

Rituals as language: the archaeological evidence

ANDREA VIANELLO

(University of Sheffield)

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 ([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 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 Los Angeles 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 probable 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. 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. 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. This imitative behaviour is often recognised in the learning process (Blackmore 1999, 2003) and it is the main tool for learning in hunter-gatherers societies (e.g. within the !Kung; see Blurton, Jones and Konner 1976). Imitation is also commonly used in learning how to perform certain activities such as dance or music.

Archaeological evidence of these hypothetic 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 early 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).

A short overview of evidence provided by new studies in genetics, neuroscience, behavioural and cognitive sciences may help at this point to understand the state of the research from an interdisciplinary perspective. Much of the research outside archaeology and anthropology is concerned with the origins of cognition, symbolism and language, which are all different and very complex issues. Science has not yet provided conclusive answers to these fascinating questions and the preliminary results are often controversial. The processes that lead to our modern brain were very slow and lasted million of years. From the earliest australopithecines dated 5 or 6 millions years ago, which were tree dwellers capable of bipedalism on the ground (Coppens and Senut 1991; Senut 1996), safe and widespread evidence of rituals using advanced cognition, complex symbolisms and spoken language is recognised only about 10,000 years ago.

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%.

Human beings are distinguished as such from any other animal because of bipedalism, for what concerns the body, and language, for what concerns the mind.

The anatomical structure seems to have changed little in the last million years or so, but significant changes have occurred to the brain. 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 changes in the brain developed relatively late, after the body anatomy was defined in its basic constituents, and appear to have been caused by a need for larger complexity, which has provided by increased size and gene activity. 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. The two main features characterising human beings, bipedalism and complex brain, are not absolute innovations. Bipedalism can be found in nature, for example in dinosaurs and birds. The *tyrannosaurus rex* already millions of years ago had two robust legs and two weaker arms while birds have two legs and two wings. Other animals, such as the bear, can stand and make a few steps on two legs while the two frontal legs are free, and so can do some dogs. For what concerns the brain, it may be true that humans have the largest and most complex brain, but no particular faculty is exclusive of the human brain. Language perhaps can help in understanding the point: no animal can speak, but the basic elements of language, namely, the capacities of understanding vocal commands or gestures and attribute meanings to them as well as vocalisation capabilities are found in nature. For instance, the bonobo Kanzi (Savage-Rumbaugh and Lewin 1994) is capable of linking human speech to signs (Arbib and Bota 2003), 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. Thus, humans have just improved capabilities. This means that the divide between humans and animals is small and mainly affects how we use the brain. In genetics, as we have seen, the difference is in genes activity rather than in the genes themselves. Thus, if we want to understand ritual behaviours, we should find out more about the brain capabilities involved. These capabilities are unlikely to be exclusively human; rather they are only more developed in humans.

Imitation, as we have seen in the speculative hypothesis of the possible first repetitive symbolism, or ritual, may have played a major role in the emergence of rituals. Although it may be debatable to attribute the earliest symbolisms and rituals to imitation, this capability appears highly developed in humans and is a key component of Mediterranean rituals at least since the Bronze Age. However, it is probable that imitation played some role even earlier, though we cannot determine yet how important it was. 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 1996) provided by imprints in fossil cranial cavities, which show a developed Broca’s area in hominins, whereas it seems absent in australopithecines.

Human beings use imitation more than any other animal (Meltzoff and Prinz 2002) and this is evident especially in babies, who learn by “interactional synchrony”, i.e. mimicking adults the better they can. A test requiring children and chimpanzees to imitate certain actions in a given order to achieve a purpose has revealed that children seem able to integrate previous information in their imitative behaviour (Whiten 2002). In doing so, they do not blindly copy the sequence of actions to achieve the purpose, but analyse each action and construct their own sequence of actions. This means that children learn how to behave in certain situations whereas chimpanzees memorise the sequence of action as it is. This finding is of capital importance to understand symbolism and rituals because it suggests that imitation in human beings, including babies, is not a mere mimicking or copying, it is an intellectual action that may produce different results in different individuals. This happens because each individual may have different views, but also each individual will have different experiences in memory. Kinsbourne (2002) argues that imitation is so deeply rooted into human beings that it cannot be a product of recent adaptation. In his opinion, imitation “underlies affiliation both to individuals and to the group” (Kinsbourne 2002). Prinz (1993) had already noted that in humans only rhythmic input induces rhythmic behaviour, which is a specific effect of the neurological capabilities affecting affiliation. Rhythmic movements of the body inviting similar movements from others can also be described as dance (Freeman 1995: 153). Kinsbourne (2002) observes that dancers synchronise, reciprocate or alternate movements and all of these actions can be recognised in infants. Moving “with others into a shared rhythm may trigger a primitive sense of irrational (...), beguiling belonging and a shared mindset” (Kinsbourne 2002: 325).

To summarise, this brief overview of what disciplines other than archaeology have achieved in the understanding of the typically human imitative behaviour provide much useful information about rituals. There is no doubt that imitation alone cannot be held responsible for every ritual, but the neurological basis of imitation, probably modelled on the needs of communicating with other individuals, introduces some recurring themes in rituals. We have seen that the imitative behaviour normally resides in the Broca’s area of the brain, which appears significantly changed in endocasts of hominins’ skulls. This same area seems to have great importance also for

language. The imitative behaviour of human beings is often used to learn actively. The brain analyses the ongoing process and recognises key elements, which are then researched in the individual's memory. The final output of the imitative behaviour can therefore not be a mimicking or copy of the imitated action or object if this has been understood, regardless of its correctness. Simple symbolism therefore may be the outcome of these neurological processes because the brain is capable of linking different concepts if it recognises analogies between them. Rhythm and the case-study of dance suggest that imitation was also a way to maintain social relationship and communicate. Rhythmic movements are a repetitive reproduction of a few movements and therefore invite other individuals to repeat and learn them. Rhythmic movements do not have a specific meaning attached and the reasons to produce them may be different for each individual (e.g. one individual may produce a repetitive movement because sick or wounded while another may repeat the same movement for curiosity or to express vicinity). Therefore, their reproduction may happen without all the individuals understanding why those movements are being enacted. In turn, this leads to a sense of irrational, where the community is paramount. The sense of irrational may also be emphasised by music or substances. A state of irrationality may be useful to create bounds among members regardless of an immediate rational reason and may be a natural way to feel free, without any of the problems or fears that a state of consciousness constantly keeps in mind.

Turning to archaeology, the term "ritual" is often undefined because archaeologists recognise differences in the purposes and performances of rituals. In short, if symbols are words, rituals are sentences of their own language. This generic analogy well expresses the fact that they are expression tools, which unlike language can encompass both the natural and supernatural sphere and are available both in conscious and unconscious states of mind.

It has been reported that the first artificial fire dates 800,000 years BP (Goren-Inbar et al. 2004), though only about 250,000 – 200,000 years ago the Levallois lithic industry introduced standardisation in tool-making. During the same period, occasional caching of the dead has been reported, such as at Pontnewydd Cave, but no rituals can be detected in the archaeological evidence. Only 92,000 years BP, at Qafzeh Cave, burials and at least red ochre were found together, suggesting some ritual (Hovers et al. 2003). 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.

The earliest examples of figurative plastic art appear much later than early burials, possibly between 35,000 and 30,000 years BP (Conard 2003), but incised red ochre found at Blombos Cave and dating 77,000 years BP (Henshilwood et al. 2002) may be an antecedent of artistic expression. The earliest example of pictorial art has been found at Chauvet Cave and dates 32,400 years BP, which is chronologically very

close to the earliest plastic art. 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 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 of 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 hoards of visitors or by the chance of learning the communal heritage or perhaps these areas were visited as part of a religious pilgrimage.

Painted caves and rock-art locations 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.

Cave and rock art at any place continues for centuries or even millennia and therefore the reasons and meanings of it may have been varied. 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). Depictions in caves may have represented the spiritual world and images were occasionally outlined from natural features of the rock seen in the feeble light of lamps such as that found at Lascaux (Lewis-Williams 2002: 210ff.). However, these are just the rituals of unconscious state. The same Lewis-Williams (2002: 207ff.) acknowledges that some signs, namely some vertical lines with a bulge on one side and hut-like motifs, do not conform to any of the known entoptic types, which are

categories of images that form naturally in the eye during states of alterations or semi-consciousness. Lewis-Williams (2002: 210ff.) also reports of images being removed, such as at the caves of Cosquer and Chauvet. Moreover, some depictions of wounded men recall the shaman-healer recorded among the Inuit and in central Australia (Lewis-Williams 2002: 281). These depictions also seem not related to altered states of consciousness, but instead they may have promoted the artists suggesting that they were in a state of sufferance, between life and death, which was responsible of their visions (Lewis-Williams 2002: 284). This would have been a manipulation for personal purposes of the ritual tradition as powerful as the creation and manipulation of memory, as we have seen. However, a distinction between states of consciousness and unconsciousness does not seem satisfactory to categorise early art. States of altered perception seem to have deliberately provoked to have visions and therefore enter in contact with the spiritual world, suggesting that the whole ritual action was motivated by some consciously pondered purpose.

In support of this view is the case of the imitation of the bear at Chauvet Cave, which also reintroduces imitation. Robert-Lamblin (in Clottes 2003: 204ff.) notes that traces of bear are omnipresent in the cave: prints, clawmarks, hollows, polishing marks and bones were all left in great numbers. Bears lived and died in the cave. In several occasions within the cave, human hands, palms and fingertips appear at the same height of the highest bear clawmarks, evidently imitating what bears did. Ancient and modern records sustain a link between bears and shamans. In the Neolithic rock art of Yakut, Siberia, the myth of the bear is linked to shamanism. In contemporary Siberian languages such as Chukchi, Yukaghir, Even and Evenk the bear is designated as an ancestor of human beings (Chichlo 1981: 39ff.). Among the Inuit, the bear is perceived as an intermediary between men and animals. Cave and rock art were therefore a symbolic mean to represent and contact the spiritual world, in different ways, either conscious or unconscious. Ancient shamanism can be considered exactly this, the practice dedicated to connect the natural and spiritual world, except for the case of the wounded figures, which may imply healing powers. Natural and spiritual world also mirror reality and mind. It seems interesting at this point to notice how imitation played a role both in depicting the natural world and in expressing the perceived spiritual world, the mind. This suggests that some of the earliest art, which seems extraordinarily abstract especially in the earliest ivory figurines (Conard 2003) or the Blombos Cave incisions (Henshilwood et al. 2002), may have been the product of the imitation of the perceived world in the mind. However, humans in creating such art expressed their minds and realised that in the natural world they were not just powerless spectators, but prime actors and potential directors as well.

The case of the Early Neolithic (EN) pottery at Franchthi Cave (Vitelli 1999) will continue the theme of rituals as link to the spiritual world. Despite the later date of 6500-6000 B.C. and the subject, some rough, heavy and relatively scarce pottery, we will see that rituals changed very little, to the point that potters play the role of shamans and promote themselves as cave artists did. At Franchthi Cave, 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 and in the case, in which sense. However, it is evident that the described ritual use of pottery is used consciously to gain a benefit, social prestige. Rituals are used at Franchthi as political tools and memory plays no role. Imitation is constrained for long time; each technical tradition is kept alive and separated. The production of pottery becomes associated to feasting and religious rituals, but for this to happen the normal transmission of knowledge is prevented, but only after five different traditions have been established. This is an interesting case because normally restrictions on who can perform a religious action or ritual are set after the performance is recognised by the community as linked to the sacred or supernatural world. Rules are defined once the community accepts either that the ritual would not succeed if performed by non-initiated or that the value of the ritual itself is provided by the initiated linking the supernatural and natural worlds in a symbolic performance. Here instead, the first potters prevent the spread of what is elsewhere regarded as a technique in order to obtain social prestige and power by having a rare and requested skill. However, the skills are then associated to existing rituals and it is possible that some people may have effectively built a ritual out of a technique for personal advantage, something which becomes frequent in later state-like polities.

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 among the Minoans help in clarifying the conscious use of rituals as uniting and excluding force. Funerary rituals outside the Mesara tholoi included drinking, eating and perhaps dances in paved courts (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. Conversely, the palatial rituals inferable from foundation deposits (Vianello 1999) were used to acknowledge an established hierarchy within the participants. In the case of the foundation deposit beneath room 50 at Phaistos, a few decorated mugs have been found together with several rough cups and animal remains. It seems plausible that the food was distributed to all participants with a mug or cup, but it is possible that a watching public was present as well, as some frescoes at Knossos suggest. In that case, at least three different social groups were participating. The first group used decorated mugs and perhaps had privileges, such as the first or larger portion. The second group, larger in number, used the rough cups and also participated to the feasting. A possible third group could only watch and was included in the community but excluded from participation, demonstrating a sophisticated political use of the ritual’s power of uniting or disuniting to set precise hierarchies. Although we cannot be sure there was a third group watching on occasion of this ritual at Phaistos, the frescoes at Knossos prove that this happened in some occasions.

Imitation also plays a role, because the celebratory feasting occurred well before the completion of the new palace. This fact recalls the Levantine customs. Indeed, the idea of foundation deposits and perhaps of palaces is copied from the Near East. An early foundation deposit at Malia containing just a jug proves a connection. The jug is similar to that visible in a Levantine relief, which was used by a king in a symbolic act of libation of him, representative of the people, sharing the contents with the deities, representing the supernatural world. This same idea of sharing beverages or food with the supernatural is much older and widespread; we have seen that already in Early Neolithic Franchthi cave feasting was enacted. However, the use of a specific ceramic set, a jug in this case, is frequent in some regions of the Near East and appears only once in Crete, in the oldest foundation deposit known. In the Mesara tholoi (e.g. Kamilari), libation is used to connect the natural and supernatural worlds in the same way. The people there used cups, which were then placed upside down probably while still containing part of their contents. This tradition is however different in its form from any other ritual. In the same tholoi, food was also consumed, and this is a Cretan tradition, which is shared by peak sanctuaries, tholoi and palatial rituals such as foundation deposits. There are at least two instances of imitation to be recognised in these connections. The fact that cups have been found upside down in the tholoi means that people took care to copy what had been done before, by the ancestors, who were remembered in the rituals. Dances may also have been a remnant from a far past. This is very different from foundation deposits, which

may have had some fixed rules but change substantially from one to another. Thus, apart from the earliest highly symbolic deposit at Malia that resembles closely other deposits in the Near East, the palatial elite did not use imitation but memory. Employing imitation, the result of the ritual in the tholoi was as similar as possible to what had been left or known from past occurrences. Employing memory instead, the ritual of foundation deposits changed and the result was often evidently different from what happened in the past, for example no jug is found in deposits later than that of Malia, where the jug was the symbol and only element of the foundation deposit. It is true that imitation in tholoi may have been facilitated by the fact that cups remained in sight whereas foundation deposits were sealed underground, in the same way that Palaeolithic and Natufian burials are incoherent while cave and rock art was consistently similar in style at any one place.

If this is the case, it seems that imitation was preferred initially perhaps because being genetically encoded in our brains; it was simply the most natural thing to do. Memory instead was used in the other cases, but it became a choice after its main advantage, adaptability, was discovered. Of course, imitation is just one of the features of these rituals, and may not be the most important in many cases. However, the available information from neurosciences is limited and imitation is one of the few brain functions to have evolved in hominins that has been studied. The capacity of language is another function recognised to have evolved in hominins, but neuroscientific studies have only begun with the controversial gene FoxP2 (Enard et al. 2002; Christiansen 2003; Marcus and Fisher 2003). The observation provided by imitation may become a useful working hypothesis. Briefly, it may be postulated that rituals were initially subject to great influence from genetic and psychological constraints, which have progressively eased.

Minoan Crete is a particular good test case because rituals can be divided in two categories: early communal rituals and late palatial rituals, which were contemporary for a long period. Among the “early rituals” are the peak sanctuaries, caves and some tombs, such as Mesara tholoi. “Palatial rituals” are those performed within palaces, including foundation deposits and perhaps some funerary rituals, though generally rituals performed in dedicated shrines were the commonest of this type. In short, early rituals are communal, without any clear social hierarchy expressed by exclusion. In the case of tombs, extended families or entire communities are buried together, though assemblages may have distinguished the rank of some people. In peak sanctuaries, fire was a featuring element, which probably had a great sensorial impact if the rituals were performed during the night. Darkness and perhaps torch fire were also features of cave rituals. Peaks and caves are special natural places, closer to the sky or inside the land that would have suggested, again via the senses, vicinity to other worlds like heaven and hell. Feasting and libation also involved sensory stimulation. In peak sanctuaries, some figurines of body parts suggest that people requested help for healing to the supernatural worlds, and this may have been linked to shamanic practices. Imitation is generally strict, with the ritual practices being observed scrupulously by direct imitation. There is scarce adaptability of these rituals, which continue almost unchanged for centuries and disappear when their associated meanings are not clear any more. Conversely, in palatial rituals, sensorial pageantry does not play a major role and much of the action takes place in or near the palace. The practicalities may change, as we have seen in the case of foundation deposits, and the rituals continue as long as the palaces are in use. They are more sophisticated because memory may play a role and complex ideas were expressed and eventually encoded. It was never the simplistic “do as your ancestors did”. All the

potential of expressivity in rituals is used; for example, intelligent manipulation of inclusions and exclusions helped to express social hierarchy and perhaps the roles in everyday life.

The case-study of the Minoan civilisation shows two important additions. The introduction of communal rituals happened very early and deeply affected all subsequent types of rituals. Although communal rituals cannot be ruled out in previous periods, they did not appear to have had much importance. For example, both Palaeolithic art and Neolithic tombs may at most suggest the integration of a few people, namely the shamans-artists and perhaps the family. Rituals that integrate an entire community can be detected only later, though dance may have had this function earlier. It is difficult to say what drives people to express unity at a certain time. For instance, the origins of Minoan tholoi are unclear, even considering the type of ritual expressed. Large funerary buildings such as the Egyptian pyramids already existed, but they were tombs of the pharaohs, not communal tombs. The individuality of people was generally always clearly expressed. The second addition regards palatial rituals, which are evidently inspired from traditional rituals. They certainly break up the previous unity to remark social hierarchy, but hierarchy had been expressed even before with gifts or monumentality in the case of non-communal tombs. We cannot distinguish them on the basis that one uses sensory pageantry to arouse emotions while the other is dull, following McCauley and Lawson work (2002), because feasting and libation were part of the palatial rituals, which were held in spaces studied to create theatrical effects like the open courts or the closed rooms with multiple doors (polythyron). However, sensorial practices and perhaps even shamans-healers do suggest that the stimulation of senses were foci of the pre-palatial rituals. In palatial rituals, senses were stimulated too, but the rituals had to deliver messages. In this sense, I would suggest that rituals are increasingly used as an intentional language, which also uses sensory pageantry. McCauley and Lawson (2002) have suggested that supernatural agents act directly in the case of sensory pageantry and are being acted upon in the case of repetitive scarcely sensorial rituals. Nonetheless, in both cases the supernatural and natural worlds meet at the time of the ritual, with possibly the shaman-healer, the descendant of the dead-ancestor or the palatial celebrant acting as media.

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 10th 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.

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 are also a powerful 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 increase in literacy affected rituals.

The use of rituals appears to have changed from Archaic Greece onwards. It is not possible to state an exact moment or place of change, but the advent of the Mediterranean classical culture seem to have changed the way rituals have been seen.

This change was progressive but inexorable. In Mediterranean Bronze Age societies, we can see that any important moment was marked by a ritual and the community itself defined itself using them, whether expressing unity or remarking social hierarchy. Feasting and libation, the ritual activity of eating and drinking together to celebrate, are very common within the Aegean Bronze Age communities, though not unique to them. This form of ritual may serve as a good case-study. It is a communal activity and therefore it appears with this type of rituals, which existed already during the Greek Early Neolithic, for example at Franchthi cave. It is practised in both non-palatial and palatial contexts in Minoan and Mycenaean Greece. Symposia (libations) and banquets (feasting) are still very popular in classical antiquity. However, there is a great difference between early Greek rituals and later Roman rituals, in spite of their even greater popularity. This happens mainly because the early rituals are prompted on occasions when people meet and eventually welcome or try to befriend members of other communities, whereas in later times banquets were held by richer people to show off their opulence or as a repetitive pleasure that may have as major goal self-pleasure.

For example, in the earliest Greek colony in the West, Pitheculae, the famous “Nestor’s cup” recalls the earlier costume of drinking and eating together when members of two cultures, or communities meet, as we have seen at Monte Grande. However, this particular cup also informs us that the people carrying out the ritual probably had enough culture to appreciate the poetical verses inscribed. The difference between non-palatial and palatial rituals in Minoan Crete was largely confined to expressing clearly the social hierarchy. The celebrants were probably trying to affirm their own social status by performing rituals, similarly to what Palaeolithic shamans-artists already did thousands of years before. The figures of wounded men in Palaeolithic caves or the shamans-potters of Franchthi cave are all possible proves of such behaviour. The introduction of communal rituals served the purpose of uniting and keeping unite different people. Age, gender, wealth and social status were all represented and preserved in the rituals, but differences were bridged in the special time of the ritual emphasising the appurtenance of all the participants to the same community. Exclusions meant that non-participants were not members of the community. In the case of the Nestor’s cup, we can still recognise the type and idea behind the ritual. However, the presence of writing, specifically poetry, introduces a new element of exclusion: culture. At the time, only a few in each community could have been educated enough to know poetry and perhaps have rudiments of literacy. This is very different from participating in a ritual with a mug, a cup, or bare hands like in the ceremonies leading to foundation deposits. In those cases, all the participants could understand the ritual and being there was enough to play a part. In the case of the rituals in which Nestor’s cup and similar pots were involved, if the majority of the community had taken part, they would not have understood poetry and possibly many of them would not have understood writing. Therefore, we may conclude that those rituals using similar pots were probably excluding large parts of the population, though the occasion may still have been somewhat special.

Roman rituals during the Empire were certainly selective in the participants, but they change the meaning of “special occasion”. In earlier times, normally something had to happen to perform a ritual, and the occasion may have been the physical occurrence of something or the recurrence of it. In Roman times instead, the banquet itself was often the occasion, like in contemporary times a party is occasion to feast, but we do not need a special occasion to have them or to participate in them. We may participate to a party without prior knowledge of the occasion that originated

the party and we may not discover it because, after a few glasses of alcoholics, we do not care or even there may be no other reason than having fun. Modern parties and Roman banquets are very similar in this, notwithstanding the opulence normally distinguishing the latter. They are the occasion to celebrate and participation is not dependent upon a connection between the celebrated occasion and the participants. Social, economic and cultural rules dictate who will be in the list of participants.

In this sense, the ritual is stripped of the cultural meaning. What remains is the sensory pageantry, which always played a role, from Palaeolithic art and the altered states that may have been necessary to produce it, to funerary rituals where grief and sadness are overwhelming, to communal rituals where the community is expressed by the physical presence of the whole community at once. The alphabet affected rituals in two other ways: by spreading knowledge and therefore reducing the need of them in a world felt more secure and by enhancing communication capabilities. For instance, a letter became a form of delayed direct contact. "Direct" contact because people can have powerful emotions reading letters, people may fall in love reading letters, emotions that previously were typical of face to face interactions or rituals. As a result, we may conclude that rituals such as those performed from the Palaeolithic to the early Mediterranean classical times decrease considerably in later periods in the Mediterranean region. Literacy perhaps played the greatest role in the change, but it may not be the only changing element.

In conclusion, changes and innovations in rituals have been assessed for most of human history, though the focus has been on the Mediterranean because the whole subject could not be compressed in this short work. Borrowing some interesting and new results from sciences other than archaeology, we have tried to investigate why early rituals appeared in a certain form and exploited certain elements. Imitation is the only natural feature useful to us that has been studied to some degree in neurosciences. Thus, this work appears inevitably imbalanced, conferring a role to imitation that may have been greater than what it was. Yet, this is the way forward. Further studies in neurosciences, psychology and genetics will provide an increasingly clear view of the natural basis upon which consciousness grow up. The idea of considering rituals as language is an old one, as we have seen, but it still seems promising. Not only rituals developed as language, they were and are a form of communicative language that was partially replaced by written language. We have therefore body language (gestures), rituals, spoken language, written language and within this alphabetic written language, music and many other forms of language (Premack 2004a). Language therefore may be a distinguishing feature of humans not because of advanced vocalisation capabilities but because language is the only way we express our consciousness, which is the true distinguishing feature. The development of rituals throughout time and space has shown common features, for example the case-study of one Dolores Anasazi ritual has been successfully intercalated in an otherwise Mediterranean history. We have seen how sensory pageantry and conscious manipulation have always been two ingredients of rituals and probably there are many more. Specific achievements have had their notable impact on rituals. The emergence of state-like polities and writing are only two of them. Something probably occurred also at the time communal rituals were introduced, but it is difficult to say what at this stage of the research. However, the two achievements identified are very different in their nature, socio-political one and cultural as well as technological the other one. We may find other similar achievements in human history that may have had, or will have, an impact on rituals. For example, new communication facilities such as the phone, particularly the mobile

phone and, of course, the Internet are changing the societies of the contemporary world. It is easy to see the analogy between writing and the new technologies. We are not able to identify instead other types of achievements or occurrences. Famine and the spread of diseases may be another factor of change. Rituals changed for various reasons, as languages do.

Andrea Vianello
University of Sheffield
Department of Archaeology
Northgate House
West Street, S1 4ET
Sheffield
United Kingdom

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