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VARIA

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TO MARCH IN PHALANX, TO JUMP WITH WEIGHTS, TO KNEAD THE BREAD, TO TREAD THE GRAPES. WHAT IS THE *AULOS* FOR? ^[1]

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RÉSUMÉ

Cet article propose une étude de l'accompagnement musical des activités physiques que sont, par exemple, le travail, les pratiques athlétiques ou militaires. Ces accompagnements, principalement exécutés au moyen de l'*aulos*, sont attestés dans les documents iconographiques et textuels, sur un millénaire environ, depuis les poèmes homériques jusqu'aux textes et aux mosaïques de l'époque de Justinien. Cette étude tente d'identifier une logique propre à ces phénomènes culturels : il s'agit de déterminer si les raisons des différents usages musicaux dans des activités aussi diverses que sont l'agriculture, les pratiques athlétiques et militaires suivent une même logique générale sur le temps long, sur le mode d'un facteur transhistorique, ou si cette similarité n'est que superficielle. Une étude du corpus des œuvres mélïques et, parallèlement, des représentations iconographiques des scènes de vendanges (fouillage du raisin) et de pétrissage du pain.

Une étude des textes antiques élaborant diverses explications sur la présence de l'*aulos* dans les entraînements sportifs et militaires, et à la guerre vient compléter cette analyse. Il est alors possible de mettre en évidence que, sur le plan du rythme et de la mélodie, il y a une forme de permanence de cette logique.

KEYWORDS

Grèce ancienne,
époque romaine impériale,
musique,
aulos,
instruments de musique,
archéologie de la musique,
poésie mélïque,
iconographie,
guerre,
athlétisme.

The present article aims to study the musical accompaniment of physical activities such as work, athletic or military practices. Such accompaniment, mainly by the *aulos*, is verified over a millennium both in iconographic and literary sources from the Homeric poems to late Antique texts and mosaics from the time of Justinian. This work seeks to identify an internal logic of this cultural phenomenon and to investigate whether the reasons for this musical usage over this long period, in varied situations, including labour, athletic and military activities, follows the same general trans-historical logic, or whether the likeness is only superficial. Therefore, it analyses the musical repertoire of work songs, and the related iconography of the vintage or bread-kneading. Furthermore, it looks for the cultural explanations formulated in Antiquity for the presence of *aulos*-music in sporting competition and military activities. It concludes that on the level of rhythm and melody there was a form of permanence regarding the internal logic.

MOTS-CLÉS

Ancient Greece,
Roman Empire,
music,
aulos,
musical instruments,
archaeology of music,
work songs,
iconography,
war,
athletism.

Article accepté après évaluation par deux experts selon le principe du double anonymat

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THE AULOS-ACCOMPANIMENT OF WORKING ACTIVITIES.

We have inherited a group of figured monuments from antiquity that represent a common practice in the world of work: working songs, i.e. the musical accompaniment of working activities, played mostly, but not exclusively, by the *aulos*. These monuments are found spread throughout a wide area in the Mediterranean, with dates covering a period of more than ten centuries. Among the most ancient iconographical testimonies we may set two monuments from the sixth century B.C., one from Boeotia and the other from Athens: a terracotta piece, conserved in the Louvre Museum, and a black-figure amphora by the Amasis Painter, conserved in the Würzburg Museum. The first of these displays is an *auletês* accompanying four women involved in the rolling of bread (**fig. 1**); the second shows a satyr blowing an *aulos*, while another one treads grapes in order to produce wine (**fig. 2**). Grape-treading accompanied by the *aulos* has provided a significant quantity of visual representations, stretching as far back as the sixth century B.C., as evidenced by the mosaic from Mount Nebo, Jordan, the mosaic from Beisan, ancient Scythopolis, in Israel, from the Monastery of Lady Mary, and the mosaic from the Saint Christopher Church, in Kabr Hiram, Lebanon, conserved in the Louvre Museum (**fig. 3**).

The Homeric description of the "Shield of Achilles" comprises the earliest testimony regarding the musical accompaniment to the gathering of the vintage. The Homeric narrator notes that, during the harvest of the grapes, in the midst of boys and girls carrying bunches of grapes in woven baskets, a boy gracefully sings the "song of Linos" in a voice that sounds like an *aulos*, accompanied by his "clear-sounding" *phorminx* [2]. The other boys and girls follow him and, by stamping their feet in unison, they make small leaps, while dancing and shouting with joy [3]. An epigram by Agathias Scholasticus (AD 536 – 582), who was active in the Justinian court, and therefore contemporary to the abovementioned Jordanian, Lebanese and Israeli mosaics, can be counted among the final literary testimonies from the period of Antiquity. In alluding to the use of the *aulos* in the vineyards, Agathias mentions a song that supports the peasants' work – one with a Bacchic, vibrant and joyful rhythm [4]. This epigram leads us to the metaphorical connection between wine (including the religious and social consequences of its consumption) and the Dionysian and satiric ambience, present from very early Greek literary and iconographical sources onwards, thus reiterating the approach found on the Würzburg amphora by the Amasis Painter that had been produced a thousand years earlier. Thereby, the tradition of visual representations of the *epilênion aulêma* accompanying the treading of the grapes oscillates

[1] The present text corresponds to the paper presented, as invited speaker, at the 14th FIEC Conference - Fédération Internationale des Associations des Études Classiques, at Bordeaux (France), entitled "Fouler le raisin, pétrir le pain, sauter avec des haltères, marcher en phalange. Enfin, à quoi ça sert l'*aulos* ?", as opening lecture of the Panel 3 (NVMERI INNVMERI "numberless numbers": music and meter in the Classical World), on the 28th August 2014.

[2] The *phorminx* is the term mostly used in Homer to identify

the ancient form of cithara known in early archaic times. It was not the precedent form of the classical *kithara*, known as *Asia*, which evolved from a variation developed in Eastern Greece, nor corresponded to the *lyra* with the tortoise-shell sound box, known as *chelus*. It probably evolved into the classical "cradle-cithara" with a rounded bottom.

[3] Homer, *Iliad*, XVIII, 566-571.

[4] Agathias Scholasticus in *Anthologia Palatina*, XI, 64.

► Figure 1

Women producing bread accompanied by an *aulos* player. Boeotian terracotta. 6th century B.C. Paris, Louvre, CA 804. Photo: F.V. Cerqueira.

▼ Figure 2

A satyr plays *aulos* during the grape-treading. Attic black-figure amphora by the Amasis Painter. 540-530 B.C. Würzburg, Martin von Wagner Museum, L 265 e L 282. Photo: F.V. Cerqueira.



▲ Figure 3 : different scenes related to the vintage. The combination of two scenes shows the *aulos* player accompanying the grape-treading. Mosaic. c. AD 575. Proto-Byzantin, from Saint Christoph Church, in Kabr Hiram, near to ancient Tyre, Lebanon. Paris, Louvre Museum, MA2231. Drawing: F.V. Cerqueira.

between idealization and realism, between human and mythological representations, as well as between satyrs and *amorini* [5], as we can verify in the famous "Vaso Blu", dated from AD 25-50, from Pompeii (fig. 4), in a Campanian terracotta from the second half of the first century, conserved in Würzburg (fig. 5), and in a Gallo-Roman mosaic from Saint-Roman-en-Gal, produced in Vienne in the early third century (fig. 6).

The repertoire of working songs has been already well studied in a systematic manner by Gérard LAMBIN (1996), Annie BÉLIS (1999) and Eleonora ROCCONI (2010) [6],

[5] Eroses depicted as children or babies, whose variants are known as *amorini*, Cupids or *putti*, are already present in early Hellenistic art, such as in Apulian Gnathia vases from the late fourth century and early third century B.C. "The combination of Silenus, the Dionysiac figures, and the vines with vintaging Eroses and putti, alludes to the influence of Dionysus and the power of wine, rather than specific ceremonies involving the wine god". ECKERSLEY 1995, p. 96.

[6] LAMBIN 1999. ROCCONI 2010.

enabling the establishment of a list of such songs and the definition of some of their musical features. First of all, these are popular songs, whose performance takes place within a quotidian setting. Hence, they are less well-known than the type of music that was appreciated within official and erudite circles – that of festivals, theatre and musical contests, present in theoretical as well as practical musical instruction. This more erudite musical stratum aroused greater interest among the ancient authors, and is therefore well represented

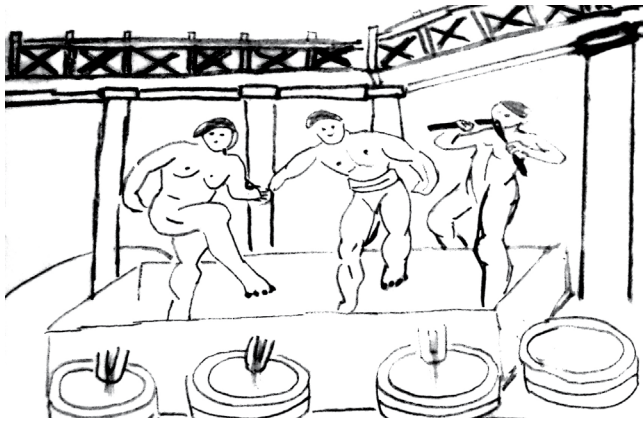


◀ Figure 4

Vintage scene with four amorini, two of them involved in the grape-treading, and two playing musical instruments (*aulos* and *syrinx*). “Vaso Blu”, cameo-glass. Pompeii. AD 25-50. Naples, Museo Archeologico Nazionale, 13521. Drawing: F.V. Cerqueira

▼ Figure 5

A Dionysiac scene depicting a vintage: a satyr plays the Phrygian *aulos*, accompanying two satyrs treading the grapes, while a third one turns out grapes over the treading structure. Terracotta antefix. AD 50-100. Würzburg, Martin von Wagner Museum, H2678. Photo: F.V. Cerqueira.



◀ Figure 6 : two men working in the grape-treading, accompanied by an *aulos* player. Gallo-Roman mosaic. Provenance: Saint-Romain-en-Gal (Rhône River). Produced in Vienne. Early III century AD. Musée Archéologique National de Saint-Germain-en-Laye, inv. 83116. Drawing: F.V. Cerqueira

in the classical literary tradition. It was even subjected to Pythagorean and Aristotelian theoretical, acoustic and moral reflections. On the other hand, the set of popular songs to which the working songs belonged, drew much less intellectual attention and is therefore less known. Livio SBARDELLA considers that the description of the “Shield of Achilles” had already established the contraposition between the erudite circle, to which the *aoidos* belonged, and, on the other hand, a popular circle, to which the peasant song tradition belonged, alluded to by the abovementioned Homeric quotation about the “boy who sings with a voice that sounds like an *aulos*” [7].

Furthermore, among the popular songs, which include different forms and genres, it is the love songs that are best known. Unlike these, the work songs belong to one of the lesser-known forms, which is why we owe so much to iconographical testimonies [8]. In order to establish

a general view of the repertoire of ancient work songs, we depend to a great degree on two imperial sources: Athenaeus of Naucratis and Julius Pollux [9]. I follow here the most complete repertoire, even if synthetic, as defined by E. Rocconi [10]:

- a. *litiere* [11]. The “reaper’s song”. Of Phrygian origin, it corresponded to the *Borimos*, sung by the Mariandinos peasants, and to the *manerôs*, which was sung among the Egyptians. [12]
- b. *bôrmo* or *bôrimos* [13]. A song employed to accompany agrarian works. Of funerary origin, it was a “threnodic song for the rural tasks”. Rocconi points out that the same name, *Borimos*, was given to a certain type of *aulos*, also known as *Mariandunoi kalamoi*, which would have accompanied rural activities.
- c. *oulos* / *ioulos* [14]. The “harvest song” and the “shearing song”.

[7] SBARDELLA 2009, p. 65-66.

[8] ROCCONI 2010, p. 26-27.

[9] Athenaeus, XIV, 618d-619c; Pollux, IV, 53-56.

[10] ROCCONI 2010.

[11] Athenaeus, XIV, 619a.

[12] Pollux, IV, 54. Cf. Athenaeus, XIV, 619f.

[13] Pollux, IV, 54sq.

[14] Athenaeus, XIV, 618d-e.

- As the “harvest song”, its form corresponds to a hymn to Demeter also named as *Oulo* or *Ioulo* [15], the “goddess of the bales” [16]. Thereupon, these songs were also known as *dēmētrouloi* or *kalliouloi*, “Demeter bales” or “beautiful bales”.
- As the shearing song, it was the “song of one who works the wool” [17].
- d. *ptistikon* or *ptismon* (sc. *aulêma* or *melos*) [18]. The milling song, accompanied by the *aulos*.
- e. *linos* or *ailinos* [19]. The “song of the vintage”. A funerary lament in memory of Linos, son of Apollo, sung not only on mourning occasions, but also at joyful moments [20], as suggested by the ambience of the vintage described in the “Shield of Achilles”, as well as in various iconographical representations, in which the presence of the satyrs, and even *amorini* in the imperial period, creates a cheerful atmosphere, appropriate to the Dionysian symbolism of this activity.
- f. *alêtis* [21]. “The vintage song”. Originally linked to the “swing party” in honor of Erigone, called Aiora, it was celebrated in Athens during the vintage period, hence associating them with one another.
- g. *epilênion aulêma* [22], or *melos* [23], or *humnos* [24], or *orchêsis*. “The presser song”, accompanied by the *aulos*, during grape-treading. It derives from *lênos*, a kind of press for treading the vine. In *Daphnis and Chloe*, Longus talks of a Διονυσιακὸν μέλος, which consisted of an ἐπιλήνιον ὄρχησιν, intoned by a *syrinx* [25].
- h. *himaion asma*. The “song for drawing the water from the well” and the “miller song”.
- The “song of he or she who pulls the rope (of the well)”.

The ἰμονιοστρόφου μέλη [26]. *Himas* leads to “belt”, and therefore to the act of drawing water from the well, pulling the water bucket, either running through pulley or just holding the rope by hand [27].

- The “song to mill the grains” [28]. The ἰμαῖος ὠδή, related to the *Imalís* (literally, “from abundance”), provides a link to the plentifulness of flour, a reminder that Demeter was known by the epithet of “Abundant” in Syracuse [29]. We also find the meaning of “millstone song” [30] and “millstone singer”, the *himaoidos* [31].

Rocconi associates a fragmentary testimony by Eratosthenes of Cyrene to wool working [32]. However, in my view the fragment actually connects the *ioulos* with the production of dough, a task that, even though a type of manufacturing, is linked through its raw material to Demeter [33]. Thus, the interpretation of this evidence relates to the theme of the Boeotian terracotta from the Louvre cited at the beginning of this paper (fig. 1).

The music of the *aulos* accompanied terrestrial cargo, as well as maritime transport. Thanks to Sextus Empiricus’ testimony, we know that the *aulos* and the *salpinx* accompanied the transportation of heavy loads [34]. The role of musicians in navigation is significant for understanding the “working songs”. The waters of the Mediterranean were crossed by variety of ships, accompanied by the music of the *aulêtai*, who played the *eretikon*, the “rowers’ song”, to provide the correct rhythm for the movement of the oars [35]. Known in Athens as the *triaraulês* [36], the *aulos*-player on a trireme was often a foreigner, a free employee, such as the *aulêtês* specified in a list of the crew of an Athenian trireme, the piper Sogenes of Siphnos [37]. However, this was generally considered

[15] Pollux, I, 38; cfr. Athenaeus, XIV, 619b.

[16] Didymi, in: SCHMIDT & MORITZ 1964, *Chalcenteri grammatici Alexandrini fragmenta quae supersunt omnia*, Amsterdam, 2nd ed. [1st 1854]), p. 66.

[17] Athenaeus, XIV, 618d.

[18] Pollux, IV, 55.

[19] Homer, *Iliad*, XVIII, 561-572.

[20] Athenaeus, XIV, 619c.

[21] Athenaeus, XIV, 618e. Cfr. Pollux, IV, 55.

[22] Pollux, IV, 55.

[23] Callixenos of Rhodes, *FGrHist* 627 F 2.

[24] *Carmina Anacreontea*, 59, 7-8 (ed. West).

[25] Longus II, 36, 1.

[26] Scholia on Aristophanes, *Frogs*, 1297a.

[27] Callimachus, fr. 260, 66 (ed. Pfeiffer).

[28] Ap. Athenaeus, XIV, 618d.

[29] Athenaeus, III, 109.

[30] Aelianus, *Varia Historia*, VII, 4; Plutarch, *Septem sapientium convivium*, XIV, 157d-e.

[31] Pollux, IV, 53.

[32] Rocconi 2010, p. 28. Eratosthenes, fr. 10, in: Johannes U. Powell, *Collectanea Alexandrina* (Oxford: Clarendon Press,

1925): Ἡ χερνήτης ἐριθος ἐφ’ ὕψηλῳ πυλεῶνος / δεινδαλίδας τεύχουσα καλοὺς ἤειδεν ἰούλους. Translation into Italian by Eleonora Rocconi: “là, dove la salariata operaia, nell’alto vestibolo, focacce d’orzo stava preparando e belli iuli canta.”

[33] Translation into Portuguese of Eratosthenes, fr. 10, by Maria Aparecida de Oliveira Silva: “A trabalhadora, no alto vestibulo, preparando um bolo de cevada, canta belos hinos a Demeter (*iouloi*).” (English version of Portuguese translation, by the author: “The maid, in the upper chamber, preparing a barley cake, sings beautiful hymns to Demeter (*iouloi*).” The direct connection between the preparation of cake and the hymns to Demeter leads to the context of bread-kneading accompanied by the *aulos* music depicted in the Boeotian terracotta.

[34] Sextus Empiricus, *Against the Musicians*, 18.

[35] Pollux, IV, 56; Plutarch, *Alcibiades*, 32.

[36] On the denomination, see Pollux, I, 96.

[37] “List of crew of Athenian triremes” (or “Naval catalogue inscription”), *IG* i³ 1032, col. 7, l. 162 (=IG II/III² 1951). AIO, *IG* i³ 1032, col. 7, l. 162 (αὐλητής), l. 163 (Sogenes of Siphnos); col. 8, l. 298 (piper?), l. 299 (-nes of Pri[ene?]). <https://www.atticinscriptions.com/inscription/IGI3/1032> (trans. by Stephen Lambert and Robin Osborne). The translators observe, in note 8, that the pipers on this inscription are consistently foreign. On this inscription see: GRAHAM 1992, p. 257-70; LAING 1965.

a less prestigious function, performed by *aulêtai* of low social extraction, for example individuals of servile origin, such as the supposed lover of Aeschines' mother, named Phormion, who was a slave of Dion de Phrearres [38]. Amid the oars' creaking and the waves' breaking on the ship's hull, the continuous and penetrating sound of the *aulos* guaranteed the maintenance of a regular rhythm, according to the speed defined by the *keleustês*, the chief rower [39]. We owe to Longus a very enlightening excerpt about the musical accompaniment of the rowers, who sang sailors songs with the aim of distracting themselves from fatigue [40].

Based on the selection of testimonies listed by Rocconi, augmented by the other registers enumerated above, we have an outline of the repertoire of working songs that points to the use of music, mostly songs accompanied by *aulos*, in a series of production chains, suggesting that they were aligned according to an economical logic:

1. General agrarian production:
 - a. Song that accompanied farming activities: *bôrmō* or *bôrimos*, using the *aulos* called *Mariandunoi kalamoi*.
2. Wine productive chain (grapes harvest and treading):
 - a. Vintage: *linos/ailinos* ("song of Linos"), *alêtis* ("swing song").
 - b. Grape-treading: *epilênion aulêma/melos/humnos/orchêsis* ("pressing song", or "tread-song").
3. Production chain for cereal grains, including the corn, flour and bread (harvest, milling and baking):
 - a. Reaping: *litierse* ("reaper's song"), *oulos / ioulos* ("harvest song"), or also *dêmêtrouloi* ("song of Demeter bales") or *kalliouloi* ("song of beautiful bales").
 - b. Milling: *ptistikōn* or *ptismon* ("milling song"), *himaïos ôdê* ("song to mill", or "millstone song").
 - c. Bread kneading/beating: *ioulos* ("bread kneading song").
4. Wool production chain (shearing and weaving):
 - a. Shearing: *oulos / ioulos* ("song of one who works the wool").
5. Water supply (drawing water from the well):
 - a. *Himaion asma* ("Song of one who pulls the rope").
6. Goods transportation (navigation and cargo transport):

a. *Eretikon* ("rower song", performed by the so-named *trieraulês*).

b. "Song of the weight porter".

The use of the *aulos*-accompaniment in work songs is present in most of these activities, as demonstrated above. Literary and epigraphic testimonies suggest its usage in the "rower song", while literary sources indicate that it accompanied goods being transported through the city. Milling was accompanied by the tune of the *aulos*, as indicated by the musical category *aulêma* that identifies the *ptistikōn aulêma* [41]. In addition, according to Boeotian terracotta iconography, the pipes could accompany the "bread kneading song". They also regularly accompanied songs performed during general farming activities, in particular the "reaper's song", when variations of this musical instrument named as *Bôrimos* or *Mariandunoi kalamoi* were employed. Last, but not least, the presence of the *aulos* during grape-treading is verified through iconographic and literary sources, accompanying the "presser song" (the *epilênion*), also classified as an *aulêma*.

In opposition to the evidence cited above, some sources indicate the usage of other instruments. The "song of Linos" described by the Homeric narrator, was sung during the grape harvest and accompanied by a stringed instrument. It is necessary to point out, however, that this archaic reference is the only quotation known to the author of a stringed instrument appearing during the vintage. This indicates that the *aulos*-accompaniment was not usual in Homeric times, which appears probable, as the pipes are rarely mentioned in the *Iliad* and the *Odyssey*. Nevertheless, one of the few passages in Homer where this instrument is noted is precisely during the description of the voice of the boy who sang the "song of Linos", which sounded like an *aulos*. What does this mean? I do not want to enter the long discussion about the layers of temporality in the "Shield of Achilles", but the quotation of the *aulos* may likely refer to the influence of a later period in the Homeric text. However, I could infer that the sonorous quality of the *aulos*, later associated with the threnodic *êthos*, was already considered an appropriate accompaniment to agrarian activities, which shared imaginary funerary symbolism.

On the other hand, Longus refers to the possibility of accompanying the *epilênion* with the *syrinx*, the

[38] Demosthenes, *On the Crown*, 129.

[39] BÉLIS 1999, p. 76-77.

[40] At the same time, the passage Longus III, 21, 2, reveals one aspect that, according to Rocconi, would be one of the main musical features of the working songs, the responsory: "et ce que font tous les marins pour ne pas sentir la fatigue,

ils le faisaient eux aussi en soulevant leurs rames : le chef des rameurs chantait, seul, des chansons de marins, et les autres, tous en chœur, reprenaient à leur tour d'une seule voix ce qu'il venait de chanter." (trans. Aline Tallet-Bonvalot)

[41] The term *aulêma* identified a genre of chant, which was sung with the *aulos*-accompaniment.

musical attribute of the god Pan which was linked to the pastoral world [42]. The presence of Pan or of his musical instrument in Dionysian scenes is frequent in Apulian vase-painting from the fourth century B.C. until the art of Imperial times, as one can see in the “Vaso Blu” from Naples (fig. 4). Furthermore, this should not cause surprise, for the *syrix* was familiar to peasants. According to Aristoxenus, writing in the late fourth century B.C., they learned to play both the *aulos* and the *syrix* without specific classes [43]. Thus we conclude that the *aulos*, despite prevailing in the accompaniment of work songs, was not the only instrument used in such situations, because on certain occasions the *syrix* was acceptable.

Considering the common trait of physical activity based on repetitive movements, the iconographical repertoires, when cross-checked with the ancient texts, point to two analogous modalities of musical accompaniment, mainly by the *aulos*. These take place during athletic and military activities. Regardless of their dispersal over more than a thousand years and several regions of the ancient Mediterranean, the iconographical and literary evidence for auletic accompaniment belong to the same “category of thought”, insofar as they are permeated by a “trans-historical constant” [44]. It is in this perspective, in considering them as analogous “facts”, even though distant and separated in time and space, that I propose to consider them in synchrony, classifying them in the same category, supposing they are comprehensible through the same trans-historical constant.

This trans-historicity lies in the internal logic of this cultural system, characterized by the musical accompaniment of various repetitive physical activities - labour, sporting or military. Hence, in understanding their belonging to the same category of “facts”, as “twin facts”, we may take advantage of the musical accompaniment of military, sporting and working activities

together in our interpretation. That is why the following sections of this study will review the descriptions and explanations given by ancient authors for the *aulos*-accompaniment of military and athletic activities, since it may also help us to understand the deep reasons for this practice during work activities, such as wine-making. Three questions should remain on the horizon during the analysis: 1) Does the presence of music accompanied by the *aulos* follow one and the same general logic for all activities? 2) Or, on the contrary, does the presence of music with such various activities follow a particular logic in each case, inherent to the uniqueness of each spatial-temporal context? 3) Or, might there be two different levels of impregnation of the internal logic: a general level, of trans-historical character, and a particular level, belonging to the singularity of each event and phenomenon?

THE AULOS-ACCOMPANIMENT IN ATHLETIC ACTIVITIES

Athenaeus explains that the Greeks exercised with musical accompaniment, as it helped them to regulate their movements [45]. The *aulos* was chosen to maintain the correct rhythm of movement in athletic games, aside from races, in which the *salpinx* was used. Archaeological finds endorse this observation. The island of Delos, where a significant number of fragments identifiable as ancient *auloi* sections have been found [46], has revealed five examples of *auloi* associated with the palaestra [47]. Ancient texts contain many examples from the Peloponnese, while the iconography reveals abundant Attic material concerning the daily life of the Athenian palaestrae, school contests and public festivities (fig. 7 – 8). Plutarch speaks of the musical accompaniment by the *aulos* during the Sthenia in Argos [48], whilst

[42] Pan himself created his own musical instrument, the so-called Pan-flute, known in Antiquity as the *syrix*. He used the reeds into which Syrinx, his beloved nymph, had turned, after dying, throwing herself over the reeds in an attempt to escape to Pan's harassment. He picked up seven reeds, cut them, obtaining seven tubes, attaching one to another with beeswax, which was also used to fill each tube to different levels, in order to perform melodies employing the seven tones of scale. The instrument symbolized the suffering of love, but it also had mystic powers, which justified its usage in pastoral rituals. Pan fell in love with Daphnis, teaching him to play the *syrix*, so that he became the first mortal to play this instrument. *Homeric Hymn. Hymn 19 to Pan*, 14-26. Euripides, *Electra*, 699sq; *Ion*, 492sq. Plutarch, *Moralia*, 1113b. Longus, II, 31.

[43] Athenaeus, IV, 174e-f.

[44] Accordingly to VEYNE 1976, these facts comprise “almost identical twins”. Our goal here is to scrutinise the underlying

reasons for the longevity of this custom. Here we benefit from an anthropological perspective, with a synchronic look at the vestiges that are distant from one another in a diachronic and geographical scale, attempting to understand the internal logic of this cultural system.

[45] Athenaeus, XIV, 629. Regarding practical aspects of athletic modalities, one should highlight that iconographical evidence is much richer, more varied and enlightening than the scattered information brought by ancient texts, whereas literary evidence, mainly from imperial period, provides us with clues about the cultural meanings of this custom.

[46] BÉLIS 1998, p. 777-790.

[47] B 5137 (Palaestra N or Palaestra of the Lake); B 5384 e 5388 (house in the east of the stadium); B 5150 (near the Palaestra); e B 4452 (Large Palaestra, or Granite Palaestra). Cf. DÉONNA 1938, p. 242-248, note 4, pl. LXXV-LXXVIII and 321-25, pl. XCII.



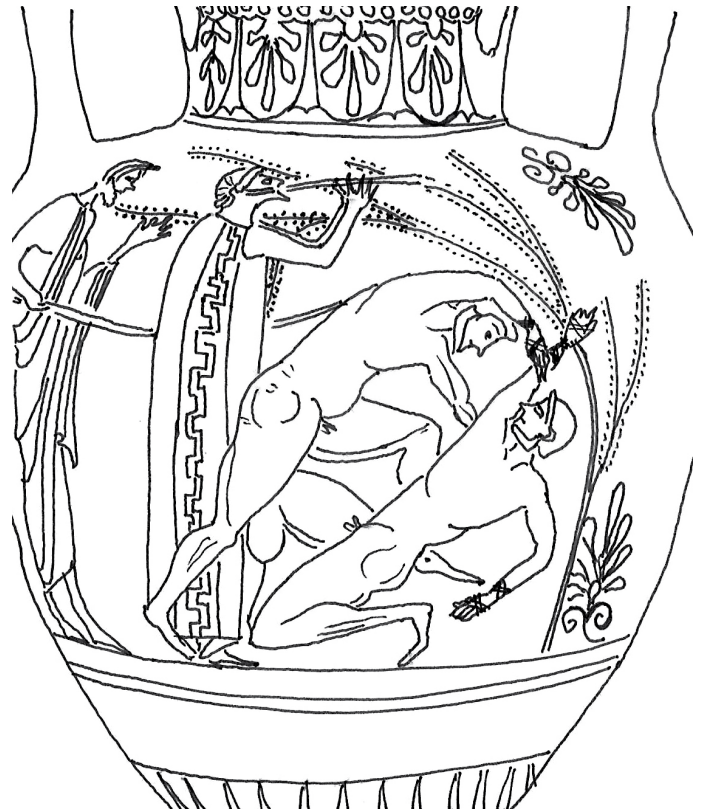
▲ Figure 7

A young leaper, naked, with halters in the hands, preparing to jump, accompanied by a professional *aulos* player, as indicates the *phorbeia* and *khiton poderes* he wears. Attic red-figure pelike by the Polygnotos Group (ARV² 1060/135). c. 440 B.C. London, British Museum, E 427. © Trustees of the British Museum.

Athenaeus notes the same regarding the Gymnopaedia in Sparta [49].

The only testimony referring directly to the accompaniment of athletics by the *aulos* at Athens in the Classical period is a passage by Xenophon [50]. In the *Hellenica*, he reports on the athlete Thibron who, one morning in the year 391 B.C., went out to train discus throwing. He was accompanied by the *aulêtês* Thersander, who, besides being an excellent piper, was strong and used to fighting [51].

Given the solid musical tradition of the Argives, namely in auletics, having been regular champions in musical contests, mostly in the sixth century B.C., there was a



▲ Figure 8

Two fighters boxing to the sound of the *aulos*, played by a professional musician, and assisted by the judge, who intercedes for them to stop the fighting. Attic black-figure amphora. Near to the Painter of Munich 1519. Group of Copenhagen 114 (ABV 395/3). 510-500 B.C. Munich, Antikensammlung, 1538 (J 578). Drawing: F.V. Cerqueira.

historical tradition, endorsed by Herodotus, Polybius and Pausanias [52], that attributed to Argos the introduction of the *aulos* in the palaestrae and athletic competitions [53]. These authors were probably influenced by the reports of the role of Sacadas of Argos and Pythokritus of Sicyon in the development of auletic performance oriented to support sporting activities. The *aulêtês* Pithokritus, six times consecutive winner in the *Phutikos nomos* at Delphi (575-554 B.C.), also played at the Olympic Games six times, accompanying the *pentathlon* [54].

The fact is that the practice spread, reaching different regions, regardless of what its origin actually was. Late authors state clearly that, in ancient Greece, one could not conceive of a palaestra or an athletic contest without the *aulos*, as indicated by Plutarch in *Peri Mousikês*

[48] Festival in honor of Danaos. Pseudo-Plutarch, *De musica*, XXVI, 1140c-d.

[49] Athenaeus, XV, 613b, 618c. LARMOUR 1999, p. 71 and 181.

[50] Xenophon, *Hellenica*, IV, 8, 18.

[51] LARMOUR 1999, p. 70.

[52] Herodotus, III, 131; Polybius, IV, 20, 4-21; Pausanias, VI, 14, 10; X, 7, 4.

[53] On the reputation of Argive musicians in Antiquity, see: VANDENSTEENDAM 1988, p. 129.

[54] Pausanias reports that his reputation in Olympia earned him a statue in his honor (Pausanias, II, 14, 10). This case illustrates well how *aulêtai*, who were famous as soloist concert musicians, could act as well in an apparently secondary function, as the accompaniment of athletic games, for it should ensure them the maintenance of their professional visibility, besides a good earning.



◀ ▼ Figure 9
Young *aulos* player, naked, with *sybene* suspending on his left arm, accompanies two boxers. Tomb painting. Paestum, Arcioni, Tomb I (1990). 370-360 B.C. Paestum, Archaeological Museum. Photo: F.V. Cerqueira.

and endorsed by Pausanias [55]. Such usage spread across the Mediterranean regions under Greek influence. In Paestum, the tomb paintings represent *aulêtai* close to athletes who are boxing with each other [56]. (fig. 9 et 10) In Etruria, pugilism accompanied by *aulos* seems to have been popular, as evidenced by an Etruscan amphora from the beginning of fifth century B.C. (fig. 11) [57].

The *aulêtai* probably adapted traditional auletic repertoires to such athletic performances. In Olympia, for example, in accordance with a report of Pausanias, jumping contests in the *pentathlon* were accompanied by the *Puthikon aulêma*. Pausanias, Strabo and Pollux believed that it consisted of the same *Puthikos nomos* from Delphi, supposedly invented by Sacadas, imitating in music the fight between Apollo and the serpent Python [58]. In *Peri Mousikês*, Plutarch recalls a composition of Hierax, called *Endrome*, performed by *aulêtai* during the *pentathlon* [59]. According to David Larmour, the name suggests a connection with races [60]. During the *Gymnopaedia*, an *aulêtês* played songs composed by Thaletas of Crete and Sacadas of Argos [61].



In some cases the written sources specify the athletic context, corroborating evidence from Attic pottery. Based on a comprehensive inventory of 56 black- and red-figure vases representing *aulêtai* accompanying athletic activities (in training or competitions), I conclude that these vase painters associate the performance of the *aulos* with all modalities of the *pentathlon*, and to a lesser degree, with wrestling, boxing and running [62].

[55] Pseudo-Plutarch, *De musica*, XXVI, 1140d; Pausanias, VI, 14, 18. Cfr. LARMOUR 1999, p. 69.

[56] PONTRANDOLFO, ROUVERET & CIPRIANI 1997, p. 45-47, fig. 44-45.

[57] The Uprooter Class (ABV 589/3). Berkeley, University of California, 8/445. *Corpus Vasorum Antiquorum*, University of California 1 (EUA 5) IV B, pl. 29.2.

[58] Pausanias, V, 7, 10; Strabo, IX, 421; Pollux, IV, 78.

[59] Pseudo-Plutarch, *De musica*, XXVI, 1140d.

[60] Its character may correspond to the "courante" movement of the French baroque suite.

[61] A significant part of this repertoire came from dance, given the common purpose of moving in accordance with rhythmic discipline. Cfr. LARMOUR 1999, p. 71.

[62] A catalogue of Attic black- and red-figure vases representing athletics accompanied by the *aulos*: **Jumping with weights**: Bearded piper 1) Belly-amphora. B.F. (ABV 384/16) Basle, Antikenmuseum, BS 06.294. CVA Basle 1,

pl. 42.6; 43.3. 2) Calyx-krater. B.F. (Para 149/23bis) Toledo, Toledo Museum of Art, 63.26. 520-10. CVA Toledo 1, pl. 17-19. 3) *Lêkythos*. B.F. Pintor de Kephisophon. (ABV 669) New York, Metropolitan Museum of Art, 08.258.30. *Unbearded piper* 4) *Pêlikê*. B.F. Adolphseck, Schloss Fasaneire, 7. CVA Schloss Fasaneire (Adolphseck) 1, pl. 11. 5) Neck-amphora. B.F. (ABV 383/8) Würzburg, Max von Wagner Museum, L. 204. 6) *Kylix*. B.F. Copenhagen, National Museum, Chr. VIII 877. CVA Copenhagen 3, pl. 115, 3a-b. 7) *Pêlikê*. R.F. (ARV² 1060/135) London, E 427. **Discus**: Bearded piper 8) *Hydria*. B.F. (ABV 365/64). Capesthorpe, The Bromley-Davenport Collection. 9) *Hydria*. R.F. London, E 164. CVA British Museum 5, pl. 324.1. 10) Bell-krater. Athens, Benaki Museum, 31120. *Unbearded piper* 11) *Olpê*. Capua, Museo Campano, 155 (40). CVA Capua 2, III H e, pl. 8.1-2. 12) *Nolan amphora*. R.F. (ARV² 423/119) London, E 288. CVA British Museum 5, pl. 297.3a-b. 13) *Alabastron*. R.F. (ARV² 101/1) Athens, National Museum, Acropolis Collection, 866. 500-490. **Javelin**: Bearded piper 14) *Lêkythos*. B.F. Paris, Bibliothèque Nationale, H 2985. CVA Bibliothèque Nationale 2, III J a, ▶



▲ ► Figure 10

Professional *aulos* player, wearing *phorbeia* and special *khiton*, accompanies two boxers. Tomb painting. Paestum, Andrioulo. Tomb 24 (1971). 370-360 B.C. Paestum, Archaeological Museum. Photo: F.V. Cerqueira.



pl. 84.5-6. 15) *Lêkythos*. B.F. St. Petersburg, Hermitage, 149 (B 363). 16) *Psyktêr*. R.F. Zurich, Archäologische Sammlung der Universität, 4039. *Unbearded piper* 17) Amphora. B.F. Bonn, Sammlung Fontana, 44. 18) Fragment. B.F. Athens, National Museum, Acropolis Collection, 590. 19) Panathenaic amphora. B.F. (ABV 369/115) Liverpool, City Museums, 56.19.6. 20) Neck-amphora. R.F. (ARV² 272/13) Paris, G 215. CVA Louvre 6, III I c, pl. 40, 11-2. 21) *Hydria*. R.F. (ARV² 16/13) Dresden, Staatliche Kunstsammlungen (Albertinum), Z.V.925. 22) *Kylix* (fragment). R.F. (ARV² 64/100) Amsterdam, Allard Pierson Mus., University of Amsterdam, 2229 (formerly Hague, Scheurleer Mus.). CVA Amsterdam 1, pl. 5.1, 3-4. CVA Musée Scheurleer 2, III I b, pl. 6.5. 23) *Kylix*. R.F. (ARV² 861/12) Berlin, Antikesammlung, 1960.2. CVA Berlin 3, pl. 105.2-4. *WRESTLING: Bearded piper* 24) Neck-amphora. B.F. (ABV 395/3) Munich, Antikesammlung, 1538. CVA Munich 9, pl. 7.3; 10.1-2. *PUGILISM: Bearded piper* 25) *Hydria*. B.F. (ABV 365/65) Vatican, 416. 26) *Pêlikê*. B.F. (ABV 384/19) New York, Metropolitan Museum of Art, 49.11.1. Running: *Unbearded piper* 27) Volute-krater. B.F. Athens, National Museum, Acropolis Collection, 654. Combinations of athletic modalities: *Bearded piper* 28) *Kantharos* with one handle. B.F. (ABV 345/2) Paris, Bibliothèque Nationale, 4960 (354). CVA Bibliothèque Nationale 2, III H e, pl. 71.1, 71.3, 71.5, 71.10. 29) Column-krater. B.F. London, B 361. 30) *Lêkythos*. B.F. (ABV 509/3, 703) Prague, Charles University, 20.2. CVA Prague 1, pl. 29.1-3. 31) *Lêkythos*. B.F. Delos, Archaeological Museum, 571 (B 6.133). 32) *Kylix*. R.F. (ARV² 430/31) Basle, Antikenmuseum, Kâ 425. CVA Basle 2, pl. 19.2-4; 20.1-2; 36.2 e 6; 39.8. *Unbearded piper* 33) *Lêkythos*. B.F. Athens, National Museum, 12571. 34) *Lekythos*. B.F. (ABV 497, below) Athens market. 35) *Lêkythos*. B.F. Taranto, Museo Archeologico, 50287. CVA Taranto 1, pl. 15.5-6. 36) *Lêkythos*. B.F. Athens, National Museum, 12533. 500-490. 37) *Lêkythos*. B.F. Athens, National Museum, 18765. 38) *Lekythos*. B.F. Athens, National Museum, 12560. 500-480. 39) Calyx-krater. R.F. (ARV² 297/11) Copenhagen, Copenhagen, 126 (Chr. VIII 805). CVA Copenhagen 3, pl. 127-8. 40) *Stamnos* (fragments). R.F. (ARV² 15/8) Leipzig, Antikenmuseum der Karl-

Marx Universität, T 523. 41) *Psyktêr*. R.F. (ARV² 54/7) New York, Metropolitan Museum of Art, 10.210.18. 525-20. 42) *Kylix*. R.F. (ARV² 72/15) Berlin, Antikesammlung, 2262. CVA Berlin 2, pl. 55. 43) *Kylix*. R.F. Malibu, J. Paul Getty Museum, 85.AE.25. 44) *Kylix*. R.F. (ARV² 126/23) Tarquinia, Museo Nazionale, RC 2066. CVA Tarquinia 1, III I c, pl. 6.1-2; 7.1. 45) *Kylix*. R.F. (ARV² 150/41) Montpellier, Musée Languedocien, 137. 46) Column-krater. R.F. (ARV² 221/14) Munich, Antikesammlung, 2381. 47) Column-krater. R.F. (ARV² 240/44) Paris, CA 1947. CVA Louvre 2, III I c, pl. 24.1-6. 48) *Kylix* (fragments). R.F. (ARV² 322/29) Florence, Museo Archeologico, PD 265. CVA Florence 3, III I c, pl. 92.1-4. 49) *Kylix*. R.F. (ARV² 351/8) Basle, Antikenmuseum, BS 438. CVA Basle 2, pl. 13.1; 14.1-2; 15.1-2. Fragments not permitting piper age identification: 50) *Kratêr* (fragment). R.F. Prague, Charles University, 75.5. CVA Prague 1, pl. 35.5. 51) *Kylix* (fragment). R.F. Paris, fr. Campana 87. CVA Louvre 19, pl. 43.2. 52) *Hydria* (?) (fragment). R.F. (ARV² 210/176) Athens, National Museum, Acropolis Collection, 934. 53) Neck-amphora. B.F. (Para 175) Hobart, University of Tasmania, 44. 54) *Kylix* (fragment). R.F. (ARV² 813/95) Adria, Museo Civico, B 49. CVA Adria 1, III I c, pl. 38.7. A lost vase, known from a description: 55) Unknown form (*kylix*?). R.F. (ARV² 59/56) Lost (formerly Rome, Museo Torlonia, 167).

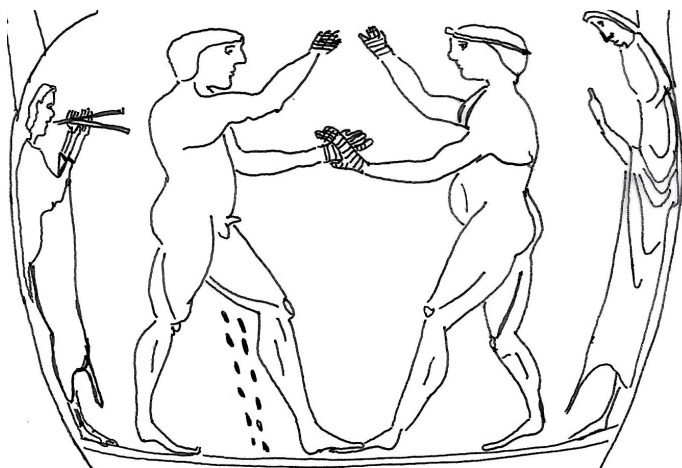


Figure 11

Palaestra scene, with two men boxing, in presence of a judge and an *aulos* player. Etruscan amphora. Uprooter Class (ABV 589/3). 500-480 B.C. Berkeley, University of California, 8/445. Drawing: F.V. Cerqueira.

According to this list, the *aulos* accompanies the javelin in 29 cases, jumping with weights in 23, and the discus in 22 [63]. This observation reveals a trend: the painter preferred to associate the piper with javelin scenes, although it indicates a balanced interest in the main contests of the pentathlon (jumping, javelin and discus). On the one hand, this contradicts the interpretation of some modern historians [64], who, perhaps overestimating the later evidence of Pausanias, Philostratus and Themistius, supposed that the *aulos*-accompaniment was intended exclusively or mainly for the jumping contest; on the other hand, it corroborates the view of other scholars [65], who observed the demand for the piper in all athletic exercises. According to Plutarch, Pausanias, Philostratus and Athenaeus, the *aulêtês* played in the *agôn* at the

champions' award ceremony [66], and in the pentathlon contest, during training [67] and competition [68]. Philostratus [69], in his theoretical essay on gymnastics, poses the auletic accompaniment to the jumping with weights as necessary for the "encouragement" of the jumper to accomplish what he considered the most difficult of all tests. Pausanias also refers to the performance of the *aulêtês* accompanying the jumping contest [70]. Nonetheless, the *aulos* was also employed for the accompaniment of fighting contests. Pausanias [71], in describing the decoration of the shield of Cypselos, shows athletes fighting to the sound of the *aulos*, which is reminiscent of scenes in the Paestan tomb paintings [72]. Understanding the reasons for the musical accompaniment with *aulos* of physical activities such as jumping with weights caught the attention of authors from the third and fourth centuries AD. Good examples, contemporary with the above mentioned Gallo-Roman mosaic (fig. 6) and with a Greco-Egyptian papyrus referring to the hiring of an *aulos*-player to accompany vintage workers, are the reflections by Flavius Philostratus (ca. A.D. 172-250), in his *De arte gymnastica libellus* [73], and by Themistios (A.D. 317-390), in his commentary on a passage of Aristotles, *Physics* 172, 26 [74]. Wolfgang DECKER takes up Joachim EBERT's study concerning the Aristotelian concept of continuous and discontinuous movement, discussed by Themistius, to justify the necessity of the auletic accompaniment to jumping with weights [75].

In philosophical reflection on this movement, one confirms a relation between the performance of the *aulêtês* and the athlete who jumps holding the weights. Themistius states that the movement of the athlete

[63] One should observe that the painter associated the presence of the piper either to one single contest (26 vases) or to a mix of different contests of the *pentathlon* (23), which is why the total number of contests linked to the *aulos*-accompaniment is greater than the sum of the 56 vases in the inventory. This choice was determined by vase shape: scenes with a single modality prevail on amphorae and *pêlikai*, whose surface supported few figures, while scenes with a mix of contests prevail on *kylikes* and *lêkythoi*, whose surface supported a composition with many figures.

[64] DECKER 1995, p. 99; LARMOUR 1999, p. 69.

[65] RASCHKE 1985, p. 178-179. GARDINER 1919, p. 302 and 476. GIRARD 1889, p. 192-193.

[66] Pseudo-Plutarch, *De musica*, XIV, 1136a-b.

[67] Athenaeus, XV, 629.

[68] Philostratus the Athenian, *De Gymnastica*, LV, 4.

[69] *Ibid.*

[70] Pausanias, V, 7, 10.

[71] *Ibid.*

[72] Plutarch (Pseudo-Plutarch, *De musica*, XXVI, 1140c-d) mentions his presence in the fighting competitions in Sthenia festivals, in Argos, whereas Athenaeus (XV, 631b) refers to *aulêtai* accompanying dances that imitated the *pankratîon* and the fight, during the *Gymnopaedia*. See: LARMOUR 1999,

p. 71: "Perhaps Athenaeus interpreted the 'performances' as dances rather than athletic contests accompanied by the *aulos* like those at Argos".

[73] Philostratus, *De Gymnastica*, LV, 3.

[74] Themistius, *Commentary on Aristotle, Physics*, 172, 26 ss. (ed. Schenel), trans. J. Jüthner, *Wiener Studien* 53 (1935), 76 sq. Themistius was very close to Christian emperors of the fourth century, as Constantius II and Theodosius, being an influent intellectual.

[75] DECKER 1995, p. 98-99. EBERT 1963. In order to understand why music improves the athletic performance, we need to retake the Aristotelian concept of "continuous" elaborated in his *Physics* V.3.226b (ed. Hardie & Gaye): "That which a changing thing, if it changes continuously in a natural manner, naturally reaches before it reaches that to which it changes last, is between. Thus 'between' implies the presence of at least three things: for in a process of change it is the contrary that is 'last': and a thing is moved continuously if it leaves no gap or only the smallest possible gap in the material – not in the time (for a gap in the time does not prevent things having a 'between', while, on the other hand, there is nothing to prevent the highest note sounding immediately after the lowest) but in the material in which the motion takes place. This is manifestly true not only in local changes but in every other kind as well."



Figure 12
Aulos player
accompanying
hoplites. Proto-
Corinthian olpe.
Painter of the Chigi
Olpe. c. 640-30
B.C. Roma, Museo
Nazionale Etrusco
di Villa Giulia,
22.679. Drawing:
F.V. Cerqueira.

who accomplishes the jump in five stages is a discontinuous movement, because discontinuity is inherent to what moves, for it changes continuously; this discontinuity, for Themistius, results from the factor of time, and not of the movement itself [76]. Hence the need for music accompanying the athlete, since the musician also moves when performing – this movement, according to Joachim Ebert, is not the movement of the hands and fingers over the strings and orifices of the musical instrument, but rather in the movement of the emitted sounds [77]. The sequence of tones, regardless of the place they occupy in the scale, being rhythmically and harmonically linked, maintains a continuous sequence of movement on the part of the athlete, reducing the discontinuity inherent to his movement, which is larger when spatial displacement occurs, such as when making leaps (and therefore, interruptions). The unavoidably discontinuous movement of the athlete who accomplishes the jump in five stages approaches continuity thanks to

the sequence of tones, which follow each other in equal tempo, regardless of the distance of the leap (interval) existing between the musical notes.

THE AULOS ACCOMPANIMENT IN MILITARY LIFE

The presence and use of musical instruments occurred at different moments. The warriors' training was mostly done to the sound of the *aulos*. When troops were advancing into battle, and even during military clashes, one could hear the sound of the *aulos* and other wind instruments, such as the trumpet (*salpinx*) and the horn (*keras*). Despite probable origins in Asia Minor and perhaps further away, in accordance with customs attested among the Lydians – and previously among the Assyrians [78] – some testimonies indicate an independent development in Greek territory, above all in Crete and Sparta. In their military expeditions, the Cretans employed

[76] Themistius, *Commentary on Aristotle, Physics*, 172, 26 ss. (ed. Schenel).

[77] EBERT 1963, p. 57, note 1: "Wir haben übrigens, was die 'Tätigkeit, in der sich der Sänger bewegt', angetrifft, wohl nicht an die Bewegung der Hand oder der Finger beim Auschlagen der Saiten zu denken, sondern an das Klingen selbst. Der Sänger bzw. Spieler bewegt sich gleichsam in Tönen. Mit «Unterbrechung des $\eta\rho\alpha\gamma\mu\alpha$ » ist das Tonintervall gemeint".

[78] Nevertheless, Assyrian reliefs show us warriors accompanied by musicians, in more remote times, what counts as an evidence of the existence of similar custom among other cultures with which Greeks held contact, even if not directly, but intermediated by other peoples. For instance, the Babylonians used to have musicians accompanying their mighty army troops. The Lydians, that influenced archaic Greece in several cultural uses, thanks to luxury and wealth, may have been the direct contact of Greeks with this traditional Oriental custom – the musical accompaniment of army – which origin goes back to distant times and lands, on the banks of

the Tigris and Euphrates. Herodotus reports that the Lydian military march was accompanied by a high-sounding orchestra of *syrringes*, harps (*pêktides*), as well as acute and bass *auloi* (*aulou gynaikeiou* and *aulou andreiou*) (Herodotus, I, 1). According to Aulus-Gellius, besides *syrrinx* and *aulos* players, the Lydians brought *aulêtridai* for the amusement of the warriors during their libidinous banquets (Gellius, I, 11, 7). Beyond the Lydians, probably the contacts the Greeks from Asia Minor had with Persians did also brought, to Hellenic context, ancient Mesopotamian cultural features, as the strong valorization of music, reinforcing Lydian influence. However, Herodotus anthropological view was very sagacious, since he noted the cultural difference: whilst the Greek troops had a sober musical accompaniment, usually with a single instrument, the reports regarding near-eastern uses indicate a multi-sounding accompaniment, suggesting a colorful musical atmosphere, with several instruments and timbres. Lydian troops advanced in the atmosphere of a real spectacle, suitable for the image of Oriental courts, aiming to intimidate the enemy before the image of power.

the *lyra* [79], the *aulos* [80], or both combined [81], as well as the *cithara* [82]. Three of the four abovementioned refer to the use of string instruments (*lyra* or *cithara*) in Crete, thus diverging significantly from the references we have in mainland and Cycladic Greece, where the *aulos* and the *salpinx* prevail.

The hundreds of *aruballoi* representing warriors are evidence of the importance the Corinthian vase-painters gave to warlike matter. Concerning this theme, a masterpiece in proto-Corinthian style arouses special interest: it is an *olpê* depicting a young *aulêtês* between two hoplite phalanxes, which advance on the enemy (fig. 12). This iconographical evidence converges with the testimony of Aulus Gellius [83]. This Corinthian vase, known as “the Chigi vase”, dates from the mid-seventh century B.C., c. 640 B.C., and therefore slightly after the activity of Archilochus on Thasos and contemporary with Tyrtaeus’ activity in Sparta. Archilochus reports in a trimeter that Thasian troops attacked chanting a paean invoking Apollo [84], to the sound of the Lesbian *aulos* (*pros aulon Lesbian*) [85]. These verses suggest that, already in mid-seventh century, it was usual to sing a hymn to Apollo, a paean, either before the attack or after the victory, as noted by Aeschylus with reference to the battle of Salamis in the early fifth century B.C. [86] Tyrtaeus played an important role in the second Spartan *katastasis* (“restoration”), together with other musicians, such as Thaletas and Xenodamus. Nevertheless, Thaletas’ and Xenodamus’ compositions, alongside the ones of Xenocritus, Polymnestus and Sacadas, belonged to the musical repertoire of the Gymnopaedia. On the other hand, Tyrtaeus’ compositions, the *embatêria mele* (called *enoplia*), a type of martial song in anapestic meter, were sung, according to Athenaeus [87], during the orderly advance of the troops, exhorting the warriors to brav-

ery [88]. That was how he contributed to the Spartan victory in the twentieth year of the Second Messenian War (c. 668 – c. 600 B.C.) [89].

Mythological narratives attribute the introduction of the martial song called *Kastoreion* in Lacedaemon to Castor and Pollux. The song’s early origin established it deeply in social memory, merging it with the mythical origins of Sparta and creating the perception of autochthony. Starting from this repertoire, the Spartans developed armed dances, accompanied by the *aulos*. According to Athenaeus, the dance of war, the so-called *purrrichê*, a traditional component of Spartan festivities and education, performed by boys in arms, functioned as training for the body, preparing it for the speed and agility required by war, in attacking and escaping [90]. According to Lucian of Samosata [91], Castor and Pollux taught the Spartans the Carvatic, a sort of dance in arms. For Plutarch [92], Lycurgus, who was contemporary with or somewhat later than Tyrtaeus, linked the music to the *agôgê*, the Spartan military education system. Plato testifies how far music was closely bound to military formation in Sparta, reporting that Spartan children were saturated with the music of Tyrtaeus at school [93].

One of the musical genres likely used in the accompaniment of the military marches was the *nomos*, like the *Nomos of Ares*, composed in enoplic meter, which would have been played during combat [94]. The warlike *nomoi* and enoplic songs were accompanied by the *aulos*. However, the *salpinx* (trumpet), poor in terms of melody and without connection to song, was frequently used as an accompaniment to military activities. Plutarch testifies to the differences in the military traditions: while the Lacedaemonians preferred to march into combat to the sound of the *aulos*, other peoples did so accompanied by the *salpinx* [95]. The Greeks from Asia Minor associated

[79] Pseudo-Plutarch, *De musica*, XXVI, 1140c.

[80] Polybius, IV, 20, 6-7.

[81] Strabo, X, 4, 20.

[82] Gellius, I, 11, 6.

[83] Gellius, I, 11, 3. The passage is analyzed further below.

[84] Archilochus, fr. 110, vs. 10-15 (ed. Lasserre & Bonnard), *Inscr. Sósthènes* IV, 54, 5. It must be the same Lesbian paean referred to in a tetrameter, which indicates that it has to be sung in the moment of attacking.

[85] Archilochus, fr. 88 (ed. Lasserre & Bonnard), *ap. Athenaeus* V, 180d-e. Lesbos had, in Antiquity, an important reputation thanks to famous musicians. Terpander was the first among them, according to the evidence of ancient texts. Terpander and Archilochus, though not having the same age, have been contemporary in some moment in their lives; however, ancient texts are not according about who was older. The reputation of Lesbos is mainly connected with stringed instruments (Terpander and Arion, Sappho and Alcaeus, and, why not, the tale about the *lyra* and the head of Orpheus). Nonetheless, the chronic of the Marble of Paros refers to Terpander of Lesbos as an *aulêtês* – so helping us to

understand the expression *pros aulon Lesbian*.

[86] Aeschylus, *Persians*, 393.

[87] Athenaeus, XIV, 630f.

[88] Dion Chrysostomus, II, 59. CORREA 1987, p. 95.

[89] Suda, Tyrtaeus 1. Tyrtaeus flourished in the 35th Olympic Games (640-37 a.C.), when he settled in Sparta to contribute to pacify the people, by means of his music, by overcoming the rivalries arising from social crisis. He composed martial songs in anapaestic meter and also elegies, which induced people, at same time, to peace and political order, to excellence and bravery.

[90] Athenaeus, XV, 630. The *aulos* kept the rhythm of the *purrrichê*, for it accompanied all dances marked by quick movements.

[91] Lucian, *De saltatione*, 10.

[92] Plutarch, *Instituta lacônica*, c.16.

[93] Plato, *Laws*, 629a.

[94] Pseudo-Plutarch, *De musica*, XXIX, 1141b. Cfr. XVII, 1137a.

[95] Pseudo-Plutarch, *De musica*, XXVI, 1140c.

the *aulos* with war. Some Clazomenian sarcophagi, dated from the first half of the fifth century B.C., represent an *aulêtês* accompanying figures dressed like hoplites [96]. In the second century B.C., when many Greek regions had already abandoned traditional usages, in Arcadia, according to Polybius, a rigorous musical and military education was preserved: young boys marched to the sound of the pipes in order to maintain good order [97].

Concerning Sparta, there is a large number of testimonies. These report, almost in unison, that the *aulos* was the musical instrument used to support military activities among the citizens, accompanying both training and combat [98]. Even Tyrtaeus is remembered in this tradition as an *aulêtês* [99]. Thus it was with the *aulos* that they played the so-called *Kastoreion* every time they advanced against the enemy. Nevertheless, other instruments were incorporated into the musical accompaniment during the Hellenistic and Imperial periods, as deduced from Pausanias [100], who reports that the Spartans marched to the music of the *aulos*, accompanied by the *lyra* and the *kithara*. In the same vein, Sextus Empiricus mentions the *aulos* and the *lyra* [101]. Abandoning traditional Spartan austerity, the change in military customs corresponds to a new taste for exuberant spectacles common to the Imperial period, causing a change in the role of musical accompaniment: for the Spartans in Archaic and Classical period, it was not a spectacle, but rather an absolute requirement of phalanx discipline.

On the other hand, there are abundant testimonies of the use of the trumpet in the military environment.

Attention is required in order to understand what is particular to each instrument in military context. Pausanias and Polybius point out that Spartans and Cretans did not use the *salpinx*: according to Polybius, they preferred the *aulos* and rhythm [102]. In emphasizing the fact that the Spartans and Cretans were unusual in not using the *salpinx*, their testimony constitutes evidence that the *salpinx* was standard in warlike contexts. Philostratus was of the opinion that the point of employing the *salpinx* was to "incite" the warriors to arms – it was a galvanizing technique [103]. Athenian authors from the classical period, such as Aeschylus, Thucydides and Xenophon, attest to the varied functions of the trumpet in war, suggesting that this was the musical instrument used in military contexts in Athens as well as in many other regions, and that it was used in different moments of the battles. The Attic iconographical testimonies from late archaic and classical periods, in black- and red-figures, represent the *salpinx* as the main military musical instrument, by means of mythological representations featuring Amazons [104] and Ethiopians [105], and representations of hoplites (fig. 13) [106]. The Athenians employed the trumpet to give the signal to attack [107], as well as to escape [108]. Such usage was common among other Greek and barbarian peoples [109]. Aristides Quintilianus provides the most detailed description of the different orders given by the *salpinx*, explaining that its orders are safer than those expressed by words, for oral orders can be misunderstood by soldiers and understood by enemies [110].

[96] The set of Clazomenian terracotta sarcophagi corresponds to approximately 120 exemplars. In a well-known sarcophagus attributed to the Albertinum Painter, conserved in British Museum, dated from around 500/490 B.C., one sees a naked *aulêtês* playing between two hoplites. On the debate between A.S. Murray and R.M. Cook about the identification of the scene, if a real fight (Cook) or a *purrrhichê* in funerary games (Murray), see Cfr. *Corpus Vasorum Antiquorum*, British Museum 8, text, p. 50).

[97] Polybius, IV, 20, 12.

[98] Thucydides, V, 70; Polybius, IV, 20, 6-7; Pseudo-Plutarch, *De musica*, 1140c; *Instituta laconica*, c.16; Lucian, *De saltatione*, 10; Gellius, I, 11, 1-4 e 10.

[99] Suda, *Tyrtaeus*.

[100] Pausanias, III, 17, 5.

[101] Sextus Empiricus, *Against Musicians*, XVIII. Alcman speaks of war accompanied by *kaloos kithariden*, translated by Campbell as "(...) fine lyre-playing tips the scales" (Alcman, fr. 41 [ed. Campbell], ap. Plutarch, *Lycurgus*, XXI, 6). It should be noted that such alternative versions to the *aulos* in the musical accompaniment to military activities date from the Imperial period, since the fragment attributed to Alcman is not known to us from any source before Plutarch.

[102] Polybius, IV, 20, 6-7.

[103] Philostratus. *De Gymnastica*, VII, 18-19.

[104] Amazons blowing *salpinx*: 1) Epinetron (fragments), b.f. Eleusis, Archaeological Museum, 907. 2) Lêkythos, b.f.

Athens, National Museum, 12738. 3) Lêkythos, b.f. Athens, National Museum, 12782. 4) Oinochoê, b.f. Ferrara, Museo Archeologico, T 915. 5) Kylix, r.f. (ARV² 62/77) Oxford, Ashmolean Museum, 1927.4065. 6) Kylix, b.f. (ARV² 43/74; 55/15) Vatican, Museo Gregoriano, 498. 7) Kratêr, r.f. London, F 158.

[105] Ethiopians blowing *salpinx*: 1) Amphora, r.f., Würzburg, Martin von Wagner Museum, L 508. 2) Amphora, r.f., Vienna, Kunsthistorisches Museum, IV 3724.

[106] Hoplites blowing *salpinx*: 1) [Fig. 13] Plate, b.f. (ABV 294/19) London, B 590. 2) Plate, b.f. (ABV 294/20) London, B 591. 3) Kylix, r.f. (ARV² 1628, ad. A 135/9 bis) Geneva, Musée d'Art et d'Histoire, 20.152.1964. 4) Kylix, r.f. (ARV² 402/17) Brussels, Musée du Cinquantenaire, R 322. 5) Kylix (fragment), r.f. Tarquinia, Museo Archeologico, 72/20048.

[107] Aeschylus, *Persians*, 392-395; Thucydides, VI, 69, 2.

[108] Thucydides, V, 10, 3.

[109] In attack: Xenophon, *Hellenica*, V, 1, 9. In the satrapa's escape: Xenophon, *Anabasis*, IV, 4, 22.

[110] Aristides Quintilianus, p. 62, 11-20 e 72, 12. BÉLIS 1984, p. 99-100. The Greek technique of musical training of horses was employed in the commands and synchronized maneuvers of the cavalry, under different signs of the *salpinx*, as we learn from the detailed description in Xenophon, *On the Art of Horsemanship*, III, 11-1, portraying the spectacle of military discipline of the cavalry, thanks to the animals' training and to the comprehension of the trumpetist's orders by the horsemen.



Figure 13

Warrior wearing *khitoniskos* and helmet, moving to right, plays a *salpinx* (trumpet), using *phorbeia*. Attic black-figure plate. Psiax (ABV 294/19). 520-15 B.C. London, British Museum, B 590. © Trustees of the British Museum.

What would be the difference between using the pipes or the trumpet in the accompaniment of warlike activities? In a military context, the communicative and tactical use of the *salpinx*, which was in addition deprived of both *melos* and *logos* (understood as a text), differs from the purpose of *aulos* songs, the military function of which was linked to rhythm and discipline. The written sources are very clear in attributing a sophisticated sense of the use of music to the Spartans, explaining how far it contributed to the success of their troops. As Sextus Empiricus reveals, they believed “that music commanded them always in the battles” [111]. Lucian states that they became almost undefeatable, because they were led by the *aulos* and the rhythm [112]. Thucydides, a keen observer of military issues, comments on how the auletic accompaniment helped the Spartan army to obtain good results [113]. In short, he argues that the main difference in the Spartans’ uses of the *aulos* was that with its music they ensured the unity of the phalanxes, for they “march up with even step and without breaking their order”. Other armies, not using the *aulos*, failed to keep the order established in training. Half a millennium later,

Aulus Gellius, regarding the same Thucydidean passage, provided a more complex anthropological explanation:

Thucydides, the most authoritative of Greek historians, tells us that the Lacedaemonians, greatest of warriors, made use in battle, not of signals by horns or trumpets, but of the music of pipes, certainly not in conformity with any religious usage or from any ceremonial reason, nor yet that their courage might be roused and stimulated, which is the purpose of horns and trumpets; but on the contrary that they might be calmer and advance in better order, because the effect of the flute-player’s notes is to restrain impetuosity. So firmly were they convinced that in meeting the enemy and beginning battle nothing contributed more to valour and confidence than to be soothed by gentler sounds and keep their feelings under control. Accordingly, when the army was drawn up, and began to advance in battle-array against the foe, pipers stationed in the ranks began to play. Thereupon, by this quiet, pleasant, and even solemn prelude the fierce impetuosity of the soldiers was checked, in conformity with a kind of discipline of military music, so to speak, so that they might not rush forth in straggling disorder [114].

Thus the military function of the *salpinx* was firstly strategic communication of orders and signs, and secondly to stimulate and encourage. On the other hand, the function of *aulos* music, at a more immediate level, was rhythmical, for the rhythm ensures moderation and measure, guaranteeing that the warriors would preserve the strategic formation of the hoplite phalanx, which was composed of soldiers who were parts of a coherent whole. Nevertheless, the function of the *aulos* was not limited to its rhythm, since its melodic dimension also played an important role. The melody, carrying the musical sweetness praised by the poets’ verses [115], contributed to military discipline as well, for it prevented the excessive and individualistic enthusiasm of the warrior, and reduced his thirst for violence. The success of the army depended on the sense of measure [116], ensuring that each warrior, disciplined and soothed by the order of rhythm and by the sweetness of the melody of the *aulos*, succeeded in remaining engaged in the established order.

[111] Sextus Empiricus, *Against Musicians*, 8.

[112] Lucian, *De saltatione*, 10.

[113] Thucydides, V, 70.

[114] Gellius, I, 11, 1-4 (ed. John C. Rolfe).

[115] Pausanias, IX, 23.

[116] On the relation between the hoplitic revolution and the sense of collectivity, that supposedly succeeded the Homeric aristocratic military individualism, see: VERNANT 1964.

However, its enemies, who did not submit their armies to the disciplining power of music, saw their troops fall into disarray at the very moment when they had to begin combat.

FINAL REFLECTIONS

Returning to the question regarding the internal logic behind the musical accompaniment of physical activity, it seems relevant to observe the scenario depicted by an Egyptian contract of employment from fourth century AD, recorded on a preserved papyrus [117]. In AD 322, a farmer of Hermopolis [118], a Greek community of Egypt, hired an *auletes*, called Psenumis, to play during the vintage, in order to support the peasants' work through his music. At first glance, the situation may seem anecdotal, but let us try to understand the reason why the farmer decided to hire a musician. Hiring a musician to work in an economical activity surely obeys an economical logic. The piper's performance was necessary for the development of the workers' routine – the farmer did not employ the musician out of generosity to his workers, but for the productivity of his vineyard. The strength of this economic logic helps us to comprehend the resilience of such usage, as supported by the iconographical evidence in mosaics of Late Antiquity [119]. From the Würzburg krater by the Amasis Painter from the sixth century B.C. (fig. 2), up to the Gallo-Roman mosaic from the third century AD (fig. 6) and later exemplars from Israel, Jordan and Lebanon from the sixth century AD (fig. 3), passing through the fourth century AD Egyptian contract, we may observe a form of social and economic continuity.

Therefore, our interpretation should take advantage of the concept of "longue durée", that provides the historian with a different treatment of temporality, permitting the establishment of an anthropological synchrony among diachronic historical testimonies, enabling one to put into dialogue, for mutual comprehension, situations verified in different periods and regions during Antiquity. What could be viewed by modern eyes as merely pictur-

esque in fact makes sense as a cultural institution, rooted in musical and agrarian culture, which had a long life in a number of rural activities in the ancient Mediterranean.

We anticipate our conclusion. The musical accompaniment by the *aulos* in wine production, as well as in sport and war, is dependent on the music's utility, but what is this utility? It serves the rhythmic demands required by physical activities that involve repetitive movements, contributing also to reinvigorate the spirit of those who must perform these strenuous tasks [120], a function in which both the *melos* and the *logos* can play a role. According to ancient thought, music should be considered as the combined effect of *rhythmos*, *melos* (the melodic, harmonic aspects of the song) and *logos* (the discursive aspect of the song, the sung words, or the poem that one sings) [121]. However, these have different effects. The Aristotelian author of *Problems* XIX.25 argues that it is more important to imitate feelings through the *melos* than through the *logos*, though in modern times we might suppose the opposite, i.e. that words would be more effective in imitating emotion than a melody. The effect of the *ethos* was namely present in rhythm, though also in melody, since rhythm and melody are both movements, as well as actions [122]. Furthermore, this essentially rhythmical and melodic ethic aspect is linked to the quality of continuity, since sound is transmitted through the continuously moving air [123]. This continuity was linked to *aulos* music, because the sound of the *aulos*, as a wind instrument, is a product of moving air.

From the standpoint of the anthropology of music, a situation repeats itself for around a millennium during Antiquity. This repetition calls attention. Let us reflect a little bit more on the utility of employing the *aulos*. It was useful because it was necessary, but in what did this necessity consist? The answer is most likely identical in the case of the auletic melodies (called *aulêma*) present in the various work activities that we have mentioned. When treading grapes, milling grain and kneading dough, there is a need for synchrony and regularity in repeated movements. Fundamentally, the same regularity required by the movements of athletes, warriors aligned in phalanxes and rowers [124]. The song

[117] *Select Papyri: Vol. 1: Non Literary Papyri Private Affairs - Private Documents*, transl. and ed. by A.S. Hunt & C.C. Edgar, London (Loeb Classical Library), 1932, n. 22. BÉLUS 1999, p. 71.

[118] Called Eugenios, he was gymnasiarch and senator.

[119] It is worth remembering that this agrarian musical custom reverberated until the 20th century, by means of a resilient cultural tradition. For instance in Lebanon, according to ethnographic reports regarding the 1930s, one witnessed the use of a kind of double flute during the olive harvest, in order to prevent the peasants to sleep. See: FEGHALI 1935, p. 167.

[120] According to the Aristotelian author of *Problems* XIX.1, thanks to the music of *aulos*, those who suffer, suffer less.

[121] Aristotle, *Problems*, XIX.

[122] Aristotle, *Problems*, XIX, 27; XIX, 29. On the other hand, colours and flavours do not have ethic character, for they are not movement.

[123] Aristotle, *Problems*, XI, 6.

[124] In the three last mentioned activities, it was usual to have the presence of *salpinx* players, although for different reasons.

performed by the piper in such collective labour activities helped the workers to sing together [125], and to preserve the rhythm that was necessary to accomplish the goal of their tasks.

In all these activities, whether labour, athletic or military, the *aulos* accompaniment, while helping to maintain synchronized and steady rhythm, simultaneously stimulates the spirit to endure the effort and exhaustion that results from the repetitive and strenuous nature of these activities – effects that could negatively affect productivity. In this sense, the melody was considered a comfort to the spirit, enabling a certain calm and allowing entertainment during hard work. It is worth noting that this second factor (the melodic factor), while inseparable from the first one (the rhythmic factor), has not yet received proper attention in modern studies, despite being clearly expressed in the sources.

But, after all, why use the *aulêma* and the *aulos*, instead of percussion or string instruments? The Aristotelian author of *Problem* XIX.43, although reflecting on theatrical performances, provides a clue regarding the reason for choosing the *aulos* as the accompaniment of physical activities. He argues that the sounds emitted by the *aulos* and by the voice were akin to each other, for both are produced by blowing. On the other hand, the sounds of the *lyra* are “thin” by nature, in so far as they do not merge well with the voice [126]. From this explanation, based on the *physis* of the sound, it is possible to infer that the *lyra* would produce a “broken”, discontinuous and interrupted sound, while the sound of the *aulos*, by blowing, would be more continuous. The continuity of the sound of the *aulos* was considered necessary to guarantee its function of regulating the rhythm of movement, not only because it reduces the discontinuity inherent to movement [127] as an effect of the continuity of the blown sound, but also as result of an acoustic effect. For the sound of the *lyra*, more timid and discontinuous, loses much of its effect under the noise produced during a number of relevant physical activities [128].

As we have pointed out above on the analysis of Themistius on Aristotle 172.26ss and Aristotle *Physics* V.3.226b, the

singer or the instrument player, as well as the athlete in jumping, could find continuity of movement in the sound, because it provides the *tempo* – and it is the time, for Aristotle, that counts most in the definition of continuous movement. Hence, music was a way to make the movement of the athlete almost continuous, for it reduced to a minimum the perception of leaps and interruptions that make movement discontinuous. It seems reasonable to add to this argument the Aristotelian concept exposed in *Problems* XIX.43, analyzed above, that the sound of the *aulos* has the capacity to produce the sensation of continuity of sound. For us, this reasoning contributes to an understanding of the cultural logic underlying the enduring permanence of the custom of accompanying physical activities with *aulos* songs.

Perhaps these reasons influenced Aristotle to consider the *aulos* an instrument that “incites to action” [129]. Concerning songs that accompanied the athletic contests or the so-called ‘working songs’, the function of encouraging physical effort [130], which is a function stimulated by the rhythm, merges inseparably with the function of relieving fatigue, which is afforded by the *melos*. The melody sung by workers, as in the vintage, milling or rowing, brings joy and softens the arduous and painful movement resulting from strenuous and repetitive activities [131]. Aristides Quintilianus demonstrated his consciousness of the inseparable rhythmic and melodic functions of music, in considering music as a gift that helped to endure fatigue, encouraging handymen to withstand strenuous efforts when coordinated by pleasant and amusing songs [132].

To battle fatigue, to encourage physical effort, to regulate and to provide rhythm for repetitive and tiresome physical movements, based on regularity and necessary continuity – music played all these roles in the accompaniment of athletic contests, military actions and working tasks. All these actions are based on repetitive movements that require rhythmic planning. According to Sextus Empiricus, the *aulos* assisted the accomplishment of any work that needed “well-marked tempo, with the purpose of ordering thought” [133].

[125] Aristotelian authors of *Problems* XIX.22 and XIX.45 learn us that many people singing together preserve the rhythm.

[126] The sounds emitted by the *lyra* produced in the listener the particular impression that each of them existed on their own, inasmuch that any singer’s error would be perceived.

[127] Aristotle, *Physics*, V, 3, 226b.

[128] Apart from that, acoustically, the *aulos* performed better than the *lyra* in outdoor spaces where working songs were played, either the arias that incited the athletes to endure the physical effort in the palaestrae or gymnasia, or the songs executed in the noisy deck of a trireme.

[129] Aristotle, *Politics*, VIII, 6, 1341a. BÉLIS 1999, p. 76.

[130] Athenaeus, XIV, 629c.

[131] BÉLIS 1999, p. 75.

[132] Quintilianus, *Instutio oratoria*, I, 10, 16 (ed. Butler): “Indeed nature itself seems to have given music as a boon to men to lighten the strain of labour: even the rower in the galleys is cheered to effort by song. Nor is this function of music confined to cases where the efforts of a number are given union by the sound of some sweet voice that sets the tune, but even solitary workers find solace at their toil in artless song.”

[133] Sextus Empiricus, *Against Musicians*, XVIII.

Nevertheless, power was attributed to *aulos* music thanks to its melodic effect, which had a pacifying virtue. For instance, according to Plutarch, the Thebans introduced the *aulos* in both serious moments and amusement, in order to calm and sweeten the impetuosity and hard character of their citizens, attributing honor and distinction to the *aulos*-performance [134]. The same virtue was attributed to the effect of the *aulos* music of Thaletas of Crete and Tyrtaeus. These musicians took part in the second Spartan *katastasis*, in which the *aulos* played an important role, accomplishing a pacifying function, harmonizing the opposite sides, and thus simultaneously playing a political role thanks to its melodic qualities [135]. To “restrain the impetuosity” [136] of the warriors, as argued by Aulus Gellius, or to “lighten the strain of labor” [137], as asserted by Aristides Quintilianus, or to cause less grief to those who suffer, as defended by the author of the Aristotelian *Problem* XIX.1, all are qualities of the *aulos* resulting from its *melos*, and not from *rhythmos*. Thanks to the pleasant and amusing songs, labourers were encouraged to withstand strenuous efforts, because “even the rower in the galleys is cheered to effort by song” [138] and the peasant’s work during the vintage was supported by the *aulos*-player [139].

Considering the previous questions about the underlying logic of the musical accompaniment of different physical activities, we conclude that there were two different levels of impregnation of the internal logic. The *melos* and the *rhythmos* were linked with a trans-historical character, while the *logos* was mainly related with a particular level, that belonged to the singularity of each event and phenomenon. For example, the rhythm and melody were responsible for many of the virtues, as

encouragement and discipline, so that it was usual to have the musical accompaniment of work, sport and military activities. The poetic discourse of the musical *logos* was linked more with particular events or with singular cultural traditions. During the pentathlon, it was usual to play the *Puthikon aulêma*, borrowed from the Delphic Games. Though having an agonistic feature, suitable for games, the most important reason, since the accompaniment in sport was only instrumental, could be the musical tradition of this *aulêma* as a musical genre specially known for the spectacle of the professional virtuosity of *aulos*-players as Sacadas of Argos.

On the other hand, in some cases the *logos* was related to the cultural meaning of the situation. The discursive meaning of the songs performed in work activities, for example the *epilênion aulêma* (“presser song”), as suggests the title, should be directly linked with the wine-production. In some cases, however, it was arbitrary, with no relation regarding the semantics of the sung poems. This was the case of the *alêtis* [141], performed as a “vintage song”, but originally linked to the Aiora in honor of Erigone. But why this connection? Just because this party was celebrated in Athens simultaneously with the vintage period.

Thus, this study reveals that concerning *rhythmos* and *melos* there is an internal logic, common to many physical activities along a large period in Antiquity. To synchronize movements, for example leg movements in grape-pressing or hand movements in bread-kneading, to insert them into a common tempo, into a tempo controlled like the pulse of a metronome, and at the same time to make movement repetition less monotonous – these functions, within this cultural system, were all carried out by the *aulos*. ■

[134] Plutarch, *Pelopidas*, XIX, 1. Roesch 1995, p. 126, nota 5.

[135] Gostoli 1988, p. 231-237. Sources are not univocal regarding neither the real name of the musician, Thaletas or Thales, nor his instrument, the *lyra* or the *aulos*; however, concerning his origin, sources are in accordance: Gortyna, in Crete. According to Plutarch, *de Musica*, X.1134d, his name would have been Thaletas and his instrument the *aulos*; on the other hand, in Plutarch *Lycurgus* 4, his name is Thales and his instrument the *lyra*; for Pausanias I.14.4, his name was Thales, but the instrument is not cited. According to Plutarch, Thaletas developed his rhythms based on the *aulos* music originally created by the legendary musician Olympus, known for his sweet, charming melodies. Later on, other pipers, such

as Polymnestus of Colophon and Sacadas of Argos, played a similar role, contributing to the reestablishment of the social and political order in Sparta with their *aulos* performance (Pseudo-Plutarch, *de Musica*, IX, 113b-c).

[136] Gellius, I, 11, 3 (ed. John C. Rolfe).

[137] Quintilianus, *Institutio oratoria*, I, 10, 16 (ed. Butler).

[138] *Ibid.*

[139] *Select Papyri*, n. 22 (ed. A.S. Hunt & C.C. Edgar).

[140] Philostratus the Athenian, *De Gymnastica*, LV, 4.

[141] Athenaeus, XIV, 618e. Cfr. Pollux, IV, 55.

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