

## Rituals as language: the archaeological evidence

Gestures, theatrical performances, face-to-face interactions, dances and any other symbolic activity that does not use material objects is often irremediably lost in the archaeological perspective. Anthropological studies can provide countless examples, but most importantly, the archaeological research confirms the importance of symbolism and rituality. For example, theatre for Greeks and Romans was an important cultural expression, which still survives in some magnificent literary writings. However, perhaps one of the best ways of approaching Greek and Roman tragedies and comedies is walking through the archaeological museum of Lipari, where so many theatrical masks as well as painted vases depicting performances are preserved. The masks particularly, in their simplicity and timelessness, provide a glimpse of what theatre really meant about two thousands years ago in the Mediterranean: a clever and sophisticated re-edition of ritualised gestures.

We understand then how, on one hand, archaeology loses the greatest part of communication, eventually suggesting that certain behaviours were rejected by cultures that are more “advanced” and leading to ethically and archaeologically flawed interpretations of cultural superiority. We all know how such interpretations were ordinary before World War II (e.g. Kossinna 1912; for a discussion of the problem see Arnold 1990 and, specifically on Kossinna, Grünert 2002), how dangerous and wrong they are, but they still haunt us today when we talk of “great civilisations” or “primitive people”. On the other hand, when ritual performances are completed and no written accounts of the performance are available, archaeology allows us to infer the past event from the surviving materials. Yet, the dilemma within archaeology is that it is intrinsically incapable of understanding ritual gestures and yet the most powerful tool to understand rituals in the past, we set limits and possibilities of any archaeological contribution.

Rituals and archaeology have a tragicomic relationship. It is inherently difficult to say what happened somewhere, at some time, when all that is available are ruined fragments, often altogether just a tiny part of any moment, and not all of them. We do not interact with all the objects that surround us at the same time. Yet, archaeologists baffled by the material evidence will often say, “it is ritual”, when they really mean, “we do not understand”. Barker (1999: 747) reports this is a consolidated *caricature*. How many times have you heard archaeologists accepting defeat in interpreting antiquity if not for the odd mystery-artefact? To sum up, archaeologists have severe and tangible difficulties in recognising and understanding rituals, nonetheless no one beats them in recognising rituals. We may conclude that “recognising rituals” has become a rite within archaeology and a pastime for archaeologists of every generation.

In January 2004 a seminar entitled “The Archaeology of Ritual” was held at the University of California, Los Angeles (UCLA, Cotsen seminar), where the problematic relationship between archaeology and ritual was discussed. It emerged that a common definition of terms is notably missing, but while there is agreement that a universal definition of terms is not useful, there are opposite thoughts among archaeologists about whether precise terms or generic definitions should be employed. The difficulties in reading the material evidence, particularly when scarce or fragmentary, clash with the scientific need for rigour. Rituals in archaeology are always repetitive, to some degree, as this is a key aspect used in their recognition in the archaeological record, but rituals are not always repetitive. Despite the

uncertainties with which archaeologists have to deal on an everyday basis, much attention has been given to the possible contribution of archaeology to the understanding of rituals. For instance, archaeology can study the emergence of rituals following the evolution of human beings in the Palaeolithic, regardless of an evolutionary perspective. Studying the origins of ritual behaviours, archaeologists collect forms and meanings used throughout time. In so doing, archaeologists find themselves in the privileged position of being able to reveal changes in rituals as reflected in the archaeological record, and it can assess the success and failures of rituals.

Archaeology, in short, adds a time depth on any ritual analysed. Because rituals are encoded and formalised within a society, they reflect some aspects of the societies in which they were constructed. However, rituals are more than mirrors of the societies that constructed and performed them; they are used actively as political and social tools. Most importantly, they are tools used to handle collective memory and therefore they can provide useful information on how memory was perceived and used in the past. A ritual at each moment carries a shared memory that has been voluntarily selected as worth being passed on to future generations. The changes that archaeologists can detect in the rituals throughout time show which elements have been added, modified and dropped from the collective memory performed in the ritual. To summarise, archaeology can trace the origins of symbolic and ritual behaviours, including gestures, but its strength is in the analysis of collective memory throughout time, or in other words, the study of how the past was perceived and used in the past. It becomes evident then how gestures, rituals and memory from an archaeological point of view are communicative elements that transferred information and particularly memories from one individual to another, from one culture to another, from one generation to the next: they are an unspoken language.

The seminar has helped in enumerating possible contributions of archaeology on the understanding of rituals and we leave it here because problems in the recognition and interpretation of archaeological records connected to rituals are not central to our discussion. Instead, it is proposed here to consider symbolic archaeological artefacts like words and rituals like sentences in a language. It becomes then possible to “read” the differences among rituals as differences in complexity and development of sentences in a language. Words and language are symbols themselves and therefore one type of symbols is simply considered like another type, in order to simplify the recognition of development. The proposition of the analogy “rituals as language” has already appeared in the anthropological literature about thirty years ago with the Indian ritual of *naivedya*, or food offered to gods analysed as a language, where the offerings are words (Eichinger Ferro-Luzzi 1977). The analogy proposed then wanted to demonstrate “the structural function of certain offerings and (...) certain structural elements in the offerings themselves” (Eichinger Ferro-Luzzi 1977: 507). The analogy applied to the ritual of *naivedya* suggested that the rite is a language because it allows the devotee to communicate with deities and went as far as stating that, “specific analogies exist between verbal language and food offerings” (Eichinger Ferro-Luzzi 1977: 513). However, much emphasis was placed on the similarity between the structure of the ritual of *naivedya* and the linguistic procedures, meanings and structures. In this study, we will not require a ritual to follow the linguistic structure as strictly as possible to be defined a language; instead we will try to demonstrate that the primary purpose of rituals is communication and try to explain why this hypothesis did not surface earlier in anthropological sciences. The analysis of a few case-studies will provide examples of

the contribution of archaeology to the research on rituals and, more importantly, they will make possible to detect any pattern in the development of rituals throughout time. Furthermore, the starting point, the origins of human beings and rituals, is a contribution in itself as it shows the relationship and parallel development of the biological body and the cognitive mind.

Isolated symbols, such as red ochre, have been frequently recognised in Stone Age material evidence (e.g. Hovers et al. 2003) and the most ancient examples (Middle Stone Age) seem to be located in Africa (McBrearty and Brooks 2000). However, during the Palaeolithic symbols seem to be associated and express a single concept each time, which may or may not have been a set of concepts. For example, red ochre may have represented blood, menstruation and therefore fertility, death or many other concepts. Archaeologists construct complex sets of meanings associated with any single material symbols while trying to propose possible associated meanings, but ancient people may well have associated a single meaning with each material symbol. This affirmation does not refer to any particular case-study, rather it suggests that “complex symbolic systems” (e.g. Hovers et al. 2003; Henshilwood and Marean 2003) were one stage forward in the development of the symbolic language.

In early times, it is likely that the symbolic and ritual repetition of certain actions was the first stage of these behaviours. After a successful activity, such as hunting, it seems plausible that ancient people tried to replicate the success by repeating what happened, modifying as little as possible. This imitative behaviour is part of the learning process in which humans excel (Blackmore 1999, 2003). During hunting for instance, we may suppose that in trying to repeat an event, the repetition of some actions was necessary, such as the preparation of any tools, but modifications were possible, for example, refining certain strategies or producing more tools of a particular type. These modifications were again part of the learning process. However, what could ancient people do about unrepeatable natural occurrences or human actions, namely any action that would have been too dangerous or simply impractical to be repeated? A symbolic representation seems the simplest answer.

Archaeological evidence of these occurrences in early times has not been found, but later activities support this view. The Copper Age iceman (Fowler 2002) recently found in the Alps provides an extraordinary occasion to study an ancient hunter literally frozen in time. The Remedello culture hand axe that he was carrying seems to have been used for a long time, and apparently periodically grinded. It seems possible that it was a very personal object, carried all the time and eventually following the holder into the tomb (about Remedello and its culture see Cornaggia Castiglioni 1971). The re-casting of a new axe may have been a feasible and clever action to take at times, just to improve certain features or maintain its overall strength, but this does not seem to have happened. Thus, we think that the success of a person and the success rate of his axe were intertwined in the minds of some ancient hunters. This fact did not prevent them from changing techniques or renewing tools, but it fixed a certain activity, the preparation of the personal axe, as a direct response to the hunt. Although the axe was also a status symbol for the iceman and therefore several meanings became associated with it, here we are simply focussing on the basic elements that probably originated symbolic and ritual behaviours in earlier periods. A contemporary version of this behaviour is superstition.

From this stage, which may be labelled as “the first word”, two further improvements need to be introduced to produce a ritual. These are the symbolic, conventional representation of ideas and the voluntary structuration, independent for the natural world, of these concepts / words in a meaningful, chained way, like words

in a sentence. Burials are one of the best examples of abstract, structured thought and indeed they have been used to set out symbolic and structural archaeology (e.g. Hodder 1982; Shanks and Tilley 1982; Thomas 1988) within the post-processual tradition and the new *cognitive archaeology* proposed by Renfrew (1982). Another typical subject of the research about the development of abstract thought is art, with figurines (e.g. Conard 2003), cave art (e.g. Valladas et al. 2001) and rock art (e.g. Thomas 2003). Burials and art are some of the earliest examples of ritualistic behaviour that cannot be dismissed easily. A development of these ritual behaviours can be traced as well, for both burials (e.g. Pettitt 2002) and cave art (Valladas et al. 2001). These developments prove that a progressive increase in the complexity of symbolic behaviours can be detected. However, the development of burials and arts are largely a matter of improved expertise in the practices and not specifically of rituals. Imitative behaviours may be named as responsible for the origin of both activities: early sepultures originally tried to preserve corpses and accelerate natural processes that often lead to natural burials; art imitates nature filtering it through the human eyes. By definition, art seems the best option to study the cognition of early humans and this may have began as early as 1.4 million years BP if we accept the parallel lines possibly engraved by *Homo erectus* in an animal bone from Kozarnika Cave as symbolic incisions (Rincon 2004).

Although *Homo erectus* was probably incapable of any but the simplest ritual, DNA and other biological studies can help in understanding how the development of the mind has been dissociated from the development of the anatomy of the body in the last phases of evolution. As the complete genome of Palaeolithic hominins is unknown, modern chimpanzees provide a clue to the genetic difference among hominins. It is probable that the difference between the hominins and anatomically modern *Homo sapiens* (AMHS) was smaller than the difference between chimpanzees and modern humans. According to Pääbo (unpublished paper presented at the Human Genome Meeting 2004), the difference in the genetic code between AMHS and chimpanzees is just 1.2%, but the differences in gene activity in some particular parts of the brain differ about 10%. Dr Pääbo “has found two tiny but important differences in the gene FoxP2, thought to be responsible for speech and language skills” (McCall 2004) that probably developed within the last 200,000 years BP (Pääbo in McCall 2004; see also Enard et al. 2002; Corballis 2004). FoxP2 (forkhead box P2) has been found in several animal species, including apes, but it appears significantly modified in humans and therefore it seems related to human-specific capacities (Enard et al. 2002), such as language, though its exact role is not yet fully understood (Christiansen 2003; Marcus and Fisher 2003). The anatomy of brain has followed its own path, with changes in capacity as late as the Neolithic (Henneberg 1998), but perhaps fluctuations may happen even nowadays. The anatomy of the body, instead, has changed far less than the brain without any apparent significant structural change from *Homo erectus* and even fewer changes following the emergence of *Homo sapiens*. The anatomical structure seems to have changed little in the last million years or so, but significant changes have occurred to the brain. These changes do not stand out considering the whole human genome, but they become apparent when focussing specifically on the genetic code of the brain. The activity of genes responsible of the functioning of the brain and therefore the way the brain works constitute the major evolutionary difference. However, the changes in the brain developed relatively late and appear to have been caused by a need for larger complexity in gene activity, brain functions and, ultimately, thoughts.

Symbols and perhaps simple rituals appear very early in the archaeological, possibly as early as 100,000 years BP (McBrearty and Brooks 2000). Later, about 40,000 years BP, cave art and some proper burials appear (Pettitt 2002). If we consider technological advances, we could add many more periods. Because of limits in the archaeological records and in the interpretive analyses of them, we have an early history punctuated by significant periods distanced one from the other, which support in its form the evolutionary theory suggesting that each change represents a change in genes. Within this framework, it makes sense to ask when consciousness or rituals first appeared as well as what biological change triggered the change. Following the Darwinian evolutionary theory, the co-evolution of body and mind may have been started by *nature*, via genetic changes, or *nurture*, via cultural adaptation. If one of the two prevailed, then the responsibility for both falls on either nature or nurture. On one hand, there is Deacon (1997, 2000), who suggests that genetic changes produced a plastic enough brain to support the development of what should be the key aspect to distinguish our mind: language. His book published in 1997 is entitled “*The Symbolic species: The coevolution of language and the brain*” and well explains his point of view, which sees language as the highest form of symbolism and proposes that the cause of its origin is in the expansion of the brain, which would have been adapted by the environment. On the other hand, there is Ridley, who, in his book “*Nature via Nurture*”, reviews Pääbo’s research on gene FoxP2 in chromosome 7 and emphasises the changes in the genome responsible for improvements in the language. The two authors mentioned are just two of the many writers on the subject and while they are not necessarily in disagreement, each one emphasises the importance of one of the two factors involved. Evidently, there is a relationship in the development of body and mind, which developed in parallel influencing each other. However, there are two problems with these theories. First, the human being is distinguished as such from any other animal because it is primarily bipedal, for what concerns the body, and uses language, for what concerns the mind. If language is really the highest indicator of humanity and its intelligence, as Premack (2004a) argues, we should worry because parrots can imitate the human sounds and many animals can communicate among them successfully. Second, we may understand that nature and nurture were two key factors in the development of our brain and mind, but we still do not know what started the development.

The discovery that gene FoxP2 is connected to language (Enard et al. 2002) and more specifically may have been responsible for improved vocalisation (Corballis 2004) suggests that the Broca’s area, where it is to be found in the brain, is important for speech. Recently, Rizzolatti and Arbib (1998) have found special neurons on the brains of monkeys. They report that, “in monkeys, the rostral part of ventral premotor cortex (area F5) contains neurons that discharge, both when the monkey grasps or manipulates objects and when it observes the experimenter making similar actions. These neurons (mirror neurons) appear to represent a system that matches observed events to similar, internally generated actions, and in this way form a link between the observer and the actor. Transcranial magnetic stimulation and positron emission tomography (PET) experiments suggest that a mirror system for gesture recognition also exists in humans and includes Broca’s area. (...) such an observation/execution matching system provides a necessary bridge from ‘doing’ to ‘communicating’, as the link between actor and observer becomes a link between the sender and the receiver of each message” (Rizzolatti and Arbib 1998: 188). The two authors also speculate on the possible transition from gestural communication to speech. “The gestures of primates that were most likely to be first used for person-to-person communication

are the oro-facial ones. (...) at a certain stage, a brachio-manual communication system evolved complementing the oro-facial one. This development greatly modified the importance of vocalization and its control. Whereas during the closed oro-facial stage, sounds could add very little to the gestural message (...), their association with gestures allowed them to assume a more referential character (Rizzolatti and Arbib 1998: 193). In their hypothesis, they suggest that by complementing sounds with gestures, the hominins managed to associate precise sounds to specific gestures and objects, perhaps handled or indicated. In turn, this created the need for a precise imitation of these sounds, which now assumed meaningfulness in their precise vocalisation, ending up stimulating the area of the brain that is best suited for imitation, including mimic imitation: the Broca's area. In a domino effect, new complex imitative capacities began to be possible and available to everyday gestures and language. These new capacities and the experience that began to be accumulated, then produced abstract thought, probably from early symbolism, and in turn rituals, which are here defined as a meaningful structure comprising more than one symbol. Rizzolatti and Arbib (1998: 193) refer to the paleoanthropological evidence (Tobias 1987) provided by imprints in fossil cranial cavities, which show a developed Broca's area in hominins, whereas it seems absent in australopithecines.

Mirror neurons are perhaps the most distinctive feature of Broca's area and notably they have been discovered in monkeys! This brings us back to the previous observation that very few biological aspects, namely hands, bipedality and language intended as the capacity of advanced vocalisation and syntactic structure, separate human beings from animals. Genetic (e.g. gene FoxP2 and differences between human and non-human genomes) and neurological studies (e.g. on the mirror neurons and the Broca's area) seem to prove that indeed the biological difference is minimal and largely due to recent evolution. For instance, the bonobo Kanzi (Savage-Rumbaugh and Lewin 1994) is capable of linking human speech to signs (Arbib and Bota 2003), crocodiles can recognise their given name and vocal commands underwater (BBC series *Dragons Alive* 2004). Crocodiles have a developed biogenetic "expression pattern" which is similar to that found in avian birds (Haesler et al. 2004), among which grey parrots (Pepperberg 1999, 2002a, 2002b, 2003) are better in repeating words than the author. Try to imagine yourself imitate a bird's sound that you have heard only once! The case of the crocodiles proves that advanced communicative capacities and intelligence have not developed recently and exclusively in mammals but date back at least to the age of dinosaurs, when crocodiles already thrived. Crocodiles do not have an extensive capacity of vocalising, but they have the genetic capacity to do so, which is active when interpreting sounds. The vocalisation capabilities of reptiles may be the basis on which birds developed their vocalisation capabilities (Haesler et al. 2004). Although only parrots can imitate human voice, it is perfectly possible that basic languages exist among animals and therefore we may conclude that language in itself is not a typical ability of humans.

To summarise, archaeology can contribute to the understanding of the origins of rituals and therefore symbolism and consciousness as well. However, the main problem is that the archaeological evidence is fragmentary and archaeologists do not know what to look for. A first look to the archaeological evidence suggested that symbols are like simple words, with two meanings, one physical and one abstract. The origins of them should be traced in the attempt of imitating real happenings without physical involvement. We have then presented a multidisciplinary overview of advances in genetics and neuroscience on the subject, which provides some useful

information. These studies link gestures, spoken language and any form of communication to imitation. Traditional theories such as Machiavellian intelligence (Byrne and Whitten 1988) or the ability of interpreting and predicting the behaviour of others, as well as the debate about nature versus nurture become therefore superseded. We know that the biological diversity between animals and humans is always small, both when we consider the entire genome or a single gene. For instance, the human genome differs just 1.2% from the genome of chimpanzees and the gene FoxP2 in zebras is 98% similar to the human one (Haesler et al. 2004). However, the human brain is exceptionally different from that of any other animal in how it works. We already mentioned that the difference in the activity of gene FoxP2 between humans and chimpanzees reaches 10%. All this is reflected in the behaviours, which cannot be understood “if we think in terms of a monolithic ‘theory of mind’ that species either do or do not have” (Tomasello, Call and Hare 2003).

As a result, we can review the origins of the rituals using all the available multidisciplinary evidence. Early hominids distinguished themselves 4 or 5 millions of years BP, when they became gradually bipedal and therefore freed two limbs. From this point in history, hominids could use their hands to point to objects, name them and build the first tools (Rizzolatti and Arbib 1998). It remains unclear when full consciousness and a basic communicative language that fixed some sounds in words naming objects was reached, but the challenges presented by handling and constructing objects, as well as communicating, may have stimulated the brain, which grew in size. Abstract thought may have been possible only in hominins (genus *Homo*) because only their Broca’s area was developed enough to create symbols. The gene FoxP2, whose function affects speech capabilities, provides us with the first date: 200,000 years BP (Enard et al. 2002). In palaeoanthropology, this is when *Homo sapiens* appeared, but in archaeology, this is the period of the first lithic industry, the Levallois one, which introduced standardisation in tool-making, though there is caution among archaeologists in linking the two events (Barker 1999: 723). However, this date appears very late if we think that the first occasion to meet around an artificial fire and socialise was not later than 800,000 years BP (Goren-Inbar et al. 2004), but even this event does not predate hominins. Both genetics and archaeology agree that imitative behaviours increased about 100,000 years BP, when the most recent evolutionary modifications to gene FoxP2 were completed and AMHS appeared. It is at this stage that early symbols, like red ochre, appear. At Qafzeh cave (Hovers et al 2003) red ochre possibly connected to a few burials is dated 92,000 years BP and in Blombos cave (Henshilwood et al. 2002) incised red ochre may date as early as 77,000 years BP. It is only at this stage, with burials, that there is some archaeological evidence supporting the practice of rituals, such as funerary ones. The caching of the dead may have appeared back at the origin of the symbolic behaviour; burials at Pontnewydd Cave dated 225,000 years BP (Pettitt 2002), but this act cannot be considered as ritual. The burials at Qafzeh cave appear to be some of the earliest rituals, and are quite simple because effectively they involve only the association of several symbols, like the sepulture and red ochre. This is an early moment of human history; Neandertal as well as AMHS individuals may have been responsible for these behaviours. However, this is a very late stage in the history of human evolution. This finding agrees with the biological discoveries suggesting minimal differences with animals.

Returning to the metaphor of language, humans emitted the first meaningful sounds perhaps one million years ago and until about 250,000 to 200,000 years BP, they seem to have been unable to successfully transfer complex techniques or express

themselves without using gestures. From this moment onwards, we have evidence of symbolic behaviour, or words in our metaphor, like the caching of the dead at the very least, but still it is just one action representing, symbolising something else. It takes up to less than 100,000 years ago to have the first sentence, which is just the union of a few words / symbols. Although this short timeline considers material evidence of symbolic and ritual behaviours, we notice immediately how it may well reflect the emergence of language as well.

Art appears about 50,000 years BP, possibly as rock art in Australia 55,000 years BP (Barker 1999: 728). The first figurines (Sinclair 2003) and European cave art follow at about 35,000 years BP. However, this early representational art is a new form of simple imitation. Hands, animals and objects incised, depicted or crafted in the earliest phases are undoubtedly evidence of symbolic behaviours, not ritual behaviours. Rituals are intended as communicative expressions using several symbols. They are complex constructions that may use different types of expression, such as gestures, dances, songs, depictions, language and sets of symbols to communicate abstract or complex concepts. In short, if symbols are words, rituals are sentences. A sentence requires the use of syntax and grammar and so rituals require an underlying structure. Only about 25,000 years BP structured rituals appear in the archaeological record, either as Venus figurines at Dolni Vestonice (26,000 years BP), rock art in southern Africa and Australia, cave art in Europe or burials (e.g. Paviland cave; see Aldhouse-Green 2000). Figurines are not simple representations of humans or symbols of specific concepts: there are various types of human and animal figurines suggesting that they were part of complex belief systems.

Rock art and cave paintings express sets of beliefs; they reproduce the natural environment filtered through the human eyes. Shamans may have used them to communicate with the spiritual dimension in order to achieve benefits such as healing from diseases. However, the complexity of beliefs increases gradually and it remains astonishing how recent the first rituals are. These manifestations in the material culture were certainly accompanied by other expressions, such as gestures and dances, which are not preserved in the archaeological record. Yet, this does not mean that complex sets of beliefs existed previously. For instance, early deliberate burials are very simple, probably as simple as any possible belief behind them. In addition, in the case of Qafzeh cave, red ochre may have meant blood and therefore death and therefore it would have been appropriate its association with burials, but there is no indication of the repetition of rituals. Red ochre was not constantly associated with burials or always present in them, nor the community agreed and shared a belief such as in the underworld because burials were not made within a short time. In the case of Shanidar cave (Pettitt 2002) the few depositions are distanced by thousands of years one from the other and their existence in a single hotspot, the cave, may simply mean that they were periodically rediscovered and re-enacted, imitated. From 12,500 years ago the Natufian culture in the Levant is one of the first with a consolidated tradition of burying the dead, but even then the offerings and burial practices are variable (Kuijt 1996: 329), suggesting that there was no consensus on the formality of the rite. It seems interesting that while rock and cave art show effects of local standardisation, burials do not. One possible explanation for this difference is that art remained accessible generation after generation while burials, of course, disappeared underground. According to this hypothesis, art permitted and facilitated the construction of complex beliefs because past beliefs remained visible next to new ones and formed a collective memory, which may have been built generation after generation. Funerary rituals instead could be formalised only much later, at the end of

the Neolithic, when people settled to cultivate and ceased to be nomadic hunter-gatherers. Accepting this hypothesis, we can infer that only at that stage newly formed stable social communities allowed the formation of formalised rituals, standard at least in some aspects and within each community. This casts doubts on the effectiveness of cultural transmission across families, though this did not affect the transmission of techniques (e.g. stone toolmaking, architectonic and farming expertise) that may have felt as impersonal and therefore more easily acceptable or simply useful.

There is no doubt that human spoken language existed at the time of the Natufian culture, but it seems that it was ineffective because only what could be physically shown passed on from group to group. Art produced on stone overcomes the problem and fixes each element, creating a memory and uniting a certain community diachronically. However, art is not required to create a ritual handling memory. Clothes, body paintings and anything that can be considered as a material and visible cultural expression could have produced belief systems, though archaeology has severe limits in finding evidence of these behaviours. Conversely, gestures, language and any synchronic cultural expression requires that only a short time passes from the original performance to the imitation otherwise it would probably change because its memory is not encoded. Oral tradition is a synchronic type of ritual because it requires a frequent repetition to be kept in memory and passed on to new generations, who have to memorise it. However, early oral traditions originated within small groups with a limited belief system, the early farmers, which were the only type of extended community. It seems unlikely that the oral tradition could grow easily because the information memorised and repeated was probably selected to be passed on to future generations. Since the communities were small and normally disconnected, it is difficult to imagine many occasions to repeat the tradition of one group to another, if any, also considering possible problems with differences in language. Furthermore, if a tradition was worth being passed on, additions must have been distanced in time and well motivated or the oral tradition would not be a collective memory but a series of stories invented on the spot and probably very similar or a few.

Epics such as the Iliad and the Odyssey by Homer typically mention hundreds of different locations and communities while others, such as the epos of Gilgamesh, refer to a specific moment in history shared by a vast group of people. Thus, epics are either a collection of many different stories from many different groups united in a common structure to express cultural vicinity within those communities or a single mythological story agreed and shared by several communities that in so doing declared their unity. Additions and changes to the existing tradition may have justified by the induction of a community into the cultural group or the recognition of that story as part of the heritage of a newly constructed culture. In most cases, oral tradition builds up by moving across a cultural landscape, from community to community, not from generation to generation within a single community. However, only after the establishment of sedentary communities in the Neolithic different communities could have come in contact, whereas art created complex belief systems well before the Neolithic and the introduction of agriculture.

Rock and cave art did not produce complex belief systems just allowing an interaction among several generations of the same community. People moved frequently before agriculture, they did not have a fixed place to stay. Thus, this form of monumental art attracted the attention of several groups and became easily a focal point for several communities. This may be one the reasons why this type of art is

normally found in a few hotspots. In uniting communities, a belief system was built by adding different traditions while standardising the expression. It is probable that these areas were considered like sanctuaries and people visited them because perhaps attracted by the same beauty that attracts today hordes of visitors or by the chance of learning the communal heritage or perhaps these areas were visited as part of a religious pilgrimage. Shamanism may have been practised and could have been responsible for some depictions. For example, this is the case for the rock art of the San culture in South Africa (Lewis-Williams 1990). However, all sorts of rituals and symbolisms may have had their focus on these special places. The main point is that they were meeting points for people; they facilitated the construction of human societies by creating the memory of a communal past and occasions for a shared present time. Supporting the suggestion that these places were meeting places is a study of the rock art at Mont Bego, France (Thomas 2003).

The site was used about 2500 – 1800 B.C., which corresponds to the Late Neolithic and Early Bronze Age in the region. Among the symbols are spirals, but there are also the “god of the mountain”, the god of lightnings and the “bull-god”. Spirals were largely used in the contemporary Minoan civilisation and the gods of the mountain and of the lightning recall the Cretan Zeus, whose myth probably originated among the Minoans. The bull is instead recurring in the epopee of Gilgamesh, in Mesopotamian depictions and in the Minoan culture. Rituals invoking sacrifices, possibly of bulls, are illustrated and they recall other Mediterranean rituals such as those of the Greek Dionysus, the Egyptian Osiris. Thomas (2003: 290) observes that, “a very famous Greek myth associates explicitly the god sending the lightning and the bull-god: it is the history of the kidnapping of Europe, where Zeus (the sender of the lightning) (...) metamorphoses into a bull. In the Greek mythology as well as at Mont Bego the god sending the lightning and the bull-god are the same” (my translation). Thomas (2003) concludes that it is possible to recognise similarities with all the major beliefs in the contemporary Mediterranean Basin in the belief system portrayed at Mont Bego. Thus, the complex belief system at Mont Bego was the product of hundreds of years of interactions and did not originate locally. The site became the focal point of the region soon after the first petroglyphs, but the belief system it was spreading was shared among all the Mediterranean populations, from Mesopotamia and Egypt to the Crete, the Aegean and France. If early cave art was expression of a few communities within a small region, the late rock was expression of a vast region united only thousands of years later by the Romans. Rituals, as it seems, were really a powerful language.

Rituals appear to be a by-product of imitative behaviours. Memory was always involved to some extent, but the production of collective memory seems incidental whereas the transmission of knowledge, or the communication of information, was paramount. The case of the Early Neolithic (EN) pottery at Franchthi Cave (Vitelli 1999) seems to confirm this. Dated 6500-6000 B.C., the EN pottery is rough, heavy and relatively scarce. There are five wares each manufactured using a different technique. During the EN period, it is evident that the five original potters passed on their techniques each to another potter because the potters of one ware never produce pots in another ware. Moreover, only a dozen or so pots were produced each year on average (Vitelli 1999: 187), which means that each potter produced just a handful of pots each year, a fact that explains the continued uncertainties, the lack of standardisation, all of which make the pottery very personal and the potter easily recognisable. In addition, the capacities of pots range from small to very small and there are no traces of firing after the production. There is scarce evidence of wear and

pots were mended when broken (Vitelli 1999: 189), both facts suggesting that pots were prized at Franchthi Cave. Vitelli (1999) suggests that women could be responsible for their production because they probably were in charge of cooking and patch repairs to the houses using clay and other mineral substances. She argues that the earliest pottery was produced accidentally and that no one would expect solid ceramic to come out from the soft clay without prior knowledge. In her opinion, people watched the clay burning on the fire, but instead of being destroyed as nearly everything else the clay came out reinforced as ceramic. This fact would have facilitated the construction of religious beliefs around the pots and therefore pots and potters would be especially prized while the ritual would have been kept for special occasions. In her opinion, the potters were shamans practising their rite. In the subsequent Middle Neolithic (MN), pottery production increases and a new type of ware, called *Urfirnis* or first glaze, progressively became dominant. The *Urfirnis* pottery developed very rapidly and six different phases have been distinguished within the MN. Errors and variances in technique were frequent, while the always changing decoration made each pot a single piece. Potters were probably competing according to Vitelli (1999: 194); they refused to imitate any production process and cared extraordinarily for the final product, making it a truly prestige product. In addition, cooking pots appear in very limited quantities in the same contexts, suggesting that potters were preparing special sets for feasting (Vitelli 1999: 196). In the Late Neolithic, *Urfirnis* ceramics disappear replaced by new styles and larger quantities. During this period, prestige pots are the product of exchanges and the association between pot and potter is broken: people cannot any more always know who produces the pots they use. In this example, we have seen how anything new could have generated a ritual. It remains uncertain whether potters were shamans or not, but it is evident that, at this stage of development, the language of rituals is mature because the ritualised technique is used consciously to gain a benefit, the prestige coming from the pots, and imitation is either prevented or programmatically refused. Rituals are used at Franchthi as political tools and memory plays no role because of the limits imposed to imitation. Yet, rituals remain a form of language; potters demand a special place in the society due to their knowledge, which probably appeared magical rather than useful during the EN, building a ritual out of a technique.

Rituals can help in integrating members in a community and keep it united. These are the communal rituals, which become formalised ceremonies when state-like political organisations are involved. At McPhee Village, a Dolores Anasazi Pueblo I village in the Four Corners region, United States of America, faunal remains have been found inside a pit system inside a pueblo (Potter 1997). Some of the remains and their context suggest that ritual feasting was practised. Local red ware pottery, which has been associated with “potluck” feasting behaviours (Blinman 1989), and ritual floor features (Potter 1997: 361) support the interpretation of the contexts as connected to ritual feasting. Potter (1997) demonstrates that the faunal remains are different among roomblocks and he rules out a possible bias in the preservation and recovery of the materials because they are closed contexts. In his final remarks, Potter (1997: 362) concludes that, “even within the confines of a single aggregated village, ritual may simultaneously operate as both a force of social integration and social distinction”. In a different cultural context, communal rituals have also been recognised within the Minoan civilisation. Funerary rituals outside the Mesara tholoi included drinking, eating and perhaps dances (Branigan 1993). Ritual consumption of food was practised in “peak sanctuaries”, where large fires were burning (Dickinson

1994). If the fires were left burning by night and the rituals organised in the same days, it would have been possible to see other peak sanctuaries from each one. All these are manifestations of unity, whether between participants and ancestors or among communities across Crete. However, the palatial rituals inferable from foundation deposits (Vianello 1999) do represent an established hierarchy within the participants by using different types of pottery and probably different levels of participation. In addition, palatial rituals involving feasting also exploited dependence by having the palatial elite feeding certain members of the community. As a result, we may conclude that communal rituals are powerful tools to define and communicate social hierarchy to the participants as well as to other members of the community. The participation to these rituals meant unity among them, or the acceptance of an established social hierarchy, but they also create a boundary between those participating and those not participating. Communal rituals were as powerful in integrating as in distinguishing members of a society. The fact that they were used with the cognition of these two powers in unrelated occasions by many cultures suggests that the main purpose of this category of rituals had little to do with religion or simple expressions of friendship. They probably were deliberate political tools and powerful communication tools used to establish or maintain social hierarchy. Communal rituals visualise social hierarchy and therefore, by accepting them, the participants accept their role within the society.

During the Bronze Age seafaring and exchanges became very frequent in the Mediterranean. Many of the trade routes later used by Greeks and Phoenicians were explored and established during this period. The civilisations in the East Mediterranean had frequent exchanges among them. Ambassadors, traders and dignitaries were often travelling. The exchanges, normally gift-exchanges, were encoded and formalised as the letters found at Amarna prove (Zaccagnini 1973). However, this was not the case in the West Mediterranean (Vianello 2004), where the absence of established state-like organisations left the space open to entrepreneurship. In this vast region, rituals became one of the main tools used in association with exchanges. For example, at Monte Grande, a sulphur extraction area without settlements or cemeteries on the southern coast of Sicily, circular enclosures typical of the regional Castelluccian culture were used for rituals. Ritual clay horns were used there as well as in many other centres of that culture for some ritual practice. At Monte Grande (Castellana et al. 1998; Castellana 2000), some decorated Aegean-type pottery and remains of hearths found inside circular enclosures suggest that rituals were used to establish a contact with foreign traders. Large quantities of undecorated Aegean-type pottery have been found outside the enclosures. A similar practice may have been practised also at Roca Vecchia, on the Apulian coast (Guglielmino, paper presented at the 10<sup>th</sup> International Aegean Conference “*Emporia*” at Athens, 2004). In the Aeolian Islands, the large presence of Aegean-type cups has suggested that rituals of communal drinking and eating were practised. At Nuraghe Antigori (Vianello 2004), in Sardinia, the only Aegean-type ceramic set found contains a rhyton, which again may have been used for communal rituals of feasting. On the Ionian coast (Vianello 2004), centrally positioned buildings with significant quantities of Aegean-type pottery contained Aegean-type pottery as well as ritual tools, which may have been used during local ceremonies but also perhaps to welcome foreigners. Even at later times, the Phoenicians will found a sanctuary in the Etruscan village of Pyrgi to facilitate the contacts and the Etruscans had their own treasure at Olympia. Whether simple acts in dedicated spaces or complex and formalised ceremonies within monumental spaces, rituals were used as the first and most essential form of contact,

preliminary to any further exchange. A development of this approach is the Roman use of incorporating in their state-religion the religions of the conquered, matching whenever possible foreign gods with existing ones.

The Bronze Age Mediterranean societies and any other society before developing state-like political and social structures employ the most complex and refined rituals. State-like structures and broad political organisations uniform the culture of vast regions in the attempt to maintain unity and control on that region. Before them, it is possible that rituals had been one of the main forms of communication. The separation in which human groups lived probably resulted in the emergence of many languages and dialects that made difficult for people outside the extended family or the village to understand each other. Thus, rituals may have been the most powerful tool to communicate, to overcome any linguistic and cultural barriers. At least during the Mediterranean Bronze Age, rituals were used effectively as a form of international language and they must have been encoded after the establishment of frequented sea routes. However, it is at this stage that the deliberate manipulation of memory becomes recurrent. The fact that rituals can handle memory and can create a common memory had certainly been discovered before, but it is unclear if this happened intentionally or not. Rock art with its cultural baggage spanning millennia would suggest that there was no consciousness at the beginning of what would have happened, since it is unlikely that someone could have forecasted its effects after millennia, without any prior experience. Taking the Minoans and Dolores Anasazi as example, we have shown how rituals were ordinarily used by small groups to define themselves by including or excluding members. In the case of the Minoans, it has been noticed how the palatial elite used rituals to present and establish the social hierarchy necessary for the palaces to exist.

The Minoan “palaces” were the earliest state-like political organisations in Crete and were modelled on those already thriving in the Near East. However, the homogenising and formalising processes typical of state-like organisations provoked a decline of rituals, observable for example in Greece after the Archaic period. These processes were visible from the beginning and the Minoans are the perfect case-study for this. For long time, the palaces tried to impose their own rituals or appropriate former rituals while resistant regions opposed this manoeuvre. For instance, ancient rituals performed in the Mesara tholoi, to link the living community with the ancestors and the territory, were evidently contrasted by the palatial elite, who never participated. Instead, new rituals such as foundation deposits were probably imported from the Near East along with the idea of palaces and proposed as new ritual (Vianello 1999). Peak sanctuaries instead saw perhaps a struggle between the two factions, because they were originally external to the palace but, probably due to their popularity, the palatial elite may have tried to insert them in the palatial-backed religion (Dickinson 1994). The palaces themselves had vast quarters dedicated to religion, and perhaps the same chief was a religious leader. In short, the formalisation processes within the palaces transformed ancestral communicative rituals in formalised acts of a state-religion. Each act, of course, had to respect the establishment: the deities first, the palatial elite in the middle was in charge of communicating between natural and supernatural, the ordinary people came last. When natural catastrophes shattered the island of Crete (Dickinson 1994), it became difficult for the palatial elite to survive, because the members of the palatial elite presented themselves as the intermediaries between deities and people. The natural catastrophes may have been interpreted as the rebellion of the deities to this establishment, so that the tensions between palatial elite and population re-emerged.

Because of these difficulties, the Minoans appear today as a civilisation very much interested in religion, but it may be that religion was only a cover for a political struggle.

When state-like organisations succeeded, and it has always been a matter of time, rituals changed deeply. They became tools of political propaganda by manipulating the collective memory they can carry. The Greek and Roman religion are large sets of formalised rituals that carry a political agenda. Many Roman emperors consecrated themselves as deities and changed the religion at their pleasure to fit their political agenda. Outside the centre, Rome, ordinary people usually preferred to keep ancient regional rituals alive. This did not happen because the Roman religion was felt as false, but because in keeping alive older rituals people kept alive their memory of distinguished population. For example, in the Romano-British cemetery at Kempston, twelve individuals were found decapitated and twelve had been placed in the prone position, recalling local practices dating back to the Iron Age rather than the conventional Roman religion (Boylston, Knüsel and Roberts 2000).

Not only state-like organisations appropriated themselves of rituals employing them as political tools, they also homogenised culture and language across vast regions and propagated, slowly, writing. Since rituals seem to be a communicative tool, their major threat has been their partial replacement with two more powerful forms of communication, spoken and written language (Premack 2004b), which had benefited from the formalising and encoding processes of state-like organisations. However, the invention of the alphabet by the Phoenicians was most important. In associating sounds to signs, they encoded both. Moreover, their extended trade network spread the alphabet very quickly. The change in use of rituals and their progressive and inexorable replacement may be the reason why rituals have been not firmly recognised as primarily communicative tools, at least in archaeology.

Archaeology has something to say about rituals. It can trace the origins of rituals and follow their development throughout history. In suggesting that rituals can be interpreted as language, because they are a form of language, we have tried to track the history of ritual but also attempted to understand them deeply. Hominids freed their hands from walking and had the possibility to handle objects, which in turn stimulated their curiosity. However, hominids were probably social animals like contemporary apes and most primates. The unique combination of these two factors is perhaps responsible for the making of human mind. The desire to know and explore as well as the need to communicate with others these discoveries and understand other individuals are some of the main forces that drive human beings then as the present-day. Imitation was used to learn and transfer practical skills or to approach other individuals and declare similarity, vicinity and ultimately the sharing of the environment and life. Biogenetic studies have found in mirror neurons the proof that imitation is an advanced behaviour in primates and that evolution improved even further this capacity in human beings. Imitation was the most advanced among the available behaviours and was suitable both to explore the surrounding environment and to communicate the discoveries to others. The ritual behaviour became the expression of new needs met using advanced behaviours available. Ritual was indeed for long the best communicative form humans had and it has not been replaced yet, despite its partial demise. Gestures probably underwent a similar development. Spoken language and more recently writing have provided a better alternative for both. During several phases, the human brain increased in size and improved overall, but it also began to work differently, in spite of its biological similarity with other

primates and animals. Human beings in their quest to understand both the natural environment and themselves began to pose and answer questions that go beyond the immediacy. This is, in my opinion, what makes humans unique. Rituals are one of the tools used by humans throughout their history in this endless quest.

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