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Gestures and rituals: the archaeological evidence
Andrea Vianello
University of Sheffield, UK

Email: a_vianello@hotmail.com

Abstract

This paper deals with the archaeological perspective of gestures and rituals. It is evidenced the necessity of a multidisciplinary approach that includes neurological studies and the contribution of archaeology to such approach. A few case studies from Mediterranean cultures and the Maya provide examples of current interpretations of the archaeological record and evidence the general features that have been identified. It is concluded that gestures and rituals were powerful vehicles of communication that have been intentionally used as niche languages. The meaningful use of gestures in particular contexts may have produced new forms of gestures, such as music and dance, which constrained the expressivity of the body to predetermined moments of total or partial loss of consciousness and agreed practices. The conscious use of gestures has also shifted away the possible messages from the body. In particular, rituals have been employed in various social strategies, and often had significant roles in the definition of social structures.

Keywords

ancient music and dance • communal burial • cross-cultural research • European archaeology • funerary ritual • gesture • Mediterranean archaeology • mortuary behaviour

Gestures and rituals: the archaeological evidence

This paper summarises the contribution that archaeology can make to the understanding of body movements, especially gestures. Archaeological evidence related to gestures and rituals will be presented. This presents a great challenge because gestures are not directly written in the archaeological record and rituals are often synonym of the unknown for archaeologists (Barker 1999: 747). However, archaeologists are not new to such challenges because recently archaeology is providing valuable insights into the development of cognition (e.g. Mithen, 1996a, 1996b), symbolism (e.g. d'Errico et al., 2003) and language (e.g. Davidson, 2003).

Multidisciplinary approach

Evidence from several disciplines including archaeology is at the heart of the multidisciplinary approach increasingly adopted by scientists to chronologically correlate the emergence of cultural and biological traits in Anatomically Modern Humans (AMH). Archaeology plays a major role because the archaeological record is subject of study or testing ground for most researches. The multidisciplinary approach is methodologically sound because human evolution is responsible for all the characteristics of humans and therefore all disciplines concerned with any human characteristic should have a say.

Archaeological evidence can be challenging for the multidisciplinary approach. The archaeological record can comprise synchronic cultural evidence as well as human fossils, allowing the association of cultural behaviours to precise stages of human evolution. However, this is a rare occurrence and for the most part biological evolution and cultural development can be reconstructed separately from a very partial record. For example, the fixation in the human genome of the only known gene having a role in language capabilities, FOXP2, has been dated to 200,000 years BP (Enard et al., 2002), but language is inferred on archaeological considerations to have existed from 60,000 years ago (Davidson and Noble, 1993, p. 363). In short, archaeology provides a *terminus ante quem* and genes a *terminus post quem*. Archaeologists often infer behaviours based on earlier biological changes (on language see d'Errico et al., 2003).

Biological evolution certainly also affects cultural behaviour, but the mechanisms and relationships are not yet understood. For instance, genetics tells us that gene FOXP2 in zebras is 98% similar to the human one (Haesler et al., 2004), and that 98% of the human genome is shared with chimpanzees (Marcus and Fisher, 2003). This suggests that only a few significant changes at the genetic level are responsible for human behaviour and the recent discovery by Dorus et al. (2004) of the accelerated evolution of 214 genes of the nervous system represents the first results of efforts to find such significant genes. Nevertheless, archaeologists still have difficulties distinguishing the cultural behaviour of Neandertals and AMH and cannot associate any cultural change to a specific genetic change. Whilst both biological and archaeological sciences contribute with relevant perspectives, they still have a long way to go before resolving the issue.

Gestures

Imitation, the neurological basis of gestures

Most great apes, including humans, live in social groups. This means that there is a common need for extensive communication capabilities in order to maintain and improve social relationships. Vocalisations (Hauser and Tecumseh Fitch, 2003) and gestures (Corballis, 2003) were probably the earliest form of communication among hominins since they were already present in primates (Dunbar, 2003, p. 222-229). The combination of sounds and gestures probably resulted in an overall extended form of communication (McNeill, 1985; Corballis, 2003), though

gestures can be a silent alternative useful in particular occasions. Spoken language eventually arose from simple vocalisations. Movements and sounds developed into dance, but gestures, movements and sounds are also the foundation of early rituals. Indeed, dance and rituals probably need not to be separated until historic times.

In modern times spoken language is the primary form of communication, but facial expressions often complement it. The tone of the voice also contributes to the physicality of spoken language. In contrast, written language excludes the body altogether. Gestures are still made while speaking, but because they generally take no part in the communication, they are ignored, sometimes can be distracting and most of the time are undecipherable to the same person making them. This happens because nobody associates a specific meaning to gestures, creating a sensation of random movements.

To sum up, humans used all forms of communication available to them, developing and integrating them. The body featured prominently in all ancient forms of communication until written language appeared, and is still being used in contemporary times. Gestures and vocalisations may have comprised the earliest capabilities and both used imitation as their primary neurological process because communication was based on imitating and then agreeing the meaning of vocalisations and gestures. The discovery of *mirror neurons* (Rizzolatti and Arbib, 1998; Arbib, 2003) has been fundamental to understand the natural basis of this imitative behaviour. Rizzolatti and Arbib (1998, p. 188) found 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.” This is also valid for dance and rituals, which are only a coordinated set of gestures and other communication forms.

The archaeological evidence of gestures

The only possible evidence for gestures in archaeology is provided by depictions. Representations of postures and movements are very frequent and ancient Egypt provides some of the best examples. Artistic rules and conventions were used in the Egyptian as well as the Aegean and the Levantine Bronze Age. In Egyptian art (Arnold, 1999; Davis, 1989), the body of important people was strictly subject to these rules which created a rigid hierarchy reflecting the social order. Expressing order was very important in Egyptian art and for this reason art was deliberately highly symbolic. Realism was principally reserved for objects, animals, and human beings of lower rank. Among these depictions, gestures such as greetings and signs of adoration are often recognisable. Remarkably, gestures are absent from depictions of those of higher rank, even the extremely realistic depictions of the Old Kingdom. The recurring integration of hieroglyphs and depictions comprising those of higher rank is more than a simple juxtaposition. Hieroglyphs help in the understanding of the scene and balance the scene by partitioning it, while the depictions permit the omission of *determinative* hieroglyphs. Thus, hieroglyphs and depictions become blended into a common symbolic language.

In contrast, in Bronze Age Aegean art, gestures are normally present and can be extremely varied within the same context, such as figurines from peak sanctuaries depicting worshippers (Morris, 2001, p. 249).

The figurative art of the Classic Maya period differs from any ancient Mediterranean work in the accuracy of depicting some gestures (e.g. Pérez de Lara, 2004). Fingers are often clearly shown in several unnatural poses, which may have been meaningful in an encoded system of gestures. Writings accompany some depictions, such as in Egypt, and therefore gestures were not

the primary form of communication. The different approaches in depicting gestures among Egyptians and Mayans are probably due to different artistic styles in the two cultures.

To conclude, it is a fact that in Egyptian art people of higher rank are normally represented omitting any gesture and postures are normally canonical if not rigid. Egyptian art seems also to divide gestures and body movements according to whether they are coordinated or uncoordinated. Dance is an example of coordinated movement, warfare one of uncoordinated movement. This distinction seems to represent the dichotomies order and chaos, positive and negative. Thus, Egyptian art considers the communicative potential of the body. The absence of gestures in depictions of those of higher rank might be due to the fact that they were representations of their *ka*, the spiritual charisma. During the Old Kingdom, realist representations of the body for funerary use were common in the belief that the *ka* needed to recognise the body before reuniting in the after life. In the Egyptian, Aegean and Mayan cases presented, ancient artists were aware of the expressivity of the body through gestures and represented or excluded them according to their beliefs, conventions and context. However, it must be noted that gestures never represent the main communicative system and are often an expression of the body only. Ancient Egyptians believed that the body was just one of nine components of the human being. Gestures are also recognisable in earlier rock and cave art, but their meaning is even more unintelligible.

Music, dance and art

The title of oldest instruments is contended by wind instruments found in three locations. Recently, three bone flutes (Conard, Malina, Münzel and Seeberger, 2004) found at Geißenklösterle cave in Germany have been dated between 30,000 and 37,000 years old and are among the oldest surviving musical instruments. In the same region, at Hohle Fels cave (Conard, Malina, Münzel and Seeberger, 2004; Dalton, 2003), several figurines made of mammoth ivory also used as flutes, have been found. They have been carbon-dated to around 30,000 years ago. The remaining evidence comes from two assemblages of bird-bone pipes, one from Geissenklösterle, Germany recently dated to 36,000 years ago and one from Isturitz, France (d'Errico et al., 2003, p. 39). Isturitz has also yielded "the best and most numerous collections of Upper Paleolithic art objects" (d'Errico et al., 2003, p. 43). Some connection between art and music appears sustained by two of the three assemblages. Although these are the earliest examples known to us, the technology used presupposes a few earlier stages (d'Errico et al., 2003, p. 48). Furthermore, musical vocalisations and other noninstrumental sounds may have existed much earlier.

In Egypt, the earliest representations referring to music represent singers along with people clapping their hands (Fig. 1), and once again the flute is the earliest manufactured instrument depicted. *Clappers* are among the earliest types of instruments known from Egypt and are musical instruments corresponding to modern castanets but shaped as hands. Although scarce, this evidence suggests that noninstrumental sounds are at the origin of music. Early instruments such as the flute and the clapper may have been developed as extensions of body parts.

Dancing is also present in figurative art from very early times. Egypt provides reference materials from the pre-dynastic period. Dance and instrumental music are often associated, but in some early Egyptian depictions they are represented in two different registers or separated. Remarkably, clappers are often included in depictions of dancers rather than musical ensembles. Flutes and other wind instruments only rarely appear along with clappers.

To conclude, body sounds and unusual movements are probably at the origin of both music and dance and therefore may have existed before any associated material evidence. The senses are stimulated while exercising such activities due to the use of the body, and while watching the performances, which are also perceived through the senses. Both music and dance were originally forms of expression of the body like gestures. The most notable difference is perhaps the separation of music and dance from ordinary activities. Whilst gestures may appear at any occasion, music and dance are confined to dedicated moments. The confinement of activities to special occasions connects music and dance to art once again. Lewis-Williams (2002) suggests that ancient people produced cave and rock art to actively pursuing a state of altered mind. By overwhelming the senses, the body escapes control from the mind and reveals the inner self. The same interpretation may be extended to music and dance. Most importantly, repeated activities performed only for special occasions are rituals.

Rituals

Rituals share the same intent of gestures, communication, and use similar neurological processes, largely based on imitation. Gestures, music, dance and art can all be part of a ritual. The main features of rituals are repetitiveness and the high stimulation of the senses, both of which may contribute to states of altered mind, especially in conjunction with music, dance and the intake of hallucinogens. Sensory pageantry has been interpreted as the fundamental attractor of any religious ritual system and as an indicator of the sustainability of the ritual itself (McCauley and Lawson, 2002), though this hypothesis remains unverified as yet.

Burials and funerary rituals

Burials appear in the archaeological record after the emergence of AMH and for this reason are frequently considered to be a by-product of enhanced cognitive capabilities. However, it is possible that burials appeared as early as the Middle Palaeolithic and that both Neandertals as well as AMH may have buried their dead on occasion. There is disagreement on several issues regarding early burials among archaeologists (e.g. Gargett, 1999; Pettitt, 2002; Davidson, 2003), and it is unlikely that solutions may be found before further analyses are carried out (d'Errico et al., 2003, p. 25). The earliest burials were probably accidental interments or simple caching of the dead, but it is often impossible to decide between the two. Burials of several Neandertals, five to fifteen, occur as early as 225,000 years ago, at Pontnewydd cave, Wales (Aldhouse-Green, 2000). Offerings appear much later in the archaeological record, about 92,000 years ago, when red ochre was probably associated to a few AMH individuals buried at Qafzeh cave (Hovers, Ilani, Bar-Yosef, and Vandermeersch, 2003). At Shanidar cave, Iraq, seven Neandertals were deposited on separate occasions over fifteen thousands years, between 60,000 and 45,000 years ago (Pettitt, 2002). From about 30,000 years ago open-air and multiple burials in European sites become frequent and grave goods are often found (Pettitt, 2002); only AMH individuals can be firmly associated with grave goods.

The mainstream theory suggests that a sudden change in the brain of AMH is responsible (Klein and Edgar, 2002; Mithen, 1996b)¹. An alternative theory (Coolidge and Wynn, 2004a)

¹ New research is trying to pinpoint exactly what made AMH brain smaller and more efficient. For instance, Seth Grant suggests that “maybe synapse protein evolution has been more important than [increases in] brain size” (Pennisi, 2006, p. 244). Furthermore, it seems unlikely that the evolution of the brain is driven by changes on just one of its components, so the reality of brain evolution and the changes that affected the development of cognitive abilities may

proposes that Neandertals matched the technological advances of AMH by emulation, but the incomprehensibility of complex symbolic behaviours to them prevented emulation of abstract ideas. Eventually, Neandertals could neither innovate nor emulate their competitors and were replaced by AMH. Regardless of which theory will be proven, it seems evident that rituals, burials in particular, are the by-product of a significant neurological modification, whether sudden or progressive. Before then, gestures expressed directly a psychological state of the individual or were used for direct communication. Burials instead convey a shared psychological state; mourners, deceased and the wider world all participate together, though differently. A ritual requires strong social bonds within an established community.

Natufian Culture

Thus, it is not the case that 13,000 years BP burials are a regular feature of the Natufian culture in the Levant, cradle of the first farming communities (Bar-Yosef, 1998). Graves are normally in pits never located underneath inhabited houses, so the practice of burying the dead is consistent across the culture. However, “the burials demonstrate variability in mortuary practices” (Bar-Yosef, 1998, p. 164), which continues in late periods (Kuijt, 1996, p. 329). Position of the body, number of inhumations, skull removal, secondary depositions, bone removal after decomposition, marking of the burial with cobbles on or around the skeleton, presence and type of grave goods are the most frequent variables. Some objects found inside burials such as figurines and daggers have been interpreted as personal possessions of the dead; these and other grave goods are most frequent in the early period (Bar-Yosef, 1998, p. 164).

Social inequality is probably not the reason behind the differences in mortuary practices because there is no clear evidence of hierarchy. During the following millennia, evidence of social hierarchy is usually clear if not extreme. For example, the Egyptian pharaoh was buried in pyramids while the first Chinese Emperor, Shi Huangdi, was entombed with a terracotta army of thousands of life-size statues near Xi’an. When social status plays a role, mortuary practices and rituals are “hijacked” for political purposes.

Bronze Age Crete

Burials and mortuary practices in Minoan Crete well represent the increasing complexity of the Bronze Age. Venues, ritual practices and represented gestures were particularly varied in Crete (Dickinson, 1994, p. 267) and it impossible to categorise each variation precisely. However, a distinction will be attempted here based on Mesara tholos tombs (Branigan, 1993), where communal rituals were practised. Other communal rituals were probably performed in “peak sanctuaries”, cultic places located on the summits of hills, where large fires were lit (Dickinson, 1994; Peatfield, 2001; Chryssoulaki, 2001, p. 60). All these are manifestations of unity were emphasised by communal eating and drinking. The presence of the dead, the possible dances, the fire, and the isolation of the locations of these rituals also suggest that the rituals were occasions in

be yet to be discovered. In the meantime, such researches prove that the simple capacity of the brain, which can be calculated from skulls, is only a partial indicator of the evolutionary stage of cognitive abilities. This is at the moment the only information that archaeologists routinely extract from the fossil record for this purpose and implicitly a direct correlation between such partial evidence and the stages of brain evolution has been accepted. As the research on brain evolution progresses, our understanding of the crucial emergence of AMH appears increasingly based on flimsy evidence and shaky foundations when it comes to its most distinctive anatomical part, the brain. Thus, we may be able to recognise when humans developed their current physical anatomy, but can probably only speculate about when the human mind evolved.

which the senses of all participants were deliberately stimulated in the same way; they were shared experiences. In addition, ecstatic trances may have been performed in caves (Tyree, 2001, p. 43) and perhaps also in peak sanctuaries and tholos tombs. Evidence of light in darkness (natural in caves, provoked by fires elsewhere), percussive music and dancing all strengthen such hypothesis (Tyree, 2001). In spite of the complexity of some rituals, ancestral practices such as shamanism may still have formed the core of the experience, but other practices were performed too. As a result, all the participants may have performed at least one cultic activity and therefore shared the experience physically.

Returning to tholos tombs (Branigan, 1993), these are communal tombs used by enlarged families or small communities that could contain thousands of corpses. A main chamber was used for the deposition of the corpses; the bones were moved aside after decomposition and it is possible that the offerings were reused at times. The assemblages of grave goods varied because of this practice and the apparent absence of a fixed set of grave goods. The same behaviour is found everywhere in the Mediterranean region and is also seen thousands of years earlier in the Natufian culture. Finally, disarticulated bones, possibly the products of the movements carried out with every new deposition, were removed and stacked in adjacent rooms. Here the set of activities performed on the corpses does not add anything new, but it is evident that a belief admitting after life and a spirit existed. The presence of the spirit was probably recognised by the face: the more its visual appearance faded away the farther from the living it was perceived to be.

The mourning and rituals associated with the death were performed outside the tombs. The outlying paved areas were probably used for dances (Branigan, 1993; Tyree, 2001), like the set of figurines “Kamilari dancers” suggests. Ceramic cups were used for communal eating and drinking; they were left in place upside down. Probably it was a way to share the food with the buried dead.

Rituals in contemporary Cretan palaces appear very different considering communality. Palaces have open air spaces called courts, which acted as theatres for gatherings of crowds at times of processions, dances and rituals, as the Grandstand fresco and Sacred Grove and Dance fresco from Knossos demonstrate (Albers, 2001, p. 137 note 24). Most of the people depicted were simply attending the performances, but they were excluded from taking part in the performances and probably food and drinks were not distributed.

Thus, it seems plausible that the communality of the rituals in tholos tombs was a social and political statement, rather than an expression of a belief. In this sense, a political message of unity was delivered across generations through rituals, which were using shared physical experiences to achieve it.

Late Bronze Age Sicily: Thapsos

Mediterranean Bronze Age cultures produced plenty of cults and ritual practices. The key advance is perhaps the deliberate use of rituals for undeclared purposes, adding layer upon layer of symbolism and effectively employing them as language. In communal Late Bronze Age rock-cut tombs at Thapsos (Vianello 2004), Sicily, grave goods are accumulated and re-displayed at each funeral in a manner not too dissimilar from Early Bronze Age Cretan tholos tombs. However, at Thapsos grave goods seem to be chosen according to their economic rather than affective value. The result is that valuables were accumulated in tombs and periodically displayed to the wider community on occasions of death. Thus, tombs were both an economic liability and an asset. The practice of carving splendid tombs, filling them with valuables and then displaying them on

occasions of interment is probably related to a strategy of social power. At the core of the strategy was the realisation that in this way accumulation would have permitted the display of more wealth than was otherwise possible.

Mourning was again occasion to drink and eat together; ceremonial ceramic basins were employed for libation and were discarded inside the tombs, often broken because of their monumentality. The absence of other cups suggests that people collected food or drinks directly from the giant basins. Performing physical activities together and sharing the experience, created a sense of unity in the same way the Cretan ritual practices did. However, here the undeclared message conveyed by the ritual is opposite to the declared one! Whilst the libation declares unity, the probable division of the community in family tombs and the practice of wealth display disclose the establishment of the social hierarchy in that community. The community was still the recipient of all the conveyed messages, but evidently the society was expanding to the point that blood ties across its members were weak and perhaps sometimes nonexistent.

Mayan communal tombs

Mayan communal tombs “lack uniform patterns regarding age, gender, completeness and articulation of skeletons”; no standardised patterns are recognisable (Weiss-Krejci, 2004, p. 369). This variability has been interpreted as the result of *strategic decisions* (Weiss-Krejci, 2004, p. 374) determined by the relationship between individuals that were possibly members of local elites considering the high number and quality of grave goods. In particular, it is possible that the Mayan elite adopted a strategy of burying together individuals distant in time to reinforce and legitimise dynasties (McAnany, 1995; Weiss-Krejci, 2004, p. 397). The evidence of this behaviour is still limited, but includes important tombs reused after centuries to establish a link between a recent ruler and an important ruler of the past such as in Temple 33 at Tikal and depictions of one ruler honouring the tomb of past rulers and their family even if probably no blood tie existed such the one of the Piedras Negras Stela 40, which depicts Ruler 4 honouring the mother of Ruler 3 (Weiss-Krejci, 2004, p. 397). As for the depiction of gestures, the Maya provide confirmation that the observations made for the Mediterranean case studies are not specific to certain locations or cultures.

Discussion

Gestures may be performed all the time by everybody, but are a rarity in the archaeological record and rarely attract attention from archaeologists. Gestures must be actively practised in order to memorise and then reproduce them as a language. Thus, the repetition of the act often helps in the identification of gestures and rituals in the archaeological record. The use of gestures does not seem as important to humans, who can but prefer not to use gestures, as to great apes that seem skilled and willing to use them. Why should humans use gestures when language is available to them? In the archaeological record, gestures often appear as a secondary form of communication for humans, a sort of backup language. However, ancient people already recognised them as the language of the body. In that role, they are complementary to language and have been reinvented in forms absent in the animal domain.

Music and dance are the best examples of reinvented gestures. They are a meaningful language of the body, capable of being expressed both visually and acoustically. Singing may be considered as an extension of language, but music is definitely different. Art seems to develop along with music, and may share neurological processes with music and dance. Palaeolithic art, music and dance are all representations in the material world of symbolic meanings transmitted, at

least in part, by imitation. They are all a form of language that required a performance of the body or an external body and are perceived by stimulating the senses. Dance, music as well as art and singing may be categorised as new forms of language of the body, exclusive to humans.

A recent neurological study of dancers (Calvo-Merino, Glaser, Grèzes, Passingham, & Haggard, 2004) proves that mirror neurons, and therefore imitation, are indeed involved in dance, as they are in gestures. Dancers who had performed certain movements were recognising them at cerebral level while watching others performing. Because of the mechanisms of mirror neurons, performing or watching someone else performing known movements has no difference at all at cerebral level. The same might be true also for sounds and performances watched at regular intervals, which therefore become familiar; but there is not yet scientific evidence proving this.

Figurative art shows dancers and musicians only in late contexts; ancient Egypt presenting one of the oldest and clearest records. It appears from the depictions that some people specialised in art, music and dance making a career out of them. Thus, it is possible that there were limits in participation or at least differences across the population in the capacity of expression through these performances. This differentiation may be linked to social status from very early times. For example, young dancers may have been capable of performances impossible for elderly people and therefore the communicative possibilities of the performance, at least in terms of shared experience, may have been restricted to groups within the community, rather than the community as a whole. Thus, these activities had potential for both aggregating and fragmenting the community, the first step towards social complexity.

Rituals are a further development of gestures in humans and one that may differentiate Neandertals from AMH. Simple burials or caching of the dead is an action that can have both symbolic and utilitarian meanings. There is no archaeological evidence suggesting that the dead remained in the mind of people after the burial, or that the burial served as a reminder of the dead. Burials with grave goods presuppose the belief of the dead still existing in some form and possibly remaining within the community, especially when the dead figures as a participant in the mortuary ritual. The belief itself depends on the capacity of keeping the dead in memory. Neandertals may have managed some symbolic behaviour, but the archaeological record suggests they lacked the memory that AMH individuals were just beginning display (Coolidge and Wynn, 2004b). The use of grave goods indeed coincides chronologically with the twilight of Neandertals.

Variability appears to be the rule in funerary practices and this suggests that at the core of the ritual there was respect for the dead and perhaps interaction with the dead, rather than encoded symbolisms and perfunctory rites, which are often characteristic of religions. Burying the dead is a very emotional activity, not suitable for routine.

Changes in the early archaeological records of burials often depend on changes within communities and these may correspond to changes in size, mobility patterns or social hierarchy of the population. Since at least the Natufian period, mourners have realised the social importance of mortuary rituals as a cohesive force that re-established social ties within the community along with their functional utility of separating the dead from the living. Rituals were therefore used deliberately also to gain or maintain social power.

Burials clearly show this potentiality early: belonging to a community means accepting its beliefs, practices and rituals in life and eventually being buried in a dedicated area or a communal tomb to maintain the community in the afterlife. The idea of maintaining the social ties of the community both in life and in death is a powerful one that underpins funerary rituals since their

inception. If rituals can be recognised as a language, then that is the message coming from funerary rituals.

Lewis-Williams (2002) in his study of cave art suggested that rituals may have been exploited very early as a source of social power by claiming the capacity to communicate with the invisible. Whether it was the dead, shaman, or ruler, whoever could claim to have been in or been in contact with the spiritual world, was a lucky individual indeed. Of rulers acting on behalf of deities and spirits, history provides plenty of examples. Hence, not just funerary rituals were subject to manipulation, but any ritual may have had multiple purposes, reflecting the complexity of the humans performing them. To some extent, rituals can be compared to grooming in monkeys: both serve to construct the social structure of the community using the body. Rituals are just more complex, as much as their performers are.

In conclusion, gestures are a form of communication inherited by humans from the ancestral past. It appears that simple gestures were superseded as a primary form of communication as early as the first examples of symbolic behaviour. Some expressivity of the body could not be replaced by language, so new forms of physical activity with similar purposes have been developed. These are dance and music and possibly art and singing as well, though there could be more. Neurological studies have just begun, but are already providing hard proof that the processes involved in dance and rituals are the same, based on *mirror neurons* (Rizzolatti and Arbib, 1998; Arbib, 2003) and imitation (Calvo-Merino, Glaser, Grèzes, Passingham, & Haggard, 2004). These new corporal or material forms of expression are then embedded into complex superstructure, the rituals. Funerary rituals are among the earliest that can be recognised in the archaeological record, thanks to burials. The earliest mortuary practices demonstrate that these rituals were not based on strict imitation, which is typical in religious practices. Rituals use intense shared physical experience to unite small communities, as small as a single family. Conversely, religion is generally apparent in large societies where blood ties may be nonexistent. One of the main functions of its associated practices recognisable in the archaeological record of early societies seems to have been the provision of a perception of cultural similarity, which would have ultimately helped in maintaining unity within the society. The case of Bronze Age Crete, with its palatial “religion” and rural “rituals” is exemplary. Religion and rituals are defined here considering the size of the population and they are explained in functional terms. These are the variables that emerge from the archaeological record. It is a partial and perhaps unsatisfactory view as much as the preserved archaeological record is, yet it is archaeology’s contribution within the multidisciplinary approach. Defining “ritual” remains an open challenge for archaeologists.

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Figure Captions

Figure 1. Clappers from the tomb of Tutankhamun



Clappers from the tomb of Tutankhamun