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THE CONCEPTUALISATION OF MUSIC IN ANCIENT GREEK THOUGHT (V CENTURY B.C. – II CENTURY B.C.)

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ABSTRACT

The focus of this dissertation is the analysis of the music-related philosophical passages from the 5th century B.C. to the 2nd century B.C. It aims to provide a multifaceted view towards music as a cultural phenomenon, which is based primarily on the philological and culturological explorations instead of the technical-musicological approach. The texts from our selected period attest that *mousikē* had an extremely broad conceptualisation which led to the attribution of the different, sometimes completely opposite value: from an insignificant performative practice to an activity which corresponds to the divine laws and directly affects the human soul. The discussed testimonia provide evidence of defining music both as an exclusively acoustic phenomenon and as a philosophically significant concept that oversteps the sonic definition. Our sources clearly demonstrate that *mousikē* was a polysemous term: it was understood as an interdisciplinary form of art (as the arts of the Muses), though it was also used to indicate the exclusively instrumental music or a philosophical concept, which does not define sound as its essential quality. The aim of this dissertation is to clarify the arguments behind each of these positions, to analyse whether such different modes of conceptualisation are compatible among themselves, and to see how they fit together into explaining what was understood as music in Antiquity. The concept of music had a complex semantic network; therefore, it cannot be reduced to the narrow definitions limited by the specific methodological approach of a particular contemporary discipline. It is for this reason that this dissertation employs an interdisciplinary and comparative approach and attempts to unravel this complexity in detail. Subsequently, we are led to the analysis of the two different traditions of thought. In the first one, music is considered to be a mimetic art that is inextricably related to the other philosophical arguments and subjects, such as mathematics, cosmology, psychology, ethics and politics. In the second one, music is conceived as a self-sufficient discourse, which has sound as its essential quality, and which is detached from the other philosophical considerations. In this thesis we explore their development and analyse what enabled the musical thought to be worthy of the attention of the greatest philosophical minds. We will demonstrate that it was not the sound or the artistic practices that were central in the philosophical thought on music, but instead the embedded structural qualities that have correspondence to the universal proportions of the cosmic world and which are perceptible to the listeners through the medium of sound.

INTRODUCTION

MOUSIKĒ. A GENERAL OVERVIEW OF THE RESEARCH SUBJECT

The phenomenon of *mousikē* undertook a significant role in the life of Antiquity. This is attested by the wide use of musical practices in a great variety of social activities, by the references found in myths, the iconographical evidence and, especially from the Classical period, by a great attention that was paid to the theoretical reflection of the musical phenomena, which can be noted in the writings of various nature, primarily technical, historical, literary and philosophical. *Mousikē* had an important role in rituals, theatre, music competitions, symposia, it was employed while carrying out everyday tasks, it took part in education and other socially significant communal contexts[1]. It was also of special importance for the religious practices and a medium through which the heritage of the past was being transmitted and through which the tradition was consolidated.[2]

Among the scholars whose interests cover Antiquity, it is now a well-known fact that *mousikē*, which is usually being translated as music, was perceived rather differently from a meaning we usually attribute to this term nowadays. Although it has a common etymological background, in Antiquity *mousikē* was understood as an umbrella term that encompassed much more than mere sounds. That is, in addition to our current understanding of music as an arranged nonverbal expression of sounds, *mousikē* was closely intertwined with poetry and physical movements. It was conceived as belonging to the realm of the Muses that take care of various practices at their disposal. In other words, the term *mousikē*, with some rare exceptions, was mostly used to indicate a single performative event, where all the parts, namely the instrumental music, the words, and the body movements were understood in a union and as closely related to one another.

The extensive scholarly studies analysing Ancient Greek music started only in the 20th century. Although the ideas from the Ancient Greek philosophers were important to the thinkers of the subsequent eras, generally such analyses were not an end to itself – the goal for them was not so much an exclusive analysis of the musical culture of the previous times, but the possibility to adapt them to the new theoretical contemplations of their own.

[1] West, M.L. (1992). Music in Greek Life. In: *Ancient Greek Music*. Oxford: Clarendon Press, pp. 13–38.

[2] Havelock, E.A. (1963). *Preface to Plato*. Cambridge (MA): Belknap Press of Harvard University Press.

Such late beginning of researching this subject is also partly related to the late discovery of the musical notations and it is now clear that the Ancient Greek musical heritage can and, in many cases, should be approached differently. Until the 19th century, only four notation examples, provided by Vincenzo Galilei[3], were known.[4] Even now our database of notation is sparse: most of the extant fragments, ranging from Classical Greece to the Roman period, fit in one book – *Documents of ancient Greek music: the extant melodies and fragments edited and transcribed with commentary*,[5] with several new sources to be added to this list.[6] There are very few extant examples of musical notations most of which are in small fragments, even though since the 4th century B.C. Greeks had such system, or even two parallel systems: one of which was used to signify a vocal line, while another – instrumental music.[7]

In fact, such lack of notated examples in the Ancient Greek context is to be expected. According to Martin West, who explored the issue of musical sources in Antiquity more explicitly, there was simply no tradition of writing music down. Giovanni Comotti also explains that "[c]ompositions were entrusted only to the memory of the listeners and re-elaborated in the course of individual performances". The author suggests that "we should not marvel at the fact that memory of musical compositions from archaic and classical times had disappeared as well", because they were never written prior to the fourth century. In fact, even later musical notation was employed only by the professional musicians.[8]

This idea that both the scores disappeared, and the cultural memory of the musical performances has been disrupted, must be taken into account when considering an appropriate approach for researching the ancient heritage of music. This points our

[3] Galilei, V. (1581). *Dialogo della musica antica, et della moderna.* Fiorenza: appresso Giorgio Marescotti.

[4] See West, M. L. (1992). Introduction, *op. cit.*, p. 7; Tsugami, E. (1998). Vincenzo Galilei and Notated Examples of Ancient Music. *Aesthetics* 8, pp. 93–102.

[5] Pöhlmann, E. and West, M.L., eds. (2001). *Documents of Ancient Greek Music: The Extant Melodies and Fragments*. Oxford: Clarendon Press.

[6] See: Martinelli, M.C. (2020). Documenting Music. In: Lynch, T.A.C., and Rocconi, E., eds., *A Companion to Ancient Greek and Roman Music*. Hoboken: Wiley, pp. 103–116.

[7] West, M. L. (1992), *op. cit.*, p. 7.

[8] Comotti, G. (1989). Introduction. In: *Music in Greek and Roman Culture*. Baltimore: Johns Hopkins University Press, p. 11.

attention towards the other available sources and towards the social and cultural reception of music. West names that information on the Ancient Greek and Roman music is also available through archaeology and art: the remains of the instruments (mostly pipes, less perishable parts of them, and fragments of lyres), instrument models, figurines, statues and reliefs, representing men, women or deities playing instruments. There are many extant iconographic sources, providing insights not only about the musical instruments but the performance technique and the performing contexts as well. Many references to music and music-making can be found in literature from 8 century B.C. onwards, especially by lyric and comic poets. Among other sources, we could name sparse specialized literature (more elaborated in the later times), and the works by philosophers.[9]

For our purposes of this thesis, it is necessary to highlight a fact that a vast amount of information about the ancient music reaches us not from the musical notation, but from the other kinds of sources. Therefore, the analysis of their cultural context is of special significance for anyone who aims to immerse oneself into the field of Ancient Greek music studies. It was already noted by Andrew Barker that it is literary texts that are our most reliable source of information against which all the hypotheses based on the other evidence must in the end be tested.[10] That being said, one must note the reciprocal relationship between the literary sources and the functions ascribed to music: despite the fact that we can learn a lot about music from these sources, they go beyond the mere explanatory purposes, for they took an active part in forming the musical culture in Antiquity. The music itself was deeply rooted in the Ancient Greek thought on various levels, primarily mythological, social, political, psychological, and philosophical, and the literary texts took part in this live multifaceted cultural tradition.

As for the textual research in this field of study, an English-speaking reader is met by a great selection of Barker's *Greek musical writings* (1984, 1989), which present a broad spectrum of the music-related textual passages including different authors and periods and provide insightful commentaries to this selection. This kind of work allows

[9] West, M.L. (1992). Introduction. *op. cit.*, pp. 4–7; Barker, A. (1988). Le fonti della antica musica greca. In: Berti, F. and Restani, D., eds., *Lo specchio della musica. Iconografia musicale nella ceramica di Spina*. Bologna: Nuova Alfa Editoriale, pp. 9–17.

[10] Barker, A. (1984). Introduction. In: *Greek Musical Writings 1: The Musician and His Art*. Cambridge: Cambridge University Press, pp. 1–17.

different specialists from diverse academic disciplines to approach the musical texts and contribute to researching them further. For our discussions, where possible, we will use Barker's translation and the abbreviations to all of the quoted texts will be provided according to the *Oxford Classical Dictionary*. The already mentioned work of West (1992) is also of special importance, for it discusses the technical issues and music-related social practices: it analyses musical sources and performance techniques; explains the misinterpretations of the ancient musical terms, and based on the various sources, indicates their actual status in the ancient world.

Recently the studies of music in Antiquity are getting wider scholarly attention. There has been some academic interest in the term itself, emphasising the central role of music in the social contexts (Murray and Wilson, eds., 2004). The renewed interest for the philosophical enquiry of music can be found in the work by Francesco Pelosi (2010), which explores the relationship between the soul and the body, analysed through the musical passages in Plato's work. A lot of research has been done thanks to the efforts of "MOISA: The International Society for the Study of Greek and Roman Music and its Cultural Heritage", which focuses and continuously promotes a great variety of activities in this field, including the organisation of the academic events and the journal it publishes since 2013: *Greek and Roman Musical Studies*. Ancient music was also approached by emphasising the role of sound and hearing in the work *Sound and the Ancient Senses* (Butler, S. and Nooter S., eds., 2019). Most recently, the reader was introduced to *A Companion to Ancient Greek and Roman Music* (Rocconi and Lynch, eds., 2020) and *Music and Philosophy in the Roman Empire* (Pelosi and Petrucci, eds., 2020) – the volumes with a great scholarly input by the variety of authors from the different study disciplines.

In the light of increasing scholarly attention to the musical heritage, the Stoic thought is one of the fields that still lacks proper textual analyses. There is no collection dedicated specifically to the musical passages from the Hellenistic times, and there are relatively few works dedicated for researching this subject. The most important contributions are the scholarly articles written by A.A. Long (1996), D. Delattre (2000), A. Barker (2001), L. Woodward (2010) and P. Scade (2017). Our main sources for the analysis of the Stoic musical thought are found in the *Stoicorum Veterum Fragmenta (SVF)* (1903–1905), which is the most extensive collection gathered by Hans

von Arnim. For the English translations we will mostly use *The Hellenistic Philosophers* (1987–1989) by A. A. Long and D. N. Sedley, as well as *The Stoics Reader: Selected Writings and Testimonia* (2008) by B. Inwood and L.P. Gerson. When available, the works by Diogenes Laertius and Plutarch will be quoted from the LOEB editions. For our discussions on the thought of Philodemus and Diogenes of Babylon we will use the French edition of *De Musica* IV by D. Delattre (2007), which is currently the fullest and the most reliable edition of this text. Currently, there is no complete English translation, and for our research we will employ the translations from the several sources, provided by L. Woodward, L.P. Wilkinson, J.C. Thom and W.B. Henry. References to Philodemus' work will be indicated according to Delattre's edition. For the other Stoic sources, we will use the references to the *SVF*.

The appendix in the end of the thesis provides the reader with the opportunity to find the quoted music-related passages in their original language (Greek or Latin), together with the accompanying English translation from the same edition, when available. Based on the edition, the translations might differ from the ones chosen to quote in the dissertation text, therefore, the quotations have numeric references that correspond to the same passages in the appendix.

RESEARCH OBJECT, AIMS AND METHODOLOGY

Many great works that study music in Antiquity have focused on exploring the technical elements of the musical thought and on some of the isolated aspects of this phenomenon (for instance, on the social practices, the performances, the musical theory, the technique, etc.). Nevertheless, almost no studies have been designed to analyse the ambiguities within the conceptual framework of 'music', which requires reconsidering how these isolated intricacies are interlinked among themselves. Most studies concern themselves with researching the sonic qualities of the phenomenon, the musical practices, or the historic development of the Ancient Greek musical theory. In this thesis, we will employ another line of research. We will discuss the passages which prove that the concept of 'music' in our selected texts has several layers of understanding and sometimes the same term was used in a very dissimilar manner. For instance, there were definitions of music that have nothing to do with the sound or the performative practices, and these

definitions currently lack proper scholarly analysis. By analysing the meanings that our discussed texts present to us, we will notice how they overlap or, quite commonly, how they are not used in the same sense even by the same author in the same text. In fact, it is not too rare that we can even find the usage of the terms to be contradicting. Naturally, when the concept is so broad, the scholarly articles focus on some particular definition and the complexity of the conceptual linkage remains unnoticed.

