of an object would be given by one of the external properties (the context in archaeological terms), but he fails to propose a method to recognise when an artefact is a symbol. Bouissac's analysis



however demonstrates in semiotic terms the indefinite character of the context and how any artefact may be a symbol depending on it.

I proposed three stages to interpret material evidence: first, the collection of data employing scientific analyses as necessary; second, the identification of the context, and consequently the questions to be answered and the theoretical model to be used for the interpretations, leading to one or multiple interpretations based on the contextual evidence and directed at answering questions about the material evidence; third, multiple interpretations and generalisations can be produced according to relevant categories. The choice of questions and relevant categories is arbitrary and open, new interpretations and generalisations can appear as the body of material evidence grows and the questions posed change. It is essential to understand that a generalisation does not produce an absolute truth; it only mediates between the surviving archaeological evidence and the reader following a methodological model and attempting to answer some questions relevant to the writer, and not necessarily the reader. The reader remains free to pursue different questions using the available evidence, or have perspectives altogether different. Different interpretations represent the different perceptions and conceptions of people; they are relevant to contemporary people; only a few perspectives will eventually prove testable using the fragmentary archaeological record; whilst multiple questions about the same evidence are acceptable, multiple answers to the same questions are not: if firm conclusions cannot be reached, then they should not be forced. This is a key difference between philosophical and semiotic models and archaeological models: the former expect and need to reach some meaningful conclusions as result of the analysis, the latter only needs to go as far as the archaeological evidence makes possible. In semiotics the analysis of some signs must produce some conclusions to be of some value, in archaeology a semiotic analysis interrupted before the end due to incomplete data may be still valuable, for example proving that certain artefacts can be interpreted as signs in a certain context (Hyosup Song, pers. comm. for emphasising this difference). Due to the fragmentary nature of the material evidence, archaeology can only accept that it interprets what has survived and uses that to understand the past, and that the narratives and interpretations produced may be as broken as the evidence it is based on. It is good practice not to fill in the blanks to make the models work fully, because in that way real data and assumptions are merged and the whole conclusions will be untrue.

Interpreting an archaeological artefact should therefore always start with its immediate context to find out its «primary» (in enumerative order) meaning. For example, a single representation of a hunting scene or animal in cave or rock art should be interpreted as evidence of the importance of the procurement of food, or the perils and difficulties associated with it if these are depicted; an exotic pot should be interpreted in terms of trade and exchange if indeed it travelled; and peculiar objects typical of a religion or ritual, regardless of their practical use, should be interpreted in social terms: they distinguish a group of people, whether they are priests or believers from others. This type of analysis is routinely done for post-Palaeolithic material evidence and therefore it is the particular case of artistic representations that needs clarification. In many cases assemblages of rock and cave art are automatically translated into symbols, but this may not always be the case: an artistic representation might just be an attempt to represent something existing in nature, and it would help to distinguish among early attempts to use symbols and tools, such as ochre stained and incised stones, more mature and natural representations, and even more advanced representations that depart from the natural world and

attribute to each element meanings beyond what is being represented. Thus, an ochre-stained stone may represent a rough, and very early, attempt to store in the material record an idea by using symbolism, while a later representation will only demonstrate a refined capability and in fact a functional interpretation may be best suited. Maps in particular need to be taken in consideration as example of depicted signs primarily used for functional purposes.

In most cases such interpretations will be of limited use barely describing the artefacts or posing questions on their validity altogether. Finding out the primary meaning of artefacts and elaborating an interpretation is part of the second stage of the archaeological process as proposed here, where the collected data are presented in a framework that links them to their context and their most basic interpretation, which can be a description in some cases. At this stage further viable and relevant (e.g. economic, religious, or social) approaches may be proposed in order to complete the interpretative process after collecting data (first stage) and formulating the first interpretation, largely based on data and descriptions (second stage). Whenever the natural world and functional use within the context do not appear to provide a satisfactory explanation of the artefacts, archaeologists should attempt to recognise their «secondary» meanings. These artefacts will probably be symbols that are best interpreted using semiotic methods. Secondary, additional interpretations do not require artefacts to have different meanings or uses; they only change the questions posed and accordingly the methods employed. Yet, when the meaning of an artefact will be unclear or the context will suggest a special use of the artefact in that context, then attempting different approaches to interpret the artefact will become a search for its symbolic meaning. The context of surrounding artefacts can provide clues about how to decipher or interpret the symbols.

The reason to leave the interpretation of symbols to the third stage does not wish to underestimate their importance. It is critical that symbols are properly recognised to avoid that the personal imagination of those interpreting the symbols produces fantastic. All material evidence is to some degree a representation of concepts in the mind, but the problem is that some concepts in the mind originate in the natural world and only transit through the mind, while other concepts and ideas originate in the mind. Stating that any artefact is symbolic because it is a representation of something in the mind fails to distinguish its true origin and therefore fails to reveal its primary meaning. Most attempts of describing semiotically archaeological artefacts such as Bouissac's have in fact proven that the whole material evidence can be translated into semiotic terms, but this is an unnecessary distraction for archaeologists and of no value for the purposes of archaeology.

An important category of materials that semiotics can help decipher are tablets, like those recording quantities, probably commodities in complex exchange systems. Such tablets are best known in the ancient Near East and Europe, but similar recording systems can be recognised in most cultures that eventually will develop or adopt a writing system. The tablets themselves might be exceedingly boring to study as they only represent quantities, but semiotic methods can reveal the complexity of such symbolic systems and that information could mirror the complexity of the society. Such pre-literate recordings have probably led to proper writing systems according to Schmandt-Besserat (1996).

A more frequent category of materials that might benefit from semiotic analyses is the one frequently labelled as «ritual» materials. The term «ritual» is very generic in its meaning and



includes anything poorly understood and very probably symbolic and not necessarily connected with religion. Rituals can be almost impossible to describe in anthropological terms because they are a repetitive performance that might convey different meanings and ideas (Peter Jackson, pers. comm.). For instance, a Christian mass can be held for a variety of reasons and the rite itself may be only marginally modified to convey different meanings. The aim of archaeology is however not that of reconstructing, describing or understanding a past performance from fragments of materials left behind. The primary aim of archaeology remains the understanding of the surviving evidence, and therefore by associating artefacts with ritual contexts we might find out something about the rituals and the symbolic meaning of the artefacts, but the result may be meaningless to anyone specialising on the study of rituals because too fragmentary. In such cases, interdisciplinary approaches would have no reason to be, and importing semiotic models into archaeology makes more sense, though the questions asked by archaeologists need not to make sense to semioticians, and therefore the models whilst founded and tested within semiotics, will be employed by archaeologists to produce archaeologically relevant data.

#### **4. CASE-STUDIES: KNOSSOS**

A new type of Minoan vessels from an assemblage found in the «Kafeneion» area of the palace of Knossos (Vianello, forthcoming), Crete, provides a good example of the application of semiotics outside the restricted domain of the study of the emergence of consciousness. The vessels can be described as circular ceramic tripods with a variable number of holes in which small conical cups and jars, also found within the same assemblage, could be inserted. The vessels can be dated to the Late Minoan I period, a moment of transition in Knossos from the Minoan rulers to Mycenaean ones. Parts of a single stone tripod have also been found as part of the same assemblage. A few vessels associated to religious practices probably from a neighbouring region have been recognised. A brazier seems also to be part of the same assemblage. The ceramic tripods were smashed and deposited in a pit, but several fragments were removed probably at the time of deposition; these vessels come from old excavations and the original context has been poorly preserved. The area of the Kafeneion was used for shrines and religious purposes, and therefore the vessels have been interpreted as «ritual» and soon forgotten.

The detailed study and attempts to reconstruct the partial vessels (as much as possible, minus the missing potsherds) has revealed that the tripods are in fact a type of kernoi, vessels that survived until the Greek period and that were used for religious or cultic purposes. The Kafeneion tripods however are composed by a set of mobile vessels whereas the kernoi are a single vessel manufactured by merging at the time of cooking the vessels various elements, a ring-shaped base on which fixed plastic appliqué in the form of small vessels, and sometimes decorative or symbolic elements; the result being a single vessel. The kernoi were used to pour liquids and perhaps to drink liquids. There are no written or pictorial documents illustrating the use of kernoi, and because they were widespread across the ancient Mediterranean for a long period, it is likely that their function and meaning changed several times. It is no surprise therefore that several interpretations have been put forward. One of the most recent and intriguing interpretation has suggested that the kernos may represent the cosmos (Bignasca 2000).

Interest for natural circles such as those of life and death, fertility, and seasons are frequently recognised in Minoan religious contexts. Full representations of the cosmos are unknown, but it is probable that existed. A rare type of vessel such as the Kafeneion tripod, which was probably used once by a restricted group and then destroyed, cannot be easily explained by rituals, cults and formal religion, all of which normally use the fixed symbolic repetition of gestures, acts and words. The cryptic vessel is also not a functional one, because it is composed by ordinary vessels, perhaps only slightly adapted, but designed to form a single composite vessel. This vessel is therefore a good candidate for a semiotic analysis because it probably embodies symbolic meanings in addition to the functional ones carried by the individual vessels composing it. The religious context of deposition and the use of the conical cups in representations of natural cycles provide the key for decoding its hidden meanings.

The circular base of the tripod may be a representation of land, particularly considering that Crete is an island and therefore limited. Not all holes would have been filled by vessels, and therefore anything contained in the small vessels that might have been spilled onto the base would fall underneath, perhaps a representation of the underworld. Certainly the base would hardly function as a tray. The brazier and other vessels suggest the presence of fire as part of the ceremony. It is not possible to know for sure what was contained in the small vessels, but their dimensions suggest that only tiny, symbolic quantities were contained. In case of a single vessel it could be suggested that the tripod contained some sort of condiments or accompaniments, but not in the case of an assemblage of many and all similar vessels. Blood, oil, wine, and water are possible candidates for the contents; red wine might have substituted blood. The mobility of vessels suggests that they contained symbolic elements representing cycles of the natural world; probably multiples cycles were represented. Each content was probably consumed, an act perhaps accompanied by reciting some formulaic text. Some contents might have been deliberately spilled on the base (representing the land) and from there underneath (the underworld) and the whole ceremony would have represented several natural cycles at once, and more importantly, symbolically linked those consuming the contents with the land and the underworld. The significance would be dual: natural cycles affect humans, who experience them, and humans are also part of a larger cycle with a more important role than other living beings, which may have been represented in the contents: humans would have had the same importance as the land and the underworld. This is not the place to review in details the symbolic significance of such ritual, or the implications of it being performed by a restricted group within a major Minoan palace, but clearly the Kafeneion vessel might have been a representation of the cosmos in a way not too different from what is inferred in similar contexts from more limited evidence. The semiotic analysis of the gestures (movements of small vessels, acts such as pouring and drinking) and symbolisms can present a more detailed and consistent understanding of the Minoan conception of the cosmos. An artefact not very far in time and space from this one and also thought to represent the cosmos, albeit centred on the sky rather than land is the Nebra disc (Meller et al. 2004), which confirms that in the Mediterranean and European Bronze Age there were portable representations of what was perceived to be the cosmos, and these sophisticated tools carried a type of knowledge that is usually difficult to recognise in the material culture.

Just a few metres from the Kafeneion area and dating to about the same period, Late Minoan I, a deposit of obsidian blades has been found underneath Room 46a in the Throne Room area of the palace (Carter 2004). Obsidian in Late Bronze Age Crete is usually associated to economic considerations, but this particular assemblage suggests that it was connected to some ceremony. The obsidian blades were produced, consumed (five to blades out of over two hundred), and deposited within a single room, in a very short time, as short as a day. The state of preservation of the delicate blades clearly sets the assemblage apart from the associated ceramic materials that were re-deposited to lay down the floor. It is impossible to perform a full semiotic analysis of the assemblage due to the limited amount of data available and the relative uniqueness of the assemblage, but it appears very likely that the obsidian blades, the artefacts, were at the centre of the ceremony since the set was prepared specifically for the ceremony, if not during the ceremony, barely used and then deposited in the same area. Tristan Carter (2004: 281) uses catchphrases such as «craft as ritual action» and «technology as performance» to describe the ceremony, suggesting that the ritual celebrated a technological process by replicating in a ceremonial context the «chaîne opératoire», the manufacture process of the lithic tools. However, the ceramic set from the Kafeneion was also produced and consumed exclusively for a ceremony, but in that case the production of pottery was not celebrated, and there is scarce evidence that other widespread technologies were celebrated in their own ceremonies. As a result, the artefacts seem to have been indeed at the centre of the ceremony, but they were probably attributed a special, «secondary» meaning for the occasion. Since in both cases we can reconstruct some of the gestures produced in the manufacture or use of the artefacts, we can in fact reconstruct parts of the ceremony. At the Kafeneion, an elaborated set of moving and pouring probably marked the cycles of life, perhaps mixing astronomical, biological and other cycles. In Room 46a, the blades were ultimately used to cut something, and a rite of passage may be postulated. Both case studies have been defined «foundation» deposits because the remaining materials were deposited in a similar way, but apart from the similarities to be expected selecting case studies so close in time and space, both deposits point firmly towards rituals where the material artefact embedded some special meaning that continued to carry forever in the deposit. Semiotic models cannot provide firm conclusions on the type of ceremonies held at Knossos, or probably elsewhere, but they can help archaeologists in identifying the artefacts as signs and at the very least provide a firm conclusion if such ceremonies were indeed rituals with common elements or we should continue to use nice catchphrases to avoid saying «we don't know».

## 5. CONCLUSIONS

I am fully aware that recognising a sign into an archaeological artefact is hardly a significant achievement in semiotics, but it is in archaeology, and perhaps such artefacts can reveal more of the rituals in which they were inserted than rock art may give away, simply because rock art is fully conceptualised, whereas artefacts may still maintain a gestural symbolism if not a proper ritual function. Indeed, gestures such as pouring, cutting, moving can be reconstructed from physical artefacts with a certain precision, and these are additional signs that can be processed in the semiotic analysis.

Can archaeology's «ritualistic and symbolic artefacts» be interpreted semiotically? The simple answer seems to be no, when we consider the different objectives of archaeology and semiotics. Yet, such artefacts can be interpreted within archaeology adopting models borrowed from semiotics. Perhaps archaeologists should leave Peirce alone given the limited extent of analyses that can be carried out, but they should definitely become familiar with some semiotics models because they can be helpful, for early and rock art as well as the myriad of ritual artefacts.

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