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Materializing music and sound in some phoenician and punic contexts

La música y los sonidos debieron ser esenciales en la vida cotidiana en tiempos Fenicio-púnicos. Pese a ello, suelen ser aspectos escasamente considerados en la bibliografía especializada, ya que a menudo la atención se ha concentrado en lo visual y en la cultura material, olvidando otros sentidos como el auditivo. En este artículo, en primer lugar, contextualizamos el uso que damos a términos específicos como música, sonido, instrumento musical o embodiment*. En segundo lugar, presentamos el marco geográfico y cronológico de los materiales seleccionados. Finalmente, analizamos las evidencias de producción musical y sonora en el registro material.*

Palabras clave: *Música, Sonido, Fenicio-púnico, Ritual, Cultura material*

Music and sound would have been essential aspects of everyday life in Phoenician and Punic times. However they have been largely neglected in the specialist literature, which has traditionally paid more attention to visual features of material culture and has ignored the other senses such as hearing. We begin this article by contextualizing our uses of specific terms such as music, sound, instruments and embodiment. We then describe the geographical and chronological framework of the materials selected, and finally we analyse the evidence of musical and sound production in the material record.

Keywords: *Music, Sound, Phoenician-Punic, Ritual, Material culture*

INTRODUCTION

Phoenician music is not currently a specific area of research. If we look up «Phoenician music» in *The New Grove Dictionary of Music and Musicians,* one of the main reference works for music history, we will be referred to «Jewish music», but the latter entry limits itself to a description of Jewish musical instruments. In another musical reference work, *The New Oxford History of Music* (the first volume, devoted to *Ancient and Oriental music*) the main topics covered are Mesopotamia, Egypt, and the Bible. The section on the Bible contains some allusions to Phoenician and Punic musical instruments.

Given the scarcity of specific research on the topic, in this paper we aim to contribute to the analysis of the role of music and sound in certain Phoenician and Punic contexts.[1] For our study we have chosen a series of sanctuaries and cemeteries from Carthage and the Iberian Peninsula, different contexts with features of their own that define several kinds of musical and auditive experiences. As we will explain below, musical experiences are not only related to instruments and musicians but also to other activities involving sound. We will therefore take into consideration the acoustic properties of spaces and landscapes, treating them as important features of material culture which participate in the way people interact with the world.

REVISITING CONCEPTS RELATING TO SOUNDS, BODIES AND OBJECTS

We start by reconsidering some of the key terms that will concern us here, such as sound, music, noise, musical instru-

ments, and silence. We will not attempt to present complete or universal definitions of these concepts, but rather working hypotheses that will help us to identify auditive phenomena in Antiquity and define their functions.

The broadest term of all is «sound». As defined in the *Encyclopaedia Britannica*, sounds are «the mechanical vibrations travelling through the air or some other medium at a frequency to which the human ear is sensitive». Usually, sounds are classified as:

– «sounds» proper: of natural origin, without human intervention and not perceived as unpleasant.
– «music»: humanly organized sounds (Blacking 1973: 3-31).
– «noise»: of natural or human origin, perceived as unpleasant, or at least not consciously perceived as pleasant.

As in the first definition, these three phenomena have in common the fact that they are audible to humans: undoubtedly, our starting point for the analysis of music and sound in Antiquity must be the limitations of the human ear. Where the three phenomena differ is in their origin (that is, whether or not humans intervene) and the ways in which they are perceived. While the origin may remain the same over the ages, perceptions depend on geographies and chronologies: when we think about sound, music and noise, the distinctions we make will probably be different from the ones our ancestors would have made. So our preconceptions about music are likely to be different as well; what the Phoenicians experienced and understood as musical phenomena may well seem alien to us.

Undoubtedly, «music» is a cultural phenomenon that is shaped by each society (Blacking 1973: 31). When we think about Ancient music, we apply our own bias (Mithen 2005: 11). In our description of the music of past times we tend to focus only on the remains of musical instruments or representations of musicians. Though this is the obvious place to start for our analysis, all too often we do not have these materials at our disposal. We should also bear in mind that musical events involved far more than just instruments and musicians; if we restrict our analysis to instruments and the musicians who play them, we risk forgetting that music *exists* because there is an audience listening to it.

In relation to this point, we should stress that we consider «musical instruments» in a broad sense. The term includes «any agency that can emit sound, from the use of raw materials such as wood, bone or stone, to the human body itself» (Watson, Keating 1999: 325). Using this definition we can identify certain materials in the archaeological record which have never previously been considered as related to musical phenomena. This is the case of certain ceramics or shells, whose functions have been traditionally defined without considering their value as producers of sound or even as models for the development of musical instruments (Kilmer 2002: 484).

The musical phenomenon may also be understood as a combination of two or more factors, not merely auditive ones. In fact, playing an instrument is a performance in itself, an embodied practice. Music is linked to dance in many contexts (Kilmer 1995: 2608-2611). For this reason, when we use the term «performance» to refer to music, the term may include dancing, singing, listening to and/or playing an instrument. Moreover, all these performances are related to a main activity –the ritual act in which they take place.

Another interesting concept is «silence», the absence of sound or noise. At first sight silence appears to be the negation of music, but it can also be understood as a part of the sound system. In Ancient Greece, and in Medieval times as well, there were two kinds of music: the music of the spheres (not audible to human ear) and music as a human creation (audible to human ear). These two kinds of music included silence, as one of them was not audible. These preconceptions were recovered by the *Avant Garde*, which considered silence, non-audible music, as the most sublime objective – indeed, an unattainable one (Fubini 1996: 473-475). Seen from this perspective, a piece by John Cage consisting of different movements for players made up only of silence is particularly significant: taking silence to be the main part of music is like using white as the main colour in the most radical twentieth century paintings.

In fact, the absence of sounds is often as significant as their presence. To a certain extent, presence and absence are the two complementary faces of the same coin. This is particularly clear in ritual contexts in which silence is associated with reflection or with contacting divinities. In a modern-day Christian ceremony, for instance, music, prayers, sermons and silence take turns during the liturgy and are all significant in the same way.

One consequence of the above definitions is that our conception of sound and music is broader than it may initially appear. Objects and bodies, for instance, have acoustic properties, and for this reason we will consider both in this article.

In our view, bodies play an active role in the creation of music and sound. Indeed, we regard them as agents in social dynamics and consider that our relation with the world has a corporeal dimension. In this process, the concept of embodiment is essential (Csordas 1994). This term focuses on the corporeal dimensions of human activities: we do not *possess* bod-

ies so much as we *are* bodies. Our bodies not only express identities and social relations but construct them as well. In the domain that interests us here, bodies create music and sound both through their movement and through their decoration.

Similarly, we consider that material culture is dynamic (Appadurai 1986; Kopytoff 1986). Objects are not static and may have different applications depending on who uses them and for what end. So we search for other explanations for the existence of pottery in shrines: besides their traditional use related to cooking and eating practices, we consider alternative explanations regarding their acoustical properties. We also try to establish how these objects, especially the masks and terracottas, would have been used in ritual performances.

THE GEOGRAPHICAL AND CHRONOLOGICAL FRAMEWORK

Our materials are selected as follows. First, we analyse various cemeteries in *Carthage* (Tunisia) and then consider two Punic sanctuaries from the Iberian Peninsula, both on the Atlantic coast: La Algaida, and Gorham's Cave (fig. 1). Apart from these contexts and materials, we will occasionally refer to other geographies and chronologies (Egypt and Mesopotamia) as supportive materials

Carthage has several graveyards. The Carthaginians first occupied the hills of Byrsa, Juno, Dermèche and the plain of Douimés between the eighth and fifth centuries BC. From the fourth century BC onwards, new cemeteries were created on other hills such as St. Monique and Odeon. In contrast to the common Phoenician model in which cemeteries were built outside cities, at Carthage all the graveyards were *intramuros* (Fantar 1995). The grave goods are relatively homogenous from the mid sixth century BC onwards: the masks, protomae, jewellery, terracottas and some metallic and ivory objects are significant for our purposes.

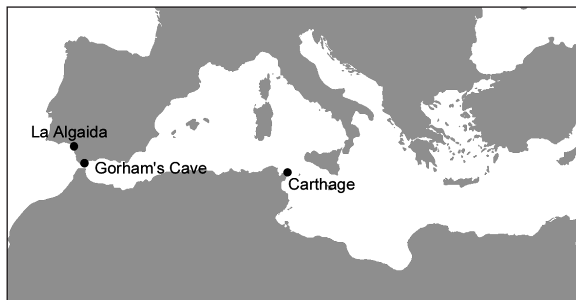

Fig. 1. Map of the Mediterranean showing the three sites mentioned in the text.

Of our two sanctuaries, *La Algaida* (Sanlúcar de Barrameda, Cádiz) is located in the Guadalquivir river marshes. In Ancient times it was an island. The shrine was an open-air sanctuary with three small rooms, identified as chapels (Corzo 1992; Ferrer 2004). The material culture covers a long period (seventh to second century BC) and is accompanied by a large amount of ashes and organic remains. The objects we analyse are, basically, pottery such as oil-lamps, terracottas, jewellery, and organic remains such as shells.

Gorham's Cave is the other Iberian case-study. As its name indicates, it is a cave-sanctuary, located on the Rock of Gibraltar. Its placement is highly significant, at the meeting-point between the Mediterranean and the Atlantic, at the most dangerous point in the Atlantic route. The cave consists of a long corridor and has a large stalagmite at the entrance (Belén 2000; Belén, Pérez 2000; Gutiérrez López *et al*. 2001). The Phoenician and Punic chronology dates from the eighth to the second century BC. The material remains are diverse; in our study, we will consider the cave itself, oil-lamps, incense-burners, and cooking and eating vessels together with organic remains such as fauna and malacofauna.

DESCRIPTION AND INTERPRETATION OF THE MATERIALS

THE EVIDENCE FROM FUNERARY CONTEXTS: CARTHAGE CEMETERIES

Though our conception of music as a complex category includes other factors as well, it is undeniable that instruments and music-players are the key agents in the analysis of musical events in Antiquity. Phoenician and Punic cemeteries provide us with a wide range of representations of musicians and instruments.

The cemeteries at Carthage contain four terracottas of cymbal players and twenty-three masks and protomae with grotesque and satirical forms. Among the grave goods we find two cymbals placed in the tomb of a priestess, and some razor-shells that bear representations of cymbal players. Some bone and ivory materials may also be interpreted as parts of musical instruments such as lyres (Fantar 1993: 222; Fantar 1995: 85). Bells and jewellery are also well represented (fig. 2).

These materials suggest that music and sound played an important role in the performance of funeral rituals. Although we have little direct evidence of musical instruments (no more than two cymbals and remains of bone and ivory

Fig. 2. Materials concerned to music and sound from Carthage cemeteries.

instruments), the indirect evidence, such as the terracottas and bells, is particularly suggestive. In fact, other products of Punic culture also present references to music in funerary contexts: depictions of dances in funeral paintings, and descriptions by some classical authors of the presence of musicians in the Carthaginian Tophet (Fantar 1993: 324-223).

In Phoenician and Punic contexts, the presence of masks and terracotta players has been interpreted as proof of dancing (Bénichou-Safar 1982: 267). The masks are especially interesting: they are not found on the face of the deceased, but next to them (Picard 1966: 10). Their size and the presence of holes suggest that these objects may have been placed on the face in order to perform a ritual before they were deposited as grave goods.

The role of masks is also important to the analysis of topics associated with the body and corporeality in rituals. Masks often represent faces in unnatural poses, with the eyes and mouth wide open. This has meant that they have traditionally been interpreted as demonic or satirical representations. However, other interpretations are possible: for instance, they may represent faces in altered states of consciousness. Dancing, together with music, stimulates hyperventilation, raises the adrenaline and reduces sugar levels, all events that may cause altered states of consciousness. During these states the intensity of the experience is more important than its duration, a phenomenon denoted as «ritual time» (Blacking 1994: 78). So masks are not passive materials, mere dedicated objects, but agents that take part in embodied ritual practices. Finally, this approach serves to emphasize the bodily dimension of religious rituals; they are not abstract entities, but practices created by the body.

Moreover, it has been demonstrated that intensive and repetitive percussion rhythm overstimulates the senses, another way of inducing altered states of consciousness (Angrosino 2004; Pollack-Eltz 2004). This is particularly relevant in view of the existence of cymbals in the cemeteries at Carthage and the numerous terracottas of cymbal players. The iconography of cymbal player figurines, very common in the Mediterranean, originated in Asia Minor: cymbals are first mentioned in Sumerian texts, and were introduced to Egypt from Mesopotamia. Representations of cymbalists are common in Coptic textiles, where the instrument is usually associated with feminine divinities (Ziegler 1979: 64-65).

Cymbal players emphasize not only the role of music, but the role of dancing as well. In many cases, they are represented as dancing or walking; one of the funerary rituals may well have been a march or procession leading the deceased to the cemetery. In this march, music, walking and dancing would all have been significant activities. The sound of cymbals has been attributed purifying properties and was believed to ward off evil spirits (Bénichou-Safar 1982: 270).

What most catches our attention at the cemeteries at Carthage is the gender of the figurines: they are always women. Some scholars have interpreted them as representations of the goddess Astarte; cymbals are among her attributes, and she is protector of the dead (Ferron 1969: 19 and 23). Although this is an admissible hypothesis, we should explore this identification of the figurines with goddesses in more detail.

First of all we should avoid the automatic identification of female figurines with deities because the evidence available is insufficient: the images could be either goddesses or real women (Picazo 2000: 29; Masvidal 2006: 37). Considering only the divinization option is the result of a trend which was in vogue in the nineteenth century (Picazo 2000: 24) and a preconception that explains why many historians tend to identify men sitting on thrones as princes and women in the same position as goddesses (Assante 2006: 188), dismissing the possibility that Ancient women might have held real earthly power. Moreover, the images of gods and goddesses change over the ages because they are always based on depictions of real men and women. If we accept this in the case of Christian sculptures and Madonnas, there is no reason to deny it when interpreting female Phoenician and Punic figurines.

The roles of women have not been analysed in depth in studies of Phoenician and Punic cultures. The relation between women and music is no exception. The women represented in these terracottas (and others without instruments) should be studied in terms of their corporeality and bearing in mind the fact that bodies are always polysemic (Dobres 2000: 45). First of all, they may be people with a specific ritual function during the performance (for instance, priest-

esses or matrons). It is natural to define them as priestesses for two reasons: on the one hand, in many societies holding a religious post necessarily requires musical knowledge; this is particularly clear in Mesopotamia, where the musicians were part of the temple staff (Martí 2003: 306; Duchesne-Guillemin 1981: 295). Indeed, their special function as priestesses or musicians was embodied by their headdresses; that is, they constructed their specific role through their corporeality.

The presence of women in funerary ritual practices may also be related to their function as mourners. In Ancient Egypt (Capel and Markoe 1996: 15; Watterson 1998: 45-46), Greece, and in many societies today, women are specialized in lamenting death. This fact is also of relevance to our study, because carrying out the same activity over long periods may induce altered states of consciousness.

Another explanation for the specialization of women as mourners is their association with activities related to the maintenance, creation and recreation of life (Picazo 1997). Seeing death as the last step of life, and bearing in mind that it is women who give birth and who take exclusive care of children in many societies (Murdock and Provost 1973), it is easy to accept that they should be responsible for the public ritual of lamenting the dead. This could explain why most of the musicians related to funerary rituals are women, while in other contexts the same instruments are depicted as being played by both men and women (Watterson 1998: 51).

To sum up, not all the women are similar; hierarchies and categories are constructed through their activities (playing music) and through their corporeality (decoration or dressing). Their capacity for singing, playing, dancing or crying define power and gender relations which are not hierarchical but asymmetrical (Waldren 1995: 36; Robertson 1987: 225). In that sense, the musical sphere is a femenine arena, especially mourning, and it has been defined as a way of femenine empowerment (Seremitakis 1994).

Moving on to another issue, in some cultures many instruments are considered as created by divinities, and consequently only people with particular skills may play them (Martí 2003: 314). Did the Phoenicians follow this premise in their management of musical performances? In our opinion, in Antiquity, this fact was more related to the context in which this music took place than to the fact of playing music itself or to the technical difficulties involved. In fact, the emergence of a hierarchy among musical performers on the grounds of technical ability began in the Renaissance, with the appearance of new complex musical instruments such as organs, harpsichords and string instruments (Fubini 1996: 134-137).

However, our analysis of the musical performance associated with the materials described in this article highlights several trends. In funerary contexts, some of the participants, including musicians, were likely to be specially selected due to the particular connotations of the task. It appears that only an «elite,» understood in terms of specialization, had the right to play certain instruments in funerary rituals. In contrast, in other situations, a far wider range of members of the society were considered able to play and perform music (Blacking 1994: 16). In fact, the presence or absence of a border between performers and the public moves according to the context where the music is performed and also over the ages. An example from our current social setting: public singing is considered acceptable at a pop concert, but it would be inconceivable in a concert-hall during a performance by a symphony orchestra. In the eighteenth century as well there is evidence that in choral concerts both the singers and the public would sing, whereas today it is only the singers that perform (Martorell 1996: 142).

But the creation of a ritual atmosphere would have involved not only musical sounds, but non-musical ones as well: from the crying of the women to the crackling of the fire during cremation. Let us concentrate on two instances: the acoustic effects of walking, and the presence of bells.

In situations that involved funerary marches, walking would have been a vehicle used to create a religious or spiritual practice. In words of Slavin (2003: 9) «walk becomes meditative as the body falls into a rhythm». Walking in ritual contexts such as marches or pilgrimages creates a specific rhythm which influences the ways in which people experience spiritual events. When walking is accompanied by music, the rhythms of the two activities condition and complement each other. Indeed, processions were common in many Ancient cultures: in some Egyptian tombs, for instance, we find depictions of funerary processions accompanied by music (see the tomb of Djeserkarasonb, in Capel and Markoe 1996: 15). In this way, the physical and material practice of walking allows people to move into a non-material world. Again, we see how the religious rituals are embodied practices.

The small bells and the metal pins presumably used to support them also provide interesting testimony. Bells were used as necklace pendants with a religious and prophylactic function, becoming amulets (Fernández 1992: 197). Equally, in modern-day societies, sounding a bell can have apotropaic motivations (Martí 2003: 311): like playing cymbals, ringing bells is a way of warding off evil spirits, which might otherwise harm the deceased in the afterlife. These interpretations raise the possibility that bells would have been played before the burial.

THE EVIDENCE FROM THE SANCTUARIES: LA ALGAIDA AND GORHAM'S CAVE

The evidence at our two sanctuaries is not as direct as that found in the cemeteries. However, as our analysis of music is not limited exclusively to instruments and players, we concentrate on other materials which are not traditionally interpreted as related to music: that is, the acoustic properties of shrines and caves, and the variety of sounds produced by human and natural phenomena.

Shells and pottery are common materials in Gorham's Cave and La Algaida, an open air sanctuary. Although some of the shells were used as oil-lamps or were simply the containers of the food consumed in feasting activities, others are likely to have had musical roles. Similarly, the use of pottery may have had auditive consequences, in addition to its more fundamental functions in cooking, drinking, eating or burning.

The shells at La Algaida may well have been used for musical purposes. Many of them bear holes, and would have been used to create necklaces, but they may also have been used as percussion instruments as well. The perforation, which seems to have been caused by natural erosion (cf. for samples from the East, Bar-Yosef Mayer 2005: 177), allows the threading of shells as necklaces or castanets (cf. the holes found in some Egyptian castanets: Ziegler 1979: 30). Many ancient societies exploited the acoustic properties of shells and used them as instruments for making music (Montagu 1981). However, some specialized studies of the use of some materials in Antiquity dismiss this possibility (Moorey 1994: 132-140; Bar-Yosef Mayer 2005).

As regards ceramics, pots and other objects might have been used as drums by adding a leather skin or something similar on their surfaces (Watson and Keating 1999: 325). Equally, small fragments of pottery could be used to tap other surfaces or other ceramics, functioning as cymbals or castanets. However, this is only a working hypothesis, and is difficult to prove since most of the pottery fragments at our two sites are from dishes or pots.

Moving on now to the acoustic features of the sanctuaries, both the open-air site and the cave have specific traits that would have influenced the performance of rituals. Caves have an echo, a phenomenon that used to be considered supernatural; some societies interpret echoes as the voices of spirits answering our questions (Purser 2002: 28). Indeed, the cave has agency and could be considered as a musical instrument (Purser 2002: 28 and 33; Reznikoff 2002: 39-40).

In addition to the echo, most caves are highly resonant, places where sound is amplified and carried (Ouzman 2001: 240; Lawson *et al*. 1998: 112). Musical performances in resonant and non-resonant sites are entirely different experiences. In a resonant environment, the sound contributes to the creation of the atmosphere described above, where music is a part of a complete ritual, a means to communicate with deities. In contrast, a non-resonant environment helps the listeners to concentrate on the music itself. This difference between music as a means and music as an aim is also reflected in the venues chosen for musical performances through the ages. For instance, Phoenician caves and Baroque churches are resonant places, made of non-absorbent materials such as stone: in this case, music is considered as a means. In contrast, modern-day auditoria, specially created to perform and hear music, are built with absorbent materials such as wood: music is considered as an aim in itself.

So the acoustic properties of caves make them as special places that are ideal for communicating with divinities. Music, this time in the form of echo or resonance, once again provides a means of contact with a symbolic world.

La Algaida, our second site, is a small island and open-air sanctuary. Its acoustic characteristics differ from those of the cave but would have been no less important. Certain studies which have focused not only on the acoustic traits of structures like caves or tombs, but also on the traits of megalithic monuments (Watson and Keating 1999; Reznikoff 2002: 49-52) have concluded that these open-air structures were deliberately located in specific places. As well as factors such as the availability of resources or visibility, the acoustics of a particular site may well have been a matter of importance, and at La Algaida the sound of the water may well have been one of the reasons for its choice as the site for a sanctuary. In this islandscape, water would have been an important symbolic and ritual element due to its purifying qualities, but also because of the acoustic properties we have noted; its murmur and flow would have acted on the senses and emotions, relaxing or hypnotizing the participants (Strang 2005: 101). Similarly, whispering winds may also have been interpreted and felt as supernatural powers.

Many other important sounds able to create a ritual rhythm in either caves or open-air sanctuaries can be inferred from the uses made of the material culture found at these sites, such as vessels for cooking and eating. Certainly, the large amounts of faunal remains found in Gorham's Cave and La Algaida suggest that the inhabitants used to cook and eat fish inside the sanctuaries. Here there would have been many special sounds: the crackle of fire, the cooking of animals, the pounding of mortars, and so on. All of them would have musical properties because they form part of ritualized activities; to use John Blacking's definition of music (1994), they are, in fact, «humanly organized sounds».

At both these sites, the cave and the open-air sanctuary, the inhabitants could have experienced altered states of consciousness. Although we lack content analyses, the large numbers of incense-burners, oil-lamps and perfume bottles, some of them miniaturized, indicate that the inhabitants may have consumed drugs via inhalation. The effects of smelling oils in caves, together with the lack of light, poor visibility, the presence of echoes and other sounds may have induced altered states of consciousness. The large number of artefacts related to burning practices would not only have had auditive consequences, but religious motivations as well, as fire and smoke were used as means to communicate with divinities.

CONCLUDING REMARKS

Our analysis of these diverse contexts suggests that many of the materials found there can be considered as related to musical phenomena. If we concentrate on musical instruments (their remains or their representations), there is a clear predominance of percussion instruments such as cymbals. In fact, most of the musical instruments of Antiquity were percussion instruments (Mithen 2005: 269), as borne out by the large number of terms used to differentiate between kinds of drum recorded in Sumerian lexical texts (*MSL* 7). Simple to build and to play, percussion instruments do not need a specific theoretical musical system. They are also closely related to the constitution of the human body: that is to say, from the beats of our heart to each one our movements, our body is constantly creating rhythm.

Intersensoriality is a common trait of all our examples and hearing is a fundamental sense in performing rituals, either funerary or otherwise. We have seen that music is a cultural phenomenon; that is, sounds that we do not consider musical such as the whispering of the wind, or the crackle of fire, could be considered either as music or as sounds in their own right, especially in ritual contexts (Mithen 2005: 2, 89 and 101). Other arguments in support of this hypothesis come from the linguistic domain: for example, the fact that the Sumerian word for the wind is also used for a kind of song, and the appearance in some texts of comparisons between musical instruments and the wind, considered as a musical phenomenon (Kilmer 2002: 482).

As the materials and contexts presented here suggest, playing music was not an aim in itself, but the way to make contact with other worlds, with divinities. In combination with other activities such as smelling perfumes and dancing, music allows its players and hearers to move to other dimensions. Focusing on corporeality and embodiment is essential to understanding how people achieve this goal: we have seen that decoration (headdresses and bells), gestures and movements (playing, listening or dancing) are the means used in order to engage with music and create ritual performances. Moreover, as we have seen in funerary contexts, women are also active protagonists, playing instruments and participating in other ritual activities (Mithen 2005: 13 and 271-273; Salamone 2004; Martí 2003: 309).

At the sites we have considered music was lived as a social phenomenon, a collective performance, much as it is today. Performing music may have been a collaborative activity or a competitive one. No archaeological evidence allows us to conclude that the Phoenicians perceived musical performance in one or other way, but both possibilities should be borne in mind.

We have also noted the significance of what we term «sounds proper». In combination with music, the two constitute a specific soundscape. This concept was created by Schafer in 1977 to describe the sonic environment of sentient beings. The soundscape is the amalgam of different sound sources: it is not a result, a closed object, but a dynamic process between people and their environment (Rodaway 1994: 85-86).

We have analysed how the physical features of shrines such as open-air sanctuaries and caves and how echoes and winds, among other factors, influenced the kind of sound produced and its intensity. We can also distinguish between two different types of sound: keynotes, and soundmarks (Rodaway 1994: 87-88). Keynotes are the recurrent sounds forming the acoustic background of a given society; they are not consciously perceived though they determine the perception of other sounds. In the examples presented here, the murmur of the sea at La Algaida and Gorham's Cave could be defined as a keynote as it is an essential sound in any maritime society. On the other hand, soundmarks are the specific sounds of a given society, recognized and shared by all the members For instance, the ringing of bells in the cemeteries at Carthage has symbolic connotations: as we have seen, this sound is attached to the idea of warding off evil spirits. So we conclude that soundscape and music were essential sources of information in Antiquity.

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NOTES

1. This work is part of our research into music and sound in Phoenician and Punic contexts. The first results of our analysis were presented at the SOMA 2007, held in Istanbul. For further details, see the Proceedings cited on the bibliography below.

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