There are several layers from which the ambiguities of *mousikē* arise. First of all, the term itself was used to indicate notions that are rather different among themselves: the sonic music, music together with poetry and physical movements, there was also a notion of music as philosophy, it was linked to astronomy, which led to the concept of the harmony or the music of the spheres, even though the term itself is of later origin. The ambiguities extend to the level of the musical value: music was understood both as very powerful and essential for the well-being of a polis, though it was also conceived oppositely: as a very insignificant activity, employed by those who seek only pleasure. Similar contrast where music is positioned on both of the polar points on the axis of significant-insignificant, can also be found discussing the level of social practices: music was employed both in the most profane contexts while getting drunk, but also in the most sacred rituals. Such oppositions constitute the problematic field for our research and require reconsidering, in which cases and for what reasons music was conceptualised in one way or the other.

Therefore, this thesis aims to find out, whether those different and even opposing attitudes towards musical phenomena are compatible among themselves – that is, if they can be seen as belonging to the one coherent cultural paradigm, or if they present separate conceptual systems, leading to the different notions and the different conceptual frameworks of mind. We will make an effort to confront both the textual passages regarding the acoustic definition and also the philosophical conceptualisation that discuss the notion of music without sound. In other words, we shall explore if the subject of music in Antiquity requires to be discussed as a one united concept, or would it be more reasonable to speak about different musics – several individual notions that happen to be indicated by the same name, though their actual content varies greatly. Keeping in mind the very different contents that the Greek philosophers attributed to the same term (varying from the hearable sounds to the astronomic order), as well as the different value

they ascribed to music, we need to reconsider, whether these conceptions can be linked to one another and, more importantly, if that is the case, to find out what are the presuppositions that allow this linkage. It is surprising that such analysis, focusing on the ambiguities and the differences, which are comprised under the term of 'music', was overlooked. Therefore, it becomes a primary goal of this study to discuss these notions together, in order to analyse music as a complex and multi-layered concept. Leaving this subject without a proper scholarly attention would allow a risk of falling into a narrow niche of a particular interpretations, a risk of ignoring the complexity of the concept and, above all, a risk of overlooking the preconditions which determine a particular understanding of music that renders it significant in the ancient Greek culture. Furthermore, researching these questions would allow to come closer to understanding the entirety of the role of music in Antiquity, which in turn would contribute to our ability of better interpreting the isolated aspects of the ancient music theory and the functions that music was expected to fulfil.

There are several ways to approach such a subject. Some of the most enlightening ones would probably include interpreting the cultural environment through the archaeological evidence, re-reading and re-creating the ancient music from the extant notations or approaching it through the philosophical writings. Our thesis is concerned with the latter. There are several reasons for such a choice, including the special significance that language attains in interpreting the world, in conceptualising and understanding various phenomena, as well as the interdisciplinary nature of the very phenomenon of *mousikē*, to which such texts provide a comprehensive view.

The explorations of *mousikē* had already been relevant for the Ancient Greeks themselves. In fact, by reading their philosophical texts we are met by numerous musical references, which too demonstrate the importance of the phenomenon, owing to the fact that the ancient authors paid a lot of attention to describe it. Music was both the actual practice related to refining one's skill and at the same time it was an object of serious theoretical contemplations. As it was already noted by Penelope Murray, who discussed the term *mousikē* in Classical Athens, "The fact that Athens became the dominating centre of performance over the course of the fifth century, a place to which poets, musicians, actors, and spectators from all over and beyond the Greek world gravitated, also made of it a place of vibrant critical reflection and exchange, where the theoretical analysis of

mousikē flourished in an intellectually heterogeneous environment, alongside and in active competition with other trends of social and philosophical thought."[11] Naturally, similar theoretic reflections alongside musical practices were not limited to Classical Athens, which points our attention towards recognising that the cultural and conceptual contexts were always present and supplemented the artistic performances.

Our aim then is to analyse the philosophical conceptualisation, the attribution of meaning to the musical realities. We do not seek to analyse music itself as a sonic phenomenon, but instead, we focus on the qualities and notions that were attributed to this phenomenon in the Ancient Greek world, and on the presuppositions that made music to be conceived as extremely relevant on so many levels. For such purposes, the philosophical works are the most suitable sources. They do not only discuss the sonic environment (which undoubtedly retains the philosophical relevance) but also provide us with the extensive knowledge of how those sounds were understood.

It is necessary to point out that the theoretic discourse which supplemented the musical practices was not only a retrospective tool for retelling historical information of the past, but it also suggested to actively rethink the context, which for the Ancient Greeks was the present. Eske Tsugami has rightfully noted, that "The whole historical development of Western music is [...] not a mere course of practical choices made empirically by musicians, but it has always been backed up with theoretical thinking. To put it more precisely, theory not only formulated practice retrospectively, but it justified and even led practice in a certain direction."[12] It is because of this reason that philosophical writings can provide us with substantial information, necessary for understanding the complexity of the discussed phenomenon. The studies on music (if it is not merely a technical analysis of its elements) require a close, attentive theoretical supplement, and the Ancient Greek philosophers already reflected on this. This is especially relevant considering that music involves the stimuli of non-verbal nature, and that conceptualising it in a verbal form provides clarification and contributes to its understanding.

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[11] Murray, P. and Wilson, P., eds. (2004). Introduction: Mousikē, Not Music. In: *Music and the Muses: The Culture of 'Mousikē' in the Classical Athenian City*. Oxford: Oxford University Press, pp. 1–9.

[12] Tsugami, E. (1998), *op. cit.*, p. 94.

As we shall see, some of the texts, like the dialogues by Plato, have already been addressed by the scholars, who have done enlightening work in explaining the functions of music and its importance in education, ethics or governing of a polis. Our goal for this thesis is rather different. It is not to analyse some particular function of music or its uses in the social contexts but to determine, how the acoustic form can have an effect on a human being and what are the preconditions for music to have such power. We are going to enquire how all of these isolated functions that are discussed by the other authors relate with one another, paying most attention to the relationship between the acoustic and the philosophical notions music, for one of them is sonic and another has nothing to do with the sound. We will also seek to find out whether the different and even opposing meanings of the term 'music' can coexist as the elements belonging to one conceptual system or if the contradicting attitudes indicate that the conceptualisation of music was not coherent. Our aim then is to discuss the notion of music in the relevant philosophical texts of the Classical period, primarily in the works by Plato and Aristotle, and to look into the transformations of these ideas later on, in particular, in the thought of Ancient Stoics, who still conceived music as possessing the power to affect a human soul, though with several essential modifications. Regarding the Hellenistic period, we have rather few extant literary sources dedicated to the philosophical reception of music. This makes our research even more relevant, especially considering that there are also not so many studies that review these extant music-related textual sources from the Stoic and Epicurean heritage, in particular with an emphasis on the concept and the conceptual relation to the thought of the previous thinkers.

From what we discussed, it is now clear that there are several reasons to focus our research on the philosophical and anthropological aspects of music instead of employing a technical approach[13]. We have already mentioned the significance that language has for conceptualising and understanding music. Furthermore, we must take into consideration that music is not only a phenomenon of sounds, but that it is inextricably related to the discourse of their perception. As we can see, this field of studies requires to explore not only the strictly musical evidence, but also to analyse the cultural context, and to question

[13] For this line of research, the reader could greatly benefit from the work of Hagel, S. (2009). *Ancient Greek Music: A New Technical History*. Cambridge: Cambridge University Press.

why those sounds were noticed in the first place and what made them be conceived as relevant.

As a particularly fitting illustrative point in arguing the necessity to broaden the scope of musical research in the ancient times, we shall take into account a discourse of 'sound events'[14] or a more recent denomination of it, called 'Storia dei popoli senza note'[15], suggested by Franco Alberto Gallo. Although it is primarily concerned with Middle Ages and the later times, it is perfectly in line with our proposition for broadening the scope of research on music in Antiquity. Pointing out the importance of understanding music as an integral part of the cultural context, Gallo reviews the history of the methodology employed in the field of musical studies. Music, he notices, was usually explored by invoking the tools of musicology and ethnomusicology, both of which are concerned explicitly with the sonic qualities, without considering other essential features of the phenomenon. However, a suggested discourse of 'sound events' comprehends much more than mere sounds, and sonic representation is conceived as only one of its constituents. Gallo claims that "The circumstances in which it occurs, the functions it performs, the goals it sets, the emotions it generates, the judgements it provokes, the memories it evokes, are equally essential components. Due to all this, which is not sound, but which provides the sound with meaning, it becomes possible to achieve a sort of reconstruction […]."[16] Despite the fact that some more essential features could be added to this list, the main idea is undoubtedly worthy of our attention – one cannot discuss music leaving the anthropological context aside. It is because of this context that some researchers claim that the real ancient music seems to be a forever lost phenomenon, yet this could not be said about our knowledge of the ancient music. For instance, Armand D'Angour shares similar insights, claiming that even if it was possible to see and hear a faithful audio-visual recording, "we would surely not be in a position to understand and

[14] Gallo, F. (1986). Introduzione. In: Musica e storia tra Medioevo e età moderna. Bologna: Il Mulino, pp. 9–29.

[15] Gallo, F. (2010). Premessa. In: *Per una storia dei popoli senza note: atti dell'Atelier del Dottorato di ricerca in musicologia e beni musicali*. Heuresis: Bologna, pp. 7–10.

[16] Ibid., p. 7, author's translation.

appreciate the impact it created on ancient ears."[17] Therefore, ancient music is such a practice that cannot, or under most circumstances, should not be separated from the whole tradition of its cultural reception. Pelosi seems to concur, stating that "to create ancient Greek music, you must *be* an ancient Greek, sharing the ancient Greek social and cultural life from early childhood."[18]

The idea that both the scores and the cultural memory of the musical performances have disappeared also must be taken into account when considering an appropriate approach for researching music of Antiquity. As Gallo eloquently points out, when we overcome the barrier of analysing music as mere sound, we can find music that cannot be heard. In such a case, we are met by a vast amount of evidence from the very early times and from every part of the world, which allows us to discuss the musical realm even without any extant musical notation; in addition, we can find out something about music in a society, where it was not transmitted by writing it down at all.[19] To overcome this barrier of mere sound, Gallo suggests two sources that are able to offer the best guidance: these are textual and iconographical evidence. Just like all the historical facts, sound events disappear in physical reality, but they are documentable in their existence and interpretable in their meaning. Pursuing the similar goal and emphasising the significance of an anthropological component of music, Allan Merriam wrote that "[w]ithout people thinking, acting, and creating, music sound cannot exist; we understand the sound much better than we understand the total organization of its production."[20] Therefore, even though we usually discuss music as a variety of acoustic performances, the special significance that this phenomenon was able to attain in Ancient Greece, was mostly related to the explanations, the conceptualisation and the theoretic discourse that supplemented the performative practices.

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[17] D'Angour, A. (2019). Hearing Ancient Sounds Through Modern Ears. In: *The senses in antiquity: Sound and the Ancient Senses*. London; New York: Routledge, pp. 31–43.

[18] Pelosi, F. (2010). Introduction. In: *Plato on Music, Soul and Body*. Cambridge: Cambridge University Press, p. 9.

[19] Gallo, F. (2010), *op. cit.,* p. 7.

[20] Merriam, A. (1964). Preface. In: *The Anthropology of Music*. Evanston (IL): Northwestern University Press, p. viii.

Philosophical texts were also chosen as an object of this dissertation due to the interdisciplinary and diverse nature of the phenomenon of *mousikē* itself. In our times, it is obvious that every field of studies has its object: musicology researches musical sounds; literary studies are occupied with analysing the texts, and so on. However, in the case of *mousikē*, this approach is troubling from the very beginning. Approaching it from one particular discipline can only provide us with the information about the separate parts of the phenomenon, which we still need to put together in order to complete a hermeneutic circle of interpretation. Pursuing the same logic we employed while discussing the need to broaden the scope of musicological research, we must notice the analogy in the discipline of literary studies as well. In this case, exploring ancient music means exploring the genres and lyrics that migrated from the sphere of music to the studies of literature – primarily the epic poetry, hymns, paeans, odes, etc. Compositions that were initially sung, that is, they were music[21], are left out by the musicologists, and nowadays are mostly studied by philologists, or vice versa. Even though such approaches provide us with an important specialised knowledge, due to the interdisciplinary nature of *mousikē*, it would need a more theoretical approach that indicates the complexity of the musical reception, and the philosophical writings are best fitted for this task.

Discussing the ancient times when the philosophical and musical terminology is still forming, we risk facing anachronisms, homonymy and discrepancies in the conceptual content. As a phenomenon of such complexity, music requires not only specialised but also a unifying approach. An approach that would cover the issue of the different meanings that this term refers to and which should not be limited by a particular research discipline, such as musicology or philology in their narrow definitions. Therefore, the right way to conduct such research would require pursuing the path of dialectics of music which, in turn, would contribute to our knowledge of the architectonics of the musical thought, and which would allow to see it both as a complex and united philosophical discourse.

The theoretic reconstruction of a conceptual framework, which we are looking for in this thesis, as well as the problems that arise from shifting the focus to particularities, is similar to the archaeological reconstruction of an excavated object. For instance, we

[21] Cf. Rocconi, E. (2015). Music and Dance in Greece and Rome. In: Destrée, P. and Murray, P., eds., *A Companion to Ancient Aesthetics*. Oxford: Wiley, pp. 81–93.

could remember the case of the lyre from the "Tomb of the Poet"[22]. It is one of the best examples that show the risk of fragmentary reconstruction, where the different elements were put together without the proper analysis of their interconnections and the entire structure of the object was misread. Without the proper differentiation of the elements and the knowledge which parts constitute the whole instrument, the reconstruction of the lyre ended to be false and even deceiving. As a result, we ended up with the wrong implications and made a "successful" reconstruction of only one instrument, in that case a lyre, when initially there were probably two. In a research which focuses on the phenomenon of *mousikē*, it becomes of crucial importance not only to look from the different perspectives (such as historical, literary, theatrical, musicological, etc.) but, quite contrarily, to overstep the boundaries of any single discipline and to see the musical phenomenon as a constituent part of a complex anthropological mechanism. Even though such approaches are very useful and provide specific knowledge, it is unnatural to view music as a differentiated scholarly field, since for the Greeks *mousikē* and even art in general was a synesthetic experience[23], in which many elements that we are now used to separating, were seen as closely interconnected.

The three main arguments: language and understanding, music as a "sound event" instead of mere sound, and an interdisciplinary nature of music lead us to the choice of the philosophical texts as our research object. They also define our aims of this thesis, which are to examine the preconditions of the effect that music (both in a broad and narrow sense) can have on human beings, to clarify the different layers and meanings attributed to this concept, and to extend the scope of investigation by looking at the different layers of music altogether. This is especially relevant considering that music, as we shall demonstrate, next to its performative definition, was also conceptualised with additional philosophical content, such as the ethical power or the correspondence to the cosmic order. These are not the sonic qualities, therefore, all the studies that are limited to the analysis of music as sound or its usage in the social contexts, ignore a great part of the conceptual content that this phenomenon was attributed with. Moreover, we shall argue that it was particularly this content and not the sonic element that attracted the

[22] Psaroudakēs, S., (2013). The Daphnē Aulos. *Greek and Roman Musical Studies* 1, pp. 93–121.

[23] See: Toner J., ed. (2014). *A Cultural History of the Senses in Antiquity*. London: Bloomsbury; Bradley, M. and Butler, S., eds. (2014–2019). *The Senses in Antiquity*. New York (NY): Routledge.

philosophical attention as well as constituted the philosophical significance of music. This work is dedicated to discussing, analysing and comparing the concept of music and its denotations throughout the selection of the most important remaining philosophical writings. It aims to explore whether the different definitions and aims of music can be interpreted as a coherent tradition of the Greek musical thought and whether it is reasonable to speak about the common, collective conception, not limited by the definition of some particular text of one author.

Therefore, our methodology for such research would not involve the analysis of some isolated aspects of music or the musical theory. Instead, we will focus on what was understood as essential in the conceptualisation of music. For this, the studies of the philosophical and anthropological nature can offer the most valuable insights. We will take on to analyse the relevant philosophical passages, which provide a complex way of interpreting the phenomenon, instead of focusing on the particular aspects of research, and allow to go beyond merely musicological or philological approaches. It is relevant not only to focus on the Ancient Greek music itself but also on the role that it pertained in their society, how it was conceptualised and what role it was assigned in the Greek world by those to whom this was a cultural tradition of the present. Having this set as the main goal, we can understand, that in such case, the most value could be found in the philosophical texts that allow us to (re)interpret the material evidence and our current knowledge of the phenomenon. Furthermore, this is not only important for the knowledge of the ancient world, but also for our understanding of our own culture, since the tradition of Western music, including the terminology, has its roots in the Greek tradition[24].

The dissertation is divided into three chapters. The first one explores the ambiguities in the music-related terminology and the different values that were attributed to the musical phenomena. The second part is concerned with the Classical Greek writings, with a special emphasis in researching the non-sonic definitions of music. Here we aim to unravel how the different descriptions and values attributed to the phenomenon

[24] For the transmission of Ancient Greek tradition, see also: Irving, D.R.M. (2018). Ancient Greeks, world music, and early modern constructions of Western European identity. In: Strohm, R., ed., *Studies on a Global History of Music A Balzan Musicology Project*. New York: Routledge; Levin, F.R. (2009). We Are All Aristoxenians. In: *Greek Reflections on the Nature of Music*. New York: Cambridge University Press, pp. 48–87.

of music could be discussed in a one coherent conceptual system. Subsequently, we analyse, how to explain the connection between the acoustic and the philosophical, inaudible notions of music. The third chapter is dedicated to exploring the Stoic musical heritage in relation to the previous tradition, and to studying what innovations were introduced into its conceptualisation after certain conceptual challenges arose due to the development of their philosophical thought. The thesis is finished with the overall conclusions and the appendix containing the passages from the primary sources and their translations.

1. THE CONCEPTUAL AMBIGUITIES OF *MOUSIKĒ*

In the philosophical writings of Classical Greece, primarily by Plato and Aristotle, we are faced with a very broad spectre of characterisations and descriptions of what music is and how it functions. We could find *mousikē* as referring to an art that deals exclusively with sounds, though, most commonly, to the musical practices closely intertwined with poetry and rhythmical movements of the body. *Mousikē* was also conceived as a representation of an astronomic order and related to the arrangements of the heavenly bodies, thus leading to the notion of the music of the spheres, or the divine music. In addition to that, *mousikē* was held to be ethically relevant and took a fundamental part in the oral tradition and its transmission[25]. In some cases, it was even identified as philosophy[26]. We are going to discuss the different characterisations of music with an effort to find out whether they are compatible with one another and, if so, what are the grounds that allow the linkage among the different conceptualisations of music, such as the acoustic, pedagogical, astronomic, and philosophical. A number of worthy issues emerge when we shift our research attention to the level of language.

There have been studies dedicated to exploring music by considering its relation to the soul[27], the divine music, music in social contexts, such as education, state affairs or the ethical life of a polis.[28] However, these conceptualisations greatly differ in their approach and explanations, they also discuss textual material, where this differently understood music(s) is attributed with a rather varying value: from a pleasure-oriented activity or an unimportant practice that exists merely for the sake of accompanying the lyrics, it ranges to music which corresponds to the divine rules of Cosmos and which is powerful enough to substantially affect one's soul. The question of how these different definitions and descriptions could or could not be connected into a coherent frame of reference appears to have been overlooked. It is particularly this question that establishes

[25] Havelock, E. (1963). The Supreme Music is Philosophy, *op. cit.*, p. 287.

[26] Pl., *Phd*. 60e–61a: ὡς φιλοσοφίας μὲν οὔσης μεγίστης μουσικῆς; cf. Pl., *Phdr*, 248d.

[27] See esp. Pelosi, F. (2010), *op. cit.*; Barker, A. (1989), *Greek Musical Writings 2: Harmonic and Acoustic Theory*. Cambridge: Cambridge University Press.

[28] See esp. West, M.L. (1992), *op. cit.*; Comotti, G. (1989), *op. cit.*; Murray, P. and Wilson, P., eds., (2004), *op. cit*.

the main axis for this thesis: evidently, many misconceptions might arise from a different content attributed to the same term, that is, discussing different matters while using the same name to indicate them or using the same term to a different extent.

For this reason and for our research purposes, when music is being discussed within the framework of cultural heritage, it is necessary to take into account the whole complexity of the phenomenon instead of focusing on the narrow line of research. Defined by our aims, in this thesis we will seek to explore whether it is possible and if so, how to approach a united background of musical thinking and to focus on the connections among these layers instead of dwelling on the more isolated particularities. Naturally, the selected literary passages of the highest relevance will be analysed along the way.

1.1. LAYERING THE MUSICAL THOUGHT

The term *mousikē* in the Ancient Greek thought encompasses a number of different meanings. Although our contemporary term 'music' in many languages has its roots in the Ancient Greek language, at first the concept was much broader than it is nowadays. For this purpose, we shall shortly revisit the main characteristics of the ancient meaning of the term. *Mousikē* could be defined as 'any art over which the Muses presided, especially poetry sung to music' or 'generally, art or letters'[29]. Similarly, the term *mousikós* does not simply refer to the meaning of 'musical' or 'skilled in music', but also to something 'elegant, delicate' or 'generally, a votary of the Muses, man of letters and accomplishments, scholar'[30], *mousikos anēr* indicates an educated man, able to comprehend poetic language in its entirety[31]. In fact, the broad conceptualisation where music is connected to poetry and followed by body movement, or where *mousikē* indicates the arts altogether, is not too surprising, since we can easily notice its etymological relation to the Muses, who were understood as the caretakers of the whole cultural life. This is why the term is primordially or prototypically adjectival, referring to

[29] s.v., *The Online Liddell-Scott-Jones Greek-English Lexicon*.

[30] s.v., *The Online Liddell-Scott-Jones Greek-English Lexicon*.

[31] Comotti, G. (1989). Introduction. *op. cit.*, p. 3.

activities corresponding to the Muses[32]. According to Penelope Murray, *mousikē* "seems to be the first of the 'tekhnai' nouns formed in -ική, reflecting its early conceptualization as a craft with established practices and principles. In short, musical 'theory' was apparently born with *mousikē* itself, and the persistent scholarly habit of locating its beginnings rather in the Hellenistic period […] reflects a narrow view of what counts as musical thinking."[33] Different textual sources from Antiquity indeed present a great variety of definitions of *mousikē*, and the broader meaning, which is not limited to describing the nonverbal acoustic sounds, prevails. Furthermore, *mousikē is* such a broad term that Murray calls it "a contender for the closest term in Greek to our (polymorphous) 'culture',"[34] and so different from what we call music nowadays, that Havelock announces a narrow and direct translation of *mousikē* to music to be fatal.[35] In pursuance of clarity, it is necessary to distinguish several principal lines in approaching the concept of *mousikē*, namely: music in the broadest sense as the art of the Muses; music as the nonverbal expression of sounds; and music as a philosophical concept, primarily related not to the acoustic phenomenon, but to the analysis of the deep structure of the musical elements.

Considering the common etymological background between *mousikē* and music, we will make an effort not to negate the continuity in the development of the term, as it is commonly done, but rather to use both of the terms in a more defined way. They will be followed by additional explanations and context that would clarify the ambiguities or the potential reduction of the conceptual content. At the same time, we are going to adhere to a broad understanding that being musical in the ancient Greek world meant belonging to the realm of the Muses. The difficulties in translation as well as in the possible definitions of our discussed phenomenon unveil that in order to understand how the people of Antiquity conceptualised *mousikē*, we must focus not on the individual aspects

[32] Georgiades, T. (2009). *Music and Language: The Rise of Western Music as Exemplified in Settings of the Mass*. Cambridge: Cambridge University Press.

[33] Murray, P. and Wilson, P. (2004). Introduction: Mousikē, Not Music, *op. cit.*, p. 1. For the multifaceted analysis of the Muses in Antiquity, see: Murray, P. (2020). The Mythology of the Muses. In: Lynch, T.A.C., and Rocconi, E., eds., *A Companion to Ancient Greek and Roman Music*. Hoboken: Wiley, pp. 13–24.

[34] Murray, P. (2004). Introduction, *op. cit*., p. 1.

[35] Havelock, E. (1963). The Supreme Music is Philosophy, *op. cit.,* p. 287.

of musical thinking, but rather on their interconnections. A multifaceted usage of the term indicates a close bond between sound and words that was established in the Greek world within the framework of literary-musical practices, and these elements, although they can and in some cases should be discussed separately, in the performative practices were usually united.

1.2. FROM WORDS TO SOUNDS

When discussing literary-musical practices, the question of the hierarchy between these two elements comes up. This is an issue of high relevance because it already indicates two different modes of speaking about music – in a very broad sense, as an oral tradition comprising poetry, which was fundamental in transmitting the tradition to the future generations, but also in a very narrow sense as an instrumental music. Such unequal modes of using the term might already create some confusion in determining a value of a musical piece and of the phenomenon of music itself. This applies both to the texts from Antiquity and to the modern scholarly studies. It would also allow a hypothesis that instrumental music was just an accompaniment for words and it is the lyrics in a poetic-musical performance that were essential, hence when analysing the phenomenon of *mousikē* we would enter the realm of words instead of sounds, rendering *mousikē* more approachable from the discipline of philology instead of musicology.

In respect of the context of Classical Greece, it is indeed most common to grant lyrics with the essence of the whole musical performance. This occurs not only because most of the research on music in Antiquity is done by philologists and historians, but also because of the attitude of the ancient Greeks themselves, which we could notice by reading the primary sources. Contemporary scholars claim the words to be dominant and preceding[36], compared to the instrumental part of *mousikē*. Acoustic and rhythmical qualities are then understood as a mnemonic technique to remember the narrative, to remember the lyrics.[37] Moreover, music is also named to be a vehicle for poetry and

[36] Di Donato, R. (2006). Moysiké. Premesse antropologiche allo studio della poesia greca. In: Restani D., ed., *Etnomusicologia Storica Del Mondo Antico. Per Roberto Leydi*, Le Tessere 10. Ravenna: Longo Editore, pp. 7–16.

[37] Havelock E. (1963). The Supreme Music is Philosophy, *op. cit.*, pp. 276–311.

drama[38]. These considerations position words as superior to the other qualities of musical performance.

Indeed, a statement that a text is a preceding element is very common among scholars, except in those cases when non-verbal aspects of *mousikē* are discussed separately. Havelock claims that an instrumental melody "cannot afford to develop as a separate technique with its own virtuosity and become what we would call 'music'. For this would drain away attention from the main task, which is of verbal memorisation."[39] Giovani Comotti at first chooses a more delicate approach and writes that "speech no less than melody and gesture had decisive functions"[40] and that "[i]n dramatic performances of the classical period, choral and solo singing were at least as important as dialogue and dramatic actions"[41], but then he as well claims that "[t]he unity of poetry, melody, and gesture in archaic and classical culture made the rhythmic-melodic expression contingent on the demands of the verbal text"[42] and also that "[m]usic […] was simple and linear and, at least until the last decades of the fifth century B.C. functioned mainly to characterize the text in relation to its poetic "genre," its purpose, and the occasion of performance."[43] Although the every before-mentioned statement seems to be right in their own way, I would suggest stopping by the relationship between the music and the words for a little longer, and to look at how the instrumental music was conceived by the Greeks themselves: if the element of sound, the sonic part of *mousikē*, is really just an accompaniment, just an addition instead of being an independent meaning-conveying element. Furthermore, we should see if any other qualities were considered important in music, besides the fact that it rendered words conceivable better.

In fact, we can clearly observe similar words-appreciative notion in the primary literary sources. For instance, *melos* (μέλος) in Plato's *Laws* is defined as a connection of words, proper arrangement (ἁρμονία) and rhythm, and in cases when music has no words, the reader is led to the conclusion that it is "a practice in which it is extremely

[38] Barker, A. (1984). Introduction, *op.cit*.

[39] Havelock, E. (1963). The Psychology of the Poetic Performance, *op. cit.,* p. 150.

[40] Comotti, G. (1989). Introduction, *op. cit.*, p. 3.

[41] Ibid., p. 6.

[42] Ibid., p. 3.

[43] Ibid., p. 12.

difficult […] to understand what is intended, and what worthwhile representation is like"[44]. When Plato analyses the practice of *mousikē,* in *Republic* III, he dedicates most of his research to the narratives and stories that are told to the young future rulers of a polis. The semantics of *mousikē* comprises words and stories (λόγους τε καὶ μύθους)[45], therefore, when he writes about narrations, he discusses the level of word-craftsmanship, and it is no wonder that in such context lyrics surely prevail. Since words have a clear meaning compared to the acoustic aspects of *mousikē*, the content of the song is conceived as being the essence of the whole musical performance. In this context, after mentioning that *logoi* belong to the sphere of *mousikē*, Socrates of the dialogue blames Homer, Hesiod and other poets for lying to their fellow citizens[46] and for promoting inappropriate and even dangerous attitude towards heroes and the life of a polis altogether. Later in *Republic* we could find an even more definite statement on lyrics vs. sounds: Plato clearly shows that *mousikē* not only comprises words, but that the mere acoustic meaning seems to lose the battle against lyrics completely. He virtually solves the question by claiming that "*harmonia* and rhythm must follow the words."[47]

The issue might seem not to require further consideration and could be conceived as a general truth. Although the previous notions are well-founded, stopping by this hierarchy allows us to raise some important questions. The first and the most important one would be the following: how could we explain the claims that *mousikē* has an effect on the human soul even when it had no words? When the words are present, one of the possible explanations for such substantial power of music presumably could be based on the very special way of how the poet is able to present the text. Havelock, who studied the issue of poetry as a part of the transmission of cultural identity asserts that the relationship between a poet and any other community member was established precisely through the audial and visual discourse and that it had an effect on both individual and collective memory.[48] This would explain why Plato is concerned with the execution of poetic performance. In fact, it becomes hard to distinguish a recited piece from the

[44] Pl., *Leg.* 669e, transl. by Barker. [4].

[45] Pl., *Resp.* 398b.

[46] Pl., *Resp.* 377d.

[47] Pl., *Resp.* 398d, transl. by Barker [10].

[48] Havelock, E. (1963). The Psychology of the Poetic Performance, *op. cit.*, p. 146.

psychological effect, caused by reciting and listening. The things that a poet says might be dangerous, though the way in which he says it may be even more significant and more destructive.[49] A poet not only conveys the words but makes his audience remember and believe in them.

However, some modes (*harmoniai*) alone, without any words accompanying the musical performance, were also considered as powerful enough to significantly affect a soul and *ēthos* of an individual. They can direct a person towards softness and idleness, like Mixolydian or the Syntonolydian modes do, they can be the modes of "slack" (*chalarai*), like Ionian or Lydian, though there are also modes suitable for soldiers – the modes that are appropriate to the brave and self-restrained men, namely, Dorian and Phrygian[50]. The principal point here is that certain melodies may be employed for the therapeutic means, as well as be used for influencing the ethical and political life of the citizens. Such notion that music is directly related to a person's *ēthos* is already common in the Pythagorean textual corpus[51] and it is significantly developed in the philosophical works by Plato and Aristotle[52]. In fact, Plato writes that music, even without words, can be so dangerous that some modes would need to be forbidden in the ideal version of a polis, and that the artists who play tunes in the inappropriate modes would need to be stopped or, otherwise, be banished[53].

We could also remember a famous passage from Plato's *Laws* (790d–791e), where he describes how mothers wishing to calm down the wakeful newborn children provide them with motion and song, and in this way cure the Corybantic hyperactivity by slowly rocking them and singing. Being very young, the babies do not understand the meaning of the words, but the appropriate dance and song (χορείᾳ καὶ μούσῃ) chosen by the mothers not only calm down the children but affect their soul and ensure the

[49] Havelock, E. (1963). The Psychology of the Poetic Performance, *op. cit.*, p. 146.

[50] Pl., *Resp.* 398e–399b, transl. by Barker.

[51] For the development of the so-called ethical musical theory and the Pythagorean contribution to it, see Rocconi, E. (2020). Music and the Soul. In: Wolfsdorf, D.C., ed., *Early Greek Ethics*. Oxford: Oxford University Press.

[52] On the significance of the instrumental music, see Ford, A. (2004). Catharsis: The Power of Music in Aristotle's Politics. In: Murray P., Wilson, P., eds., *Music and the Muses: The Culture of Mousikē in the Classical Athenian City*. Oxford: Oxford, pp. 309–336.

[53] Pl., *Resp.* 398c–401b, transl. by Barker.

appropriate and right state of it.[54] Therefore, sounds and rhythm influence the soul even if a person does not understand the lyrics. A similar notion could be found in Aristotle's *Politics,* book 8th, where he confirms and discusses the effects that different kinds of melodies have on the soul.[55] Following Barker's commentary on Aristotle's *Politics*, we may see that if Susemihl's emendation on the line 1340a[56] is accepted, there would even be a direct statement by Aristotle that "when people listen to imitations, their feelings are always changed in sympathy with them, even when there are no words, owing to the rhythms and melodies themselves". Barker claims such emendation to be possible, based on nearby reference to Olympus, a Phrygian composer, who composed the musical pieces for solo *aulos*.[57] Whichever reading would be true, Aristotle has already noticed the complexity of the topic. In the nearby passage of the 8th book of *Politics,* he confirms our suspicions that the subject of music is not as straightforward as it could initially seem. At the beginning of his analysis, he claims that "it is not easy to identify precisely the power that music has, nor the reasons why one ought to engage in it,"[58] and later on he returns to the issue of the non-verbal musical meaning: "For tune and rhythm alone are employed in flute-playing and harp-playing (αὐλητικὴ καὶ ἡ κιθαριστικὴ) and in any other arts which have a similar function, as, for example, pipe-playing. Rhythm alone without tune is employed by dancers in their representations, for by means of rhythmical gestures they represent both character and experiences and actions." (Arist., *Poet.* 1447a, transl. by Fyfe [30]). The before-mentioned passages clearly demonstrate that the issue of the relationship between words and music is not as simple as it is usually described to be.

In addition to the previous remarks, let us not forget a close reciprocal relationship between the words and the sound – they are not always so easily separable, nor is there

[54] See Schoen-Nazzaro, B.M. (1978). Plato and Aristotle on the Ends of Music. *Laval théologique et philosophique* 34(3), pp. 261–273.

[55] Arist., *Pol.* 1340a, transl. by Barker.

[56] "Again, when people listen to imitations, their feelings are always changed in sympathy with them, even when they are not accompanied by rhythms and melodies", transl. by Barker.

[57] Barker, A. (1984), *op. cit.*, p. 175.

[58] Arist., *Pol.* 1339a, transl. by Barker [32].

always a reason for such distinction.[59] For instance, even though meter and rhythm are present in the language, they are also part of the musical nature and do not belong to the isolated realm of words. In the world of Antiquity, all of these elements are closely connected. Just like the word *mousa* in the passage from *Laws* we recently quoted – neither it indicates just words, nor mere instrumental music, but a song in its full entirety. An articulated word has a sonic element within itself already, and in the ancient Greek world, this feature is not underestimated. Broad and diverse usage of *mousikē* clearly represents this close relationship, therefore, it refers to both the "musical word" and "wordy music". Music and literature were usually conceived as belonging to the one creative paradigm, and that is different from the contemporary view. This conceptual overlap between the ancient and the modern approaches requires a modern scholar to reconstruct these links which would allow an understanding about the ancient world and the ancient conceptions.

There is no doubt that a specific and isolated research of musico-poetic compositions has its purposes, though there is a lot of knowledge that could come from analysing the connections themselves. It is now clear that the relationship among the separate parts of the musical performance is not as straightforward as it seemed at the beginning, and we will come back to addressing this problem in the subsequent chapters of this thesis.

In the Ancient Greek world, the musical culture, including both lyrics and sonic part of the performance, was transmitted not through notation, but through memory. Through the artistic practices the figure of the Muses became a representation of all the knowledge, both human and divine, because it was through the medium of song that all the ideas in Antiquity were expressed, whether religious, political, moral or social. Making the Muses the daughters of Mnemosune means allowing the past to speak to the present or allowing any communication, any tradition at all.[60] Memory here is understood both in a very practical sense (for e.g., a poet may ask the Muses to remind him of something), but also in the most abstract sense that allows the tradition and the possibility

[59] For relationship between poetry and music in a composition, see Klavan, S. (2019). Sung Poems and Poetic Songs: Hellenistic Definitions of Poetry, Music and the Spaces in Between. *The Classical Quarterly* 69(2), pp. 597–615.

[60] See Murray, P. (2020), *op. cit.*

of its transmission. This is especially relevant in the song culture[61], which was the core of the world of Antiquity. The Muses, to whom the term "music" directly refers to, are not solely the guardians of poetry, but of the entire intellectual life in general. They inspire poets to sing of the heroic deeds of the past and they provide them with the necessary knowledge.[62]

It is necessary to emphasise the importance of the oral tradition compared to the written one. This also means that usually no notation was used, except in the cases when professional musicians started to develop this technique in the 5th to 4th century B.C.[63] In such a case, both sounds and words retain a meaningful addition to the overall performance and are inseparable. For instance, Havelock relates memory, text and recitation, and comes to the conclusions that "[a]ll memorisation of the poetised tradition depends on constant and reiterated recitation. You could not refer to a book or memorise from a book. Hence poetry exists and is effective as an educational instrument only as it is performed. Performance by a harpist for the benefit of a pupil is only part of the story. The pupil will grow up and perhaps forget. His living memory must at every turn be reinforced by social pressure. This is brought to bear in the adult context, when in private performance the poetic tradition is repeated at mess table and banquet and family ritual, and in public performance in the theatre and market-place. The recital by parents and elders, the repetition by children and adolescents, add themselves to the professional recitations given by poets, rhapsodists and actors."[64]

In Classical Greece, the oral tradition is still highly appreciated. This is most evident from Plato's *Phaedrus*, where the written text is opposed to the live discussion[65]. In *Phaedrus,* the Socrates of the dialogue presents a story about Thamus, a ruler of Egypt, who speaks to the god Theuth. Let us take a look at the most enlightening excerpt:

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[61] See Herington, J. (1985). *Poetry into Drama: Early Tragedy and the Greek Poetic Tradition*. Berkeley, Los Angeles and London: University of California Press.

[62] Murray, P. (2004). The Muses and their Arts. In: Murray P., Wilson, P., eds., *Music and the Muses: The Culture of Mousikē in the Classical Athenian City*. Oxford: Oxford University Press, pp. 365–389.

[63] West, M. L. (1992). Introduction, *op. cit.*, pp. 1–12.

[64] Havelock, E. (1963). Poetry as Preserved Communication, *op. cit.*, p. 43.

[65] Pl., *Phdr.* 276d.

[…] and now you, who are the father of letters, have been led by your affection to ascribe to them a power the opposite of that which they really possess. For this invention will produce forgetfulness in the minds of those who learn to use it, because they will not practice their memory. Their trust in writing, produced by external characters which are no part of themselves, will discourage the use of their own memory within them. […] for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with, since they are not wise, but only appear wise. (Pl., *Phdr.* 275a–b, transl. by Fowler [9])

Although the quoted passage is mainly concerned with the relevance of the live conversation, live discussion, it nevertheless highlights the importance of transmitting the tradition by spoken word and establishes the logical connection between the written text and forgetfulness. Even though written tradition is recognised as important for preserving the cultural memory for the future generations, for when the times of forgetfulness come, even though it is a significant stimulus in dialectical thinking, *Phaedrus* emphasises the relevance of the actual time and of the live tradition. Bereft of such means of communication people would eventually forget who they are.

Here we should notice that not only the content but also the way how the content is transmitted (namely, the verbal, live acoustic tradition) is understood as being of special importance. Notated music is always unfulfilled since music is a performance, there is a particular way of how it has to be executed, it has the element of unrepeatability – the uniqueness of a piece; and the performance is directly linked to the live tradition and the cultural preparation of the listeners from the very particular period of time. Partly the thoughts from the mentioned dialogue could be applied in the discussion of why there are not so many examples of musical notations: it has to do with the reason that the execution of *mousikē* inherently has an acoustical form. Therefore, instead of being transmitted through notation, in Antiquity musical culture was transmitted by memory. This might be one of the reasons why in some cases only the lyrics remain extant from the musical piece, for e.g. when Alexandrian scientists collected Greek literature, they probably did not have a notation for what they later called "lyrical poetry": the literary genre, whose pieces were initially accompanied by a musical instrument.[66] As it is noted by Adam James in his commentary on Plato's *Republic* 398d, "In the best period of Greek music, lyric poetry was written only for music, and music only for poetry, the separation of the two being

[66] Rocconi, E. (2015), *op. cit.*, p. 82.

condemned as illegitimate."[67] This marks a huge gap between the ancient and the modern approaches to the text and music. As it is noted by Butler and Nooter, "[…] we have the poems of Homer and the speeches of Cicero. But to hear them, we must read them aloud, which means we must listen to ourselves struggling to reconstruct what their languages, rhythms, metres, and music (assuming we even make an effort to go this far) once sounded like."[68]

After pointing out the complexity of the term itself, it is now necessary to note that not only the term "mousikē" is multifaceted but the attitude towards musical practices greatly differs as well. On the one hand, music has a fundamental role for the well-being of a polis, it has an important part in education and even in politics. In the fourth book of *Republic,* this is stated very clearly: "People should beware of change to new forms of music, for they are risking change in the whole [i.e., in the whole constitution and fabric of the state]."[69] On the other hand, music in the same literary sources is described contrarily: as dependant on lyrics, as something that has an unclear object of representation, and as a pleasure-oriented activity, where pleasure is not considered to have high significance as a goal that music is expected to achieve[70]. In the texts of our chosen period, we could find music defined both as a divine and powerful phenomenon, but at the same time as having a goal of mere pleasure, which lowers its significance. The before-mentioned distinction of the highly valued and highly depreciated music can also be noticed in Aristotle's *Politics* VIII. He devotes the whole book to researching the subject of *mousikē*, agrees with its high value for education and a person's *ēthos*, but also does not hold back on criticism – names it to be pleasure-oriented and vividly describes how unacceptable it is to practice it: "the poets never describe Zeus as singing or playing the *kithara*: rather, we say that such practitioners are vulgar artisans and that what they do is not for real men, unless they are drunk or joking."[71] As we can already notice, the

[67] Adam, J. (1902). *The Republic of Plato*. Cambridge: Cambridge University Press.

[68] Butler, S. and Nooter S. (2018). Introduction: Sounding Hearing. *Sound and the Ancient Senses*. London-New York: Routledge., p. 2.

[69] Pl., *Resp.* 424c, transl. by Barker.

[70] We will come back to the issue of pleasure on the pages 94-97 of this dissertation.

[71] Arist., *Pol.* 1339b, transl. by Barker [33].

definitions of music and its value range all the way throughout the axis of being significant and insignificant at the same time.

That music was a practice of high relevance can also be confirmed by noticing numerous musical allusions invoked to discuss the social structure of a polis, for example, "syntagma" "can refer to either a political or a musical system"[72], we could find similar usage of "diapason"[73] while discussing the contexts of social involvement, or "mousikē" itself, like in Plato's *Laws*, where the ideal city is effectively to be "sung and danced into existence."[74] It is important to notice how musical terminology is employed when discussing the most important subjects – the structure of the political setup and describing the functioning of the Cosmos[75]. Probably the most evident passage, where music is attributed with the highest significance, appears in *Phaedrus*, where Plato directly states that "the soul that has seen the most shall enter into the birth of a man who is to be a philosopher or a lover of beauty, or one of a musical or loving nature."[76] Choosing musical allusions when discussing the topics of the highest importance is already an indication that the phenomenon of *mousikē* indeed had a special place in the world of Antiquity and that musical questions must not be ignored lightly.

And yet, Plato also wishes to ban some kinds of music from his perfect state, claiming them to be not only inappropriate or inaccurate but also wrong and too dangerous for the well-being of a polis. The issue becomes even more complicated considering the very cautious and depreciative views that Plato held towards art in general, claiming it to be the shadows of the shadows,[77] and it becomes even more

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[72] Pont, G. (2004). Philosophy and Science of Music in Ancient Greece: The Predecessors of Pythagoras and Their Contribution. *Nexus Network Journal* 6(1), pp. 17–29.

[73] See Lynch, T. (2017). The Symphony of Temperance in Republic 4. Musical Imagery and Practical Models*. Greek and Roman Musical Studies* 5(1). Leiden: Brill, pp. 18–34; Rocconi, E. (2007). Valenze etico-psicagogiche delle *harmoniai* greche. In: *Storia dei concetti musicali. Armonia, tempo*. Roma: Carroci editore, pp. 45–55.

[74] Murray, P. and Wilson, P., Introduction: Mousikē, Not Music*, op. cit.*, p. 2.

[75] Plato refers to Cosmos as being musical both in *Republic* and *Timaeus.*

[76] φιλοσόφου ἢ φιλοκάλου ἢ μουσικοῦ. Plato, *Phaedrus*, 248d, Plato. Platonis Opera, ed. John Burnet. Oxford University Press. 1903. The text quotes Fowler's translation.

[77] See esp. Pl., *Resp.* 373b and *Resp*. *522b, 598a-599e*.

perplexed regarding music in particular since it was the vision that was usually held to be the most reliable sense, and not hearing.

One could also question the status of music when discussing it among the other kinds of art in Ancient Greece. For instance, those who study musical sources point out how crucial the role of *mousikē* was for the life of Ancient Greek society and ask to acknowledge it as one of the most important practices. However, even though it is common to discuss music in the specialised academic works that are dedicated specifically for this purpose[78], in the extensive studies which cover various types of art, music does not get its own chapter – usually it must suffice with some mentions along the lines. Presumably one of the reasons for such miscommunication is the very sparse evidence that we have about the musical notation, though there are many other sources, such as textual or archaeological, that could offer significant insights and become a substantial addition. Similarly, we must note that the studies, dedicated to the Ancient Greek art altogether, tend to focus on the visual artistry, especially on the sculpture and the vase painting, while the art of music is being left aside[79]. Such issue also has to do with the fact that the Western discourse of "art history" in its modern sense refers to the "history of visual art". In this case, the modern discourse is completely different from the very broad notion that the Greek *technē* comprises[80], therefore, when discussing the subject of art in Antiquity, music must not be ignored, for it was one of the most important artistic practices closely intertwined with the questions of cultural identity.

The status of music, then, is not as clear as it might have seemed at the beginning. Furthermore, this could be said both about the discussions of the emic and the etic perspectives on musical knowledge. Among those who research the performative culture in Antiquity[81], it is agreed that music was one of the most important practices: it had a

[78] It is worth mentioning that some new interdisciplinary effort has been made, like *The Senses in Antiquity* (Butler S., Nooter S., eds.), though their main focus is not the interrelation among different art forms, but of different senses.

[79] Here we do not refer to the cases of music in art, for e.g., studies by Lissarrague, F. (2016), Bundrick, S.D. (2005), etc. that analyse visual depictions of music or music in other forms of art, we refer to the studies where the art of Ancient Greece is discussed altogether.

[80] See Roochnik, D. (1996). *Of Art and Wisdom: Plato's Understanding of Techne*. Pennsylvania: Pennsylvania State University Press.

[81] See esp. Havelock, E., (1963), *op. cit.*; Murray, P. and Wilson, P., eds., *op. cit.*; Barker, A. (1984), *op. cit.*

substantial relevance both for the everyday life and for the special occasions or rites. It also took a crucial part in the transmission of the cultural identity and traditions. However, in this case, we would still need to explain the deprecative attitude that can be easily found in the quoted texts.

The previously discussed distinction between the lyrics and the instrumental music does not seem to be sufficient since the sonic or rhythmic qualities alone were conceptualised as powerful enough to have an effect on a person's soul. Therefore, we could not contend that music without words was considered to be insignificant or that it did not possess any power, while the words were thought to have it. Different attitudes towards music are also not limited to the different opinions of the individual philosophers, since we could find such opposing views by the same author in the same text – whether it would be Plato, Aristotle, or the others. It appears that the controversies arise from the different modes of speaking and the different layers of meaning that rendered *mousikē* a very multifaceted concept. This confusion is even strengthened by the fact that there are numerous references to music as the illustrative examples for the non-musical questions, and these musical analogies are often being understood as self-explanatory, not requiring a detailed specification (see for e. g., Pl., *Symp.* 187a, *Crat.* 405d). Such presumed obviousness leaves a lot of room for potential miscommunication.

By now we have encountered the term *mousikē* having both the very narrow and the very broad conceptualisation. Therefore, to avoid confusion it is necessary to distinguish among the different layers of meaning and the different approaches that the discussed phenomenon covers. That is, *mousikē* must be considered as an entirety of various qualities, of which different aspects may be emphasised, be it mathematical, educational, ethical, or aesthetical. It is also a concept that includes very contradictory content. For instance, it refers to an exclusively instrumental music but also to a practice that is not limited to the instrumental sounds and, as such, goes together with poetry and dance. We encounter *mousikē* as philosophy and as belonging to the prestigious realm of reason, but also as a technical craft, sometimes not worthy of a greater attention. It can be invoked as an exercise of the mind, as a therapeutic and soul-ordering activity, or as destructible and dangerous for the well-being of a polis. As a social phenomenon, *mousikē* has an important part in education (*paideía*), next to grammar and gymnastics, but it is also described as an insignificant, mere pleasure-aiming practice.

Such different values attributed to the practices of music are not limited only to the ideas that certain philosophers proclaimed. We can notice that music was used in the rather different social contexts as well. For example, it was performed both by men and women, and it was both employed while performing everyday duties and used in the celebrations. Moreover, even in celebrations, it was used both for the mere entertainment and for the most sacred purposes of the very special occasions. Such conclusions require further analysis of what was the status of *mousikē* in relation to hearing: if the latter was not too important, if indeed it was only the pleasure that was the aim of the instrumental music, which philosophers condemned, how could it have such a powerful effect on a person's soul? Was it only the words that had real significance in the musical performance, or else, what other elements did the Ancient Greeks understood as being meaningful?

It is not enough to limit ourselves to the social or historical approaches. Nor it is enough to state the fact that music was important and used in many social practices or that it was understood as powerful and influencing one's soul. Differentiating among the different layers of meaning and different approaches is only a first step to determining the overall status of music in the Ancient Greek society. All these approaches and layers still leave behind the question of how to solve the before-mentioned ambiguities: what was understood as the preconditions that establish the possibility of all of these qualities to appear in the same philosophical discourse and how is it possible to discuss a phenomenon of music in its entirety? How should we link the discourse about music as part of a social context to music as a form of art, music as narratives, the realm of reason and mathematical exercise? For this, the textual sources are the most useful: to some extent, they allow us to take a look into what the Greeks themselves thought on this subject. Many of Plato's observations have been interpreted as characteristic in an ancient Greek way of understanding music, and in the other writings of the same period, we can find the concurring ideas about what music is and what influence it could have on a person's soul or on a whole polis.

Having said that, it is now evident how important it is to explore whether these layers are interconnected and what becomes the foundation for such a relationship. This directs our research to look for the possible explanations beyond the sphere of physics and ethics, namely to the metaphysics, and we are going to approach this issue the next

chapter. It is clear, however, that our task to analyse how the phenomenon of *mousikē* is conceptualised in the selected texts is of great significance. In a manner of speaking, it is not peculiar that the term 'music' has several different meanings since it refers to such a broad phenomenon used in a great variety of cultural practices. However, it is essential to emphasise these obscurities, considering both the ambiguous meanings attributed to the term, the different contexts and individual themes of the texts, and the ambiguities arising from the different research approaches. This would open new research possibilities, primarily by enabling the access to the whole complexity that a concept of *mousikē* carries within itself, and to raise a question not as much if but why music had such a great importance (social, philosophical, communal, individual), and why it was conceptualised as comprising such a vast variety of fields of reality.

2. THE CONCEPTUALISATION OF MUSIC IN CLASSICAL GREECE: THE CASE OF INAUDIBLE MUSIC

By now we have established that the discussions of *mousikē* are comprised under a complex concept. It encompasses multiple meanings which could even be understood as conflicting. For this reason, it is necessary to find out, whether the musical terms are invoked only as having diverse isolated meanings, or if they could be seen as coherent parts of a consistent system that would allow determining certain linkage regarding the phenomenon of music altogether. This is why our main interest becomes not the musical qualities or some isolated ideas, but the general role and function that music had in the Greek society based on the analysis of the philosophical texts. We take Plato and Aristotle as some of the most able representatives of the intellectual mind from the Classical period, which allows us to unwrap the contents of the conceptual grounds for the musical phenomena. At the same time, we must acknowledge that the philosophical approach is already biased – it offers only one of the possible reflections, leaving some aspects of the every-day musical life aside. We do not have enough literary data to reasonably speak about music from the perspective of ordinary people and their everyday life, as well as the meaning that music had for an individual human being. Likewise, the philosophical writings not only retell but also propose a certain vision of the whole cultural framework of the concept, which is often linked to the broader philosophical considerations and cannot present a complete image of the whole musical world. Usually, they do not discuss the musical choices of the everyday life and tend to generalise, provide us with the systemic, abstract theories. Nevertheless, despite the fact that such analyses cannot represent the status of music fully, that they leave aside a variety of questions related to the individual musical practices, musical competitions, or individual approaches to music, at the same time they offer the most unifying research perspective, enabling us to acknowledge music as a systemic phenomenon, or at least familiarising a reader with a perception of the concurrent musical practices in their entirety. Whilst focusing on the concept of music allows us to grasp how and when music was invoked, it also provides us with the opportunity to approach the fundamental question of why music was understood as necessary in the first place: it offers the most diverse knowledge which is

essential for analysing such a broad concept as music and the connections that are beyond the methodological approaches of the other isolated disciplines.

Due to the fact that our goals are defined by focusing on the complexity of music and not on the particular aspects, our analysis does not seek to provide as many new and unknown details about the musical practices as possible. Instead, our primary concern becomes managing the knowledge that we already have, in order to find a more reasonable way of discussing *mousikē* in the contexts of Antiquity, and to avoid the ambiguities that are very much alive in the present scholarly discourse. An accurate metaphor, proposed by E. Havelock while discussing the time of Plato's time of writing, delicately points out that "A history of the Greek mind furnishes a stage on which the players in the great comedy of ideas conduct their business with each other. These are not men and women but rather words and thoughts which cluster in competing formations and manoeuvre to challenge us and win our attention while they seek to elbow each other off the boards."[82] We could invoke and adapt this analogy for our discussion on music. Theorising greatly contributes to how the phenomenon was conceived – in our case, music is a very relevant but disperse concept, intervening in the discussions of various subjects, comprising diverse activities and differing attitudes. In this comedy of ideas, the question of music takes up an important role, and for the sake of understanding it, it is primarily the concept that must take a central place in our research instead of the analysis of a great variety of the performative practices.

In this chapter, we are going to analyse the presuppositions of musical thinking and the linkage among music, mathematics and ethics, which consequently leads to exploring the relationship between music and metaphysics. The mathematical analysis of music already takes part in a great variety of studies, together with the questions of how music was invoked to teach and improve mathematical cognition.[83] For instance, music

[82] Havelock, E. (1963). The Supreme Music is Philosophy, *op. cit.*, pp. 276–311.

[83] See esp. Barker A., (2019). Greek Acoustic Theory: Simple and complex sounds. In: Butler, S. and Nooter S., eds., Sound and the Ancient Senses, New York (NY): Routledge, pp. 92–108; Cattanei, E. (2003). Le matematiche al tempo di Platone e la loro riforma. In: Vegetti, M., ed., *Platone, Repubblica, Libri VI-VII*, Napoli: Bibliopolis, pp. 473–539; Burnyeat, M.F. (2000). Plato on Why Mathematics is Good for the Soul? In: T. Smiley (ed.), Mathematics and Necessity: Essays in the History of Philosophy, pp. 1–81.

takes a great part in a student's education, and it is seen as a cognitive exercise that improves his intellectual capabilities. Nevertheless, the initial presuppositions of why music as a practical activity becomes related to music as a source of mathematical knowledge and in which way, still need more research. It is for this reason that we would pay more attention to the philosophical reception of the relationship between music and mathematics, instead of dwelling on the mathematical analysis of technical parameters of music, such as the technicalities of the modes, rhythmical patterns, and the music theory altogether. We will first enquire about the relevance of harmony and proportion as well as the contexts in which they are considered to be important, in an effort to analyse the philosophical discourse on music, and to unveil a linkage between its acoustic and philosophical conceptualisation.

2.1. MUSIC AND HARMONY – THE PREREQUISITES FOR BEING HARMONIOUS

When *mousikē* is considered from the perspective of a theoretical science, it is commonly analysed as harmonics, a discipline next to rhythmics or metrics. However, such an approach seems to unravel the notion of the phenomenon of music only partially. This is because it focuses on the rules of music as an activity – either performative or intellectual practice – but leaves aside the conceptualisation where music is discussed as the means for the harmony where no human action takes place and where the sound is not necessarily present. To be more precise, it leaves aside the kind of music that is not audible and therefore exists beyond any sound. Here we refer to the philosophical, cosmic, or political notions of music, which undertook a significant part of the musical discourse in Antiquity: they were conceptualised as music, yet this music was very different from the one that emits a series of sounds.

Even though music in relation to the senses recently has received some new interest[84], it mainly focused on the sonic aspects of *mousikē*, ignoring the role that the senses have for the philosophical conceptualisation, primarily that of the cosmic music or the preconditions for the musical power to have an effect on a human *ēthos*, where the

[84] See, for e.g., Butler S. and Nooter S., eds. (2018). *Sound and the Ancient Senses*. London-New York: Routledge.

relationship between sound and music is much more complex. It discusses the "cosmic sound" instead of "cosmic music", and this seems to be an oversight, for the cosmic music was not necessarily conceptualised as sonic, as we have already indicated and as we will discuss in the following pages. It must already be noted that it is not the sound but music that takes a central part in the most philosophical dialogues, and the discussions that limit it to the acoustic nature are misleading. This leads us to the necessity of considering the phenomenon of the perceptible music as an aesthetic experience in parallel to music as a philosophical notion, the latter of which is mainly related to its intellectually comprehensible content.

In the discussions of the extant musical sources of Antiquity, the theoretic discourse on music is usually differentiated into two traditions.[85] One way of thinking is primarily related to Aristoxenus, a student of Aristotle, who claims that music, as well as musical harmony, should be understood within the realm of a self-sufficient system having its own rules and dependant on the conventional laws of how music should be composed. The origins of this theory can be traced back to the 6 century B.C., in particular, the works by Epigonus and Lasus, though there are no extant sources to reasonably present their work.[86] In this first theory, later developed by Aristoxenus, musical harmony is defined as the rules of melody-constituting sounds. It was conceived as a science, whose facts and explanatory principles are interpreted within a self-sufficient system, mainly disjunct from the other scientific discourses.[87] Musical matters are considered in the enclosed contexts, which confine themselves only to practising music and should not be anyhow linked to the other layers of reality. Another line of thinking was theorised primarily by Pythagoreans[88] and significantly developed into an extensive philosophical discourse by Plato, Aristotle and many authors who absorbed their ideas later on. Instead of leaving the subject of music to the realm of its own, the latter position does not view music to be a self-sufficient system and conceives it as closely linked to

[85] These differences are well summarised by Barker, A. (1989). Introduction: Traditions of enquiry in harmonic and acoustic science, *op. cit.*, pp. 3–11; Klavan, S. (2019), *op. cit.*

[86] Barker, A. (1989). Pythagoras and early Pythagoreanism, *op. cit.*, p. 29.

[87] Barker, A. (1989). Introduction, *op. cit.*, p. 4.

[88] For historical transmission of Pythagoreanism and different traditions of interpretation see Burkert, W. (1972). *Lore and Science in Ancient Pythagoreanism*. Cambridge: Harvard University Press.

the other fields of reality, such as astronomy, ethics, or politics. Pythagorean tradition presents a view where musical harmony is not disjunct from the other sciences and, on the contrary, it is very closely related to them. [89] We hold this distinction to be a starting point for analysing the various considerations of the musical thought of Antiquity, because all the musical terminology, including the most important terms, such as *harmonia, analogia, sumphonia* and others, are dependent on the conceptual framework defined by their initial presuppositions and the semantic extent that these terms are bound to.

The understanding that music and mathematics are closely connected has long been present. H. H. Eggebrecht ascribes the origins of the whole Western music to Pythagoras and his notion that musical intervals can be expressed in numerical nature. It is exactly at this time, according to the author, that the nature of music was started to be seen as numerical, in contrast to the earlier attitude to music as a conventional system of rules.[90] For our purposes, it is not the dating and the genealogy of the idea that is most important, but the very fact that music and mathematics at some point were started to be seen as closely interrelated and that this notion became accepted by the numerous subsequent writers.

Reconstructing the authentic thought of early Pythagoreans is a rather difficult task. A lot of uncertainty rises from the lack of sources since Pythagoras himself did not leave any writings and the community's secrets were strictly protected. The Pythagorean tradition is not unanimous as well: over time, it became intertwined with the Platonic and Hellenistic ideas. The very possibility of the theoretically explicated Pythagorean musical thought is considered by some scholars to be suspicious in general (e.g., P. Tannery, E. Frank[91]), due to the fact that their significant development into the complex metaphysic structures started only with Plato[92]. By making no pretension towards the actual views of the historical Pythagoras himself, we can, however, notice that the Pythagorean theory,

[89] Barker, A. (1989). Pythagoras and early Pythagoreanism, *op. cit.*, pp. 28–29.

[90] Eggebrecht, H.H. (1961). Musik als Tonsprache. In: *Archiv für Musikwissenschaft 18(1)*, pp. 73–100.

[91] These interpretations are thoroughly analysed in W. Burkert's chapter "Pythagorean Musical Theory" (1972), *op. cit.*, pp. 369–400.

[92] On the Pythagorean influence, see Barker, A. (1989). Plato, *op. cit.*, pp. 53–54.

which is available to us through the Pythagorean corpus[93], finds resonance in the reception of the later authors. Even though the early Pythagoreanism might have had more to do with the practices of the appropriate way of life than a systematic philosophical theory[94], the legendary figure of Pythagoras, his legacy, and references made to his teachings by the other authors prepared the grounds for discussing music and mathematics together in the philosophical discourse of Classical Greece, where it was developed into the complex mathematical, astronomic, educational, ethical and political schemes.[95] From its beginning, Pythagoreanism which is usually understood as taking part in the shift from the mythological to the rational world, already provides hints of the metaphysical considerations, that are related to the questions of the divine harmony of *kosmos* – a term that literally refers to the ordered structure[96]. Despite the discrepancies in the Pythagorean tradition, the relevance of number, harmony and proportion were considered the unifying link in the Pythagorean reception[97]. The related subjects and issues, especially regarding the laws of cosmos and harmony as well as their connection to music, are further developed by Plato and Aristotle, who refer back to the Pythagoreans, accept, criticise or incorporate their views in their own theories.

The conceptualisation where music is seen in relation to number, remains influential in the Classical Greek writings on music, in which it is analysed as taking part in the philosophical discourse that overcomes the initial mystical numerology.[98] We shall now take a look at Aristotle's description of Pythagoreanism from *Metaphysics*, a passage which discusses the relationship between numbers and music:

[93] Guthrie K.S., ed., (1987). *The Pythagorean Sourcebook and Library*, Michigan, Phanes Press, p. 127.

[94] Barker, A. (1989), *op. cit.*, p. 29.

[95] On the Pythagorean reception see Burkert (1972), *op. cit.*; Huffman, C.A., ed. (2014). *A History of Pythagoreanism*. Cambridge: Cambridge University Press.

[96] s. v. *The Online Liddell-Scott-Jones Greek-English Lexicon*.

[97] For re-evaluation of the dating of the Pythagorean number theory and its formation, see Zhmud, L. (1989). "All is number"?: "Basic doctrine" of Pythagoreanism reconsidered. *Phronesis* 34(3), pp. 270–292.

[98] Barker, A. (1989). Pythagoras and early Pythagoreanism, *op. cit.*, pp. 28–29.

[…] they saw that the attributes *[pathe]* and ratios of the *harmoniai* are found in numbers; since, finally, all other things seemed to have been framed, in the whole of their nature, in the likeness of the numbers, and of all nature the numbers seemed to be first, they supposed that the elements of the numbers are the elements of all things, and that the whole heaven is a *harmonia* and a number. (Arist., *Metaph*. 985b, transl. by Barker [29])

This excerpt very well summarises and presents us the importance of a primordial role number had in the reception of the Pythagorean thought. It clearly states that musical modes (*harmoniai)* are based on numbers and names *harmonia* to be the status of the whole heaven. Similarly to the other pre-Socratics, Pythagoreans were looking for the primordial reality founding principle (*ἀρχή*), and it is in number that, according to Aristotle, they believed to have found it.

It is eminent to notice that those Pythagoreans who related number and metaphysics, conceptualised number not as a formal entity: their numbers were loaded with the qualitative significance, for instance, number 1 could have denoted "the reason of Unity, Identity, Equality, the purpose of friendship, sympathy, and conservation of the Universe, which results from persistence in Sameness"[99], two – with difference, unevenness, 3 – harmony, 4 – rightness, etc. [100] Great attention was paid to the complex numbers, for e. g., number 3 was conceived as the first real number, emerging from the oneness and multiplicity, sameness and difference, and embedding harmony; likewise, the number 10 was understood as a perfect, divine number, also called "an eternal spring of nature"[101], since in its internal structure one can notice the underlying numbers of 1, 2, 3, 4 put together, which can also be demonstrated in its pyramid structure (τετρακτύς). Even though the early Pythagorean tradition is often mixed with the mystical numerology and limited by the imaginary symbolism, it encompasses the early philosophical, scientific considerations, which become the basis for the formation of their worldview and define their lifestyle. It is not within the goal of this thesis to discuss the number theory at length, though what is key to note, is that Pythagorean explorations of harmony

[99] Porphyry. The life of Pythagoras, fr. 49, transl. by Guthrie [50].

[100] See Burkert, W. (1972). Platonic and Pythagorean Number Theory, *op. cit.*, pp. 15–96. For the critique of the general reception of Pythagoreanism presented by Aristotle, see Zhmud, L. (1989), *op. cit.*

[101]Sextus Empiricus on Pythagorean oath: πηγὴ δὲ ἀενάου φύσεως λέλεκται [56]. In: *Against the Logicians* I, 94–95, Bury, R.G., ed. 2006.

did not confine themselves only with the attempts to formally describe the world and its principles: their effort was to determine, how the set-up of the world is linked to the qualitative characteristics of numbers, and vice versa. Therefore, the Pythagorean research starts with an aim to understand the principles of the world, and the perceptible phenomena become instrumental in pursuing this kind of knowledge.

These remarks highlight the complexity that our research presents. Here, the number has a dimension of quality, therefore Pythagorean thinking about the world as mathematical expressions did not suffice with the formal calculations; they saw the world as a combination of the world-founding and world-structuring principles, a union, created from the different and irreducible qualities. For this reason, in addition to studying the correlation of numerical values in the theory of music or musical instruments, we should primarily question the presuppositions behind the applied theories. It is, therefore, necessary to pay attention to the very possibility of harmonising, and the fact that this harmonising is not a formal work dependant on conventions, but a work directly linked to the other elements of the world, such as the human soul or the cosmic order.

It is precisely the numerical nature embedded in all the things of reality[102] that becomes the linkage between the world and the music, which allows us to discuss both of these things together. Pythagoreans were looking for the harmony that comprises and bonds together all the phenomena of the world, and such harmony was to be found not only in the empirical world, but primarily in the world of mathematical reasoning. Only when the connection between music and mathematics is established, music is potent to transcend the boundaries of an enclosed, self-sufficient scientific system. For this reason, in the described context, the ratios are understood as consonant not only in the terms of music, but also of mathematics. The sound is not a simple stimulation of the senses. Its acoustic expression corresponds to the hidden principle of nature, lying within the deep layers of reality, and they can only be approached by mathematic explorations. Similar notion of concord, the relevance of harmony and number in the pre-Platonic and Platonic thought, as well as the different contextualisation, namely that of intelligible and perceptible realms, is also described by Theon of Smyrna in his work *Mathematics Useful for Understanding Plato*:

[102] See esp. fragments by Philolaus in Stob. *Anth*. DK 44 B4; DK 44 B6.

Since people also call some numbers 'concordant', and without the science of number *[arithmetike]* the proper account of concordance could not be discovered, and since this concordance possesses the greatest power, in speech being truth, in life happiness, and in nature *harmonia,* one could also not discover what this *harmonia* is in the cosmos if one had not first discovered fully what it is in numbers. This *harmonia* is intelligible, but the intelligible kind is more easily grasped from a beginning in the perceptible kind. We must now speak, therefore, about the two *harmoniai,* that which is perceptible in instruments and that which is intelligible in numbers. After giving an account of all the mathematical *harmoniai* we shall add, finally, that of the *harmonia* in the cosmos. We shall not hesitate to take the discoveries of our predecessors and write them down again ourselves, just as we have passed on what was previously handed down by the Pythagoreans, setting it out again to make it better known, without claiming to have discovered any of these things ourselves. In offering examples of the things handed down by our predecessors, we made a collection of these things too, containing what is necessary for anyone who is to understand what Plato says. (Theon of Smyrna, 46.20-47.17, transl. by Barker [54]).

The initial ideas described by Pythagoreans are later developed into the more extensive and complex philosophic discourses. It is particularly in the thought of Archytas and Philolaus, as well as in the works Plato, where the initial Pythagorean ideas attain great philosophical complexity.[103] As it is rightfully noted by Barker, "Plato's notion of harmonics is Pythagorean in inspiration, but his radical separation of the intelligible from the perceptible is not, and […] he chides them for engaging in researches at too low a level of abstraction.".[104] Even though we have to keep in mind the very particular context and meanings that the Pythagorean tradition attributed to numbers, the relevance of numeric proportions remains valid long after Pythagoreans. For instance, in Plato's works[105] they undertook an important role in the complex discourse of cosmology or ethics. We could also remember how Plato describes a comparison between a life of a king and that of a tyrant: "if one tries to express the extent of the interval between the king and the tyrant in respect of true pleasure he will find on completion of the multiplication that he lives 729 times as happily and that the tyrant's life is more painful

[103] For music in the Pythagorean though, see Rocconi, E. (2020), *op.cit*; on the reception of early Pythagoreanism, see Burkert, W. (1972), *op. cit.*; Huffman, C.A., ed. (2014), *op. cit.*

[104] Barker, A. (1989). Plato, *op. cit.*, p.54.

[105] Cf. Arist., *Metaph.* 987b.

by the same distance."[106]. Siegmund Levarie, elaborating on McClain's research on music and mathematics, discusses this particular fragment, explaining why it was this precise number that was chosen for constructing such opposition: "the number 729 […] corresponds to the musical quality of the tritone (36 = six fifths above the fundamental), the worst possible dissonance in the musical systems known to Plato and, for that matter, in all Western tonal systems for two thousand years after him. What Plato evaluated by the number 729 was the relation between the good man and the tyrant as that of the greatest possible tension within a civilized system."[107]

For our purposes, it is not the numerical symbolism that matters at most, but the very fact that the same harmony-enabling ratios which are present in music, are considered effective in the other realms of the world as well. In fact, these considerations are used for the non-musical subjects of greatest significance, for instance, harmony could be understood as a result of an order-establishing activity within the Cosmos[108] or within the human soul[109]:

[Simmias speaking] ' For I think, Socrates, that you have realised yourself that we believe the soul to be something much like this: our body is as it were tensioned and held together by hot and cold and dry and wet and other things of this sort, and our soul is the blending and *harmonia* of these same things, when they have been finely and proportionately *[metrios]* blended with one another. So if the soul turns out to be some sort of *harmonia,* it is clear that when our body is excessively *[ametros]* slackened or tautened by diseases and other evils, it is inevitable that the soul must perish at once, most divine though it be, just like the other *harmoniai,* those in the notes and in all the things that craftsmen make... ' (Pl., *Phd.* 86b-c, transl. by Barker [7])

The idea of opposites that are joined together into a coherent unity is undoubtedly of great relevance for the discourse on music. This is well described in a passage from Plato's *Symposium*, which discusses the functioning of *harmonia* in a musical context. In this passage, the author elaborates on the fragment by Heraclitus[110] and describes music

[106] Pl., *Resp.* 587e, transl. by Jowett [19].

[107] Levarie, S. (1984). Introduction. In: Ernest McClain, G., *Myth of Invariance: The Origin of the Gods, Mathematics and Music From the Ṛg Veda to Plato*. York Beach (ME): Nicolas-Hays, Inc.

[108] See esp. Pl., *Ti.* 35–36; 43d, Pl., *Resp. 617b*.

[109] See esp. Pl., *Phd.* 86b; *Ti.* 47c-d.

[110] Cf. DK 51.

primarily as an art that allows the interaction between the opposites, establishing harmony that would not otherwise be present:

> This perhaps is what Heraclitus meant, although his actual wording is not accurate; for he says of "the One" that "it is in agreement while being in disagreement with itself, like the harmony of the taut bow or the lyre". However, to speak of a harmony as being in disagreement with itself, or as existing when it is composed of elements still in disagreement, is quite absurd. But perhaps what he meant was that harmony is created out of elements, namely the high and the low, that were originally in disagreement but were subsequently brought into agreement through the art of music. For of course harmony could not arise out of the elements high and low while they were still in disagreement, because harmony is concord and concord is a kind of agreement, and agreement is impossible between elements that are in disagreement as long as they remain in that state. […] Here it is music that creates agreement in all these things by implanting mutual love and unanimity between the different elements, just as in the previous case it was medicine. Music too, therefore, is knowledge of the influence of love, in this case in respect of harmony and rhythm. (Pl., *Symp.* 187a-c, transl. by Howatson [21])

It is worth noticing the extreme level of abstraction invoked for this description. Music here is not described as a performative event or the art of the words where lyrics prevail, not even as an intellectual activity where the mind comprehends the mathematical ratios: it is characterised in terms that allow using musical terminology independently from the material world. In this case, music is foremost described as the means for establishing harmony by structuring different elements in a unifying way[111]. *Harmonia*, then, is a result of this process, where the different elements are brought together into the right and coherent union.

This passage allows us to notice the parallel usage of musical terms that have both abstract and specific meanings. Music, which is described as a structuring activity that joins different elements by implementing love and unanimity, is indicated by the same word that refers to music in an audible sense. This observation applies to the terms of harmony and concord as well. For instance, the line "harmony is concord and concord is a kind of agreement" (ἁρμονία συμφωνία ἐστίν) is a very clear example of erasing the

[111] This fundamental scheme of harmony understood as a realm that connects unity and diversity both in the discourses of music and Cosmos, which Plato later elaborates into the complex philosophical discourse, was already present in the works of previous thinkers – the Presocratics: see Sassi, M.M. (2015). How Musical was Heraclitus' Harmony? A reassessment of 22 B 8, 10, 51 DK. *Rhizomata* 3(1), pp. 3–25.

boundaries between the terminology of the perceptible music and its abstract conceptualisation: concord can refer to the meaning of the sounds that sound well together, or to the "agreement" or "harmony" – terms which are significantly more abstract in their nature. Similarly, in *Cratylus* 405d, when the participants of the dialogue analyse the possible explanations for the name of Apollo, harmony is presented as a self-evident quality of an object being musical[112]. The usage of the terminology, indicating both the perceptible world and the abstract ideas, is one of the main objects of our research. The previously quoted passage from *Phaedo* (86b) presents the reader with a similar comparison when the proportion and harmony of the soul is compared to the *harmoniai* "in the notes and in all things that craftsmen make". Therefore, it seems reasonable to suppose a hypothesis that such usage of the musical terminology is not accidental. That is, musical terms are used to describe other significant realms of the world, such as the human soul or political life, not because of the polysemy, caused by the technical language still being developed, but because of the deep interconnection between the *realia* of the musical world and the fundamental principles of all the laws of the Cosmos. This would allow explaining why musical terms are used for discussing the soul, the political system, and the other subjects of great importance, which would otherwise seem to be a rather peculiar choice, considering all the negative descriptions that the (technical) practices of *mousikē* received in the philosophical writings by Plato and Aristotle.

The differentiation of the polar opposites on the ontological level, and the ideas about the unifying principle was a known *topos* in Plato's time. It was conceived as being present in the various fields of reality, such as the world of Cosmos, the musical theory, as well as the other arts, or medicine[113]. As it is noted by Maria Michela Sassi who analysed in-detail the musical fragments by Heraclitus, Heraclitus' notion of cosmic

[112] Cf. Pl., *Crat.* 405a: Εὐάρμοστον μὲν οὖν, ἅτε μουσικοῦ ὄντος τοῦ θεοῦ· [1]

[113] See Barker, A. (2016). Pythagoreans and Medical Writers on Periods of Human Gestation. In: Renger and Stavru eds., *Pythagorean Knowledge from the Ancient to the Modern World: Askesis, Religion, Science*. Wiesbaden: Harrassowitz Verlag, pp. 263–275; Restani, D. (2016). Embryology as a Paradigm for Boethius' musica humana. *Greek and Roman Musical Studies 4*, pp. 161–190; Pelosi, F. (2016). Music for Life: Embryology, Cookery and Harmonia in the Hippocratic *On Regimen*. *Greek and Roman Musical Studies 4*, pp. 191–208.

harmony was not Pythagorean in style, because he did not immerse himself into the mathematical aspects of the issue, though it is even "more significant because he shares with Pythagorean thought the crucial link of the notion of harmony with that of rationality and the ordering of relations between cosmic units."[114] *Harmonia* in its initial meaning anticipates the possibility for the different subjects who work on the different material. Therefore, who is a harmoniser depends on the matter he is working on. For instance, *demiurgos* in Plato's *Timaeus* works with establishing the harmony within the Cosmos, and human beings can be the harmonisers for the audible musical tunes.

The elements of this harmonisation are conceived as individual and different in their very nature, and it is particularly because of these differences that they do not mix with one another, which allows them to create a united whole. The proportions in music ensure that the compositional elements maintain their differences and clearly defined identity: even though musical elements differ from one another, they can be arranged into a new entity and to be perceived as a single musical piece, not only as a composition, consisting of a multitude of separate musical elements. In this context, we may see how the reference to the philosophy of Heraclitus in the before-quoted Platonic passage is not too surprising. It is a continuance of the dialectics of stability and change, where the very existence of the both polar opposites depends on one another. The relationship between the opposites and the wholeness they constitute together is the core of the discourse on the inextricable relationship between the flow of change and stability[115]. In Plato's *Timaeus*, this is developed into a cosmological dimension, where it is represented by the differentiation of the circles of Same and Different[116]. *Timaeus* contends a numerical constitution of the world as well as the proportionality of it, the harmonious (that is, well ordered) and symphonic (that is, consonant) nature of cosmos, which is constituted from the same-kind of intervals that could be found in the Pythagorean thought. Most importantly, it contends an uninterrupted relation between mathematics and Cosmos.

[114] Sassi, M.M. (2015), *op. cit.*, p. 9.

[115] See esp. DK 49A, DK 51, DK 54, DK 60, etc; cf. Philolaus DK B6.

[116] See Pl., *Ti*. 43-44.

As we have previously indicated, music is only one of the possible realms where *harmonia* is present[117]. Therefore, it is not too surprising that in the world of Antiquity, initially, it was astronomy that took a significant part in the explorations of the orderly structure of the heavenly bodies, which was followed by the considerations of what constitutes or denies the proportionality in various phenomena. For this reason, it is crucial to highlight the fact that even though the term *harmonia* is regularly used in the musical contexts, it does not emerge from the sphere of musical theory and that it can be used in a great variety of other contexts[118]. The same act of structuring is found everywhere in the structure of the world, and the term *harmonia* is being used to indicate the result of such activity. In addition to its evident meaning in the musical contexts, initially *harmonia* had a broad and unspecialised meaning as well, which was "to join", "to fit together"[119].

According to Chantraine's *Dictionnaire Etymologique de la Langue Grecque*[120], we can follow the morphological development of *harmonia* to the word *ararisko* and the word-root of ar-. The beforementioned ideas concerning the necessity to discuss specialised vs. broad meanings of *harmonia* become even more evident if we note that ar- is not only of the same root as in Latin *ars* (art) corresponding to the Greek *technē*, but also as in *aruthmos*, meaning 'number' in Ancient Greek language.[121] We shall point out that there is an etymological linkage that connects the three elements, namely harmony, art, and number – they all belong to the same semantic family long before they are defined in the specialised contexts. This connection is very much in line with the philosophical notion of music as a representation of the objective and universal harmonious ratios. The harmonious and, as we shall demonstrate, beautiful object, then, is the one which is well ordered, all of whose parts are coherent to the other parts, and which is structured according to the right, proportionate mathematical ratios.

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[117] For the usage of *harmonia* in the musical contexts, see: Rocconi, E. (2007), *op. cit*.; Sassi, M.M. (2015), *op. cit.*

[118] For the early uses of the musical term, see: Sassi, M.M. (2015), *op. cit.*; Rocconi, E. (2020), *op. cit.*

[119] For the early usage of the term, see Stokes, M.C. (1971). *One and Many in Presocratic Philosophy*. Washington: Center for Hellenic Studies, pp. 94–97.

[120] s.v., Chantraine, P., (1999). *Dictionnaire Etymologique de la Langue Grecque: Histoire des mots*. Paris: Klincksieck.

[121] See Cipolla, G. (1969). What is Art?, *de arte,* 4(6), pp. 30–35.

This semantic connection that links harmony, art and number requires more research and consideration. It suggests that in those cases when we discuss the musical intervals or any performative musical practices together with the contexts of mathematics and Cosmos, we must keep in mind that both the numerical and the sonic qualities are discussed at once. In this line of thought, it would be an oversight to focus on only one of these qualities, for e.g., on researching the sonic practices, the musical theory, or musical harmony as a self-explanatory or as a self-sufficient entity. For instance, when discussing *harmoniai*, a term that is usually translated as modes or tuning schemes, it is of high significance to keep in mind its etymological relation to *harmonia* – a term, which for the ancient Greeks encompassed much more than the same term in its musicological context. This is particularly valid for the considerations of the philosophical writings from Ancient Greece. For e. g., is common to find *harmoniai* and other morphologically related terms discussed in the technical context of harmonics or technical musical theory of the ancient authors, though these discussions would certainly benefit from analysing the same issues within the broader framework of the etymological background of the terms. This is especially relevant considering that the laws of music were not always conceived as some artistic regulations, established through the conventional systems but also as taking part in the same philosophical discourse that describes the functioning of the Universe. The commensurable nature of harmony encompasses all the different forms of art, including both the terrestrial and the cosmic reality, which explains the efforts by the Ancient Greeks to maintain the harmonious and proportionate world, and to look for this harmony in various phenomena, starting from the simple musical tunes to the Cosmic order.

2.2.ACOUSTICS AND METAPHYSICS: THE CONCEPTUAL FRAMEWORK LINKING THE PERCEPTION AND THE ETHICAL POWER OF *MOUSIKĒ*

After pointing out the conceptual framework of musical and non-musical *harmonia*, we can now discuss how the previous reflections affect the discourse of musical thought. It is rather clear now that the acoustically perceptible music is only one of the possible manifestations of the universal harmony, though noticing the etymological background of the term and the relation between music and number allow us to reasonably discuss music as interconnected to the great variety of the other, non-musical, realms of

the world. For us, this relationship also allows to consider music within the contexts of cosmology, political and ethical life, in which the discourse of the number and proportion was of great significance as well. The universal concept of harmony partially explains why some of the terms that have correspondence to the realm of music are so common in the non-musical (in a strict sense) contexts, and it allows to propose a reading where musical references gain greater relevance than being mere illustrative metaphors. Such broadening of the conceptual framework might contribute to our further research, for even though it is easy to notice how harmony as unifying means that connects differing elements is incorporated in the technical musical theory, what is yet to be defined, is the relationship between the philosophical notion of music and music as an acoustic phenomenon. We have already mentioned several passages that discuss music in a completely practical as well as very abstract way, and proposed a hypothesis that both of these uses are somehow connected, therefore, the terms that indicate the different semantic referents, might be parallelly used on purpose.

To approach this subject, we are going to analyse the philosophical passages that cover the explorations of the aims of music, especially the descriptions of the non-performative, abstract music, and we are going to discuss in which way the acoustical and the philosophical understandings of music are interconnected.

A number of eminent scholars have been researching the goals of music and the functions it fulfilled in society[122]. Usually, they focus on the musical practices or the craftsmanship of music in the human world. Despite that being a fundamental part in the philosophical discussions in Antiquity, a human sphere provides only partial knowledge to the understanding of the overall phenomenon of *mousikē*. Indicating the different aims and functions or limiting ourselves to the isolated discussion of music in the social world, tells very little for the purposes of this thesis, which is to see how the different meanings are interconnected, and to analyse the overall status of music not only in the society but in the philosophical perception which seems to transcend the historical descriptions of the social usage. Music, being an especially broad term as we indicated in the first chapter,

[122] See Rocconi, E. (2019), *op. cit.*; West, M. (1992), *op. cit.*; Destrée, P. (2017), *Aristotle and Musicologists on Three Functions of Music*, Greek and Roman Musical Studies 5(1). Leiden: Brill, pp. 35–42; Stamou, L. (2002). Plato and Aristotle on Music and Music Education: Lessons from Ancient Greece. *International Journal of Music Education* 39, pp. 3–16; Schoen-Nazzaro (1978), *op. cit.*

frequently surpasses the definition of a performative activity. For instance, in Plato's *Cratylus* 406a, we can find the etymological argument that links philosophy to the arts of the Muses:

> The Muses and music in general are named, apparently, from μῶσθαι, searching, and philosophy. (Pl., *Crat*. 406a, transl. by. Fowler [2])

Due to the supposed connection with searching and philosophy, this passage already allows us to presume that *mousikē* – the group of arts that belong to the sphere of the Muses – could have a greater philosophical relevance than being a human musical practice or a human form of *technē*. We could take a look at another famous example, where Socrates from Plato's *Phaedo* speaks about his dream and presents a view where philosophy is being understood as the greatest music (μεγίστης μουσικῆς) of all:

> The same dream came to me often in my past life, sometimes in one form and sometimes in another, but always saying the same thing: 'Socrates,' it said, 'make music and work at it.' And I formerly thought it was urging and encouraging me to do what I was doing already and that just as people encourage runners by cheering, so the dream was encouraging me to do what I was doing, that is, to make music, because philosophy was the greatest kind of music and I was working at that. (Pl., *Phd.* 60e-61a, transl. by Fowler [6])

Furthermore, we encounter the cosmological descriptions where cosmic harmony is described in a musical way, such as:

> The spindle is spun upon the knees of Necessity. Up on top of each of the circles rides a Siren, carried around with its revolution, each giving out a single sound, a single pitch [tonos]: and from these sounds, eight in all, is made the concord of a single harmonia. Round about at equal distances are seated three others, each on a throne, the Fates, daughters of Necessity, clothed in white and with garlands on their heads. They are Lachesis, Clotho and Atropos; and they sing [hymnein] to the harmonia of the Sirens, Lachesis of what has been, Clotho of what is, and Atropos of what will be. (Pl., *Resp.* 617b-c, transl. by Barker [20])

Similarly to the cosmic descriptions, in *Republic* 432a-b, the musical terminology is used for the other subjects of highest significance, such as governing of the state, the interrelations within the political community, or the questions of virtue. For instance,

temperance (σωφροσύνη) is explained through the musical harmony[123], and not the other way around:

> […] its operation is unlike that of courage and wisdom, which residing in separate parts respectively made the city, the one wise and the other brave. That is not the way of soberness, but it extends literally through the entire gamut throughout, bringing about the unison in the same chant of the strongest, the weakest and the intermediate, whether in wisdom or, if you please, in strength, or for that matter in numbers, wealth, or any similar criterion. So that we should be quite right in affirming this unanimity to be soberness, the concord of the naturally superior and inferior as to which ought to rule both in the state and the individual. (Pl., *Resp.* 431e-432b, transl. by Shorey [14])

For our purposes, it is important to note that the musical discourse is chosen for the discussions and explanations of the other, non-musical (in a narrow sense) phenomena. For instance, Tosca Lynch, who analysed the meanings of music in Plato's *Republic*, points our attention to such terms as the "symphony", "harmony", "diapason" and their usage in both musical and ethical contexts. According to Lynch, moderation in the recently quoted passage functions as a community-connecting element, that weaves the political fabric of a truly unified community, and this idea is clearly visible from the selected terminology.[124] Plato's *Republic* discusses the unity of a political system that consists of different elements which have diverse nature and goals, namely of the tradesmen, the guardians and the decision-makers. These three in their essence correspond to the appetitive (ἐπιθυμητικόν), spirited (θυμοειδές) and logical (λογιστικόν) parts of the soul. Lynch notes that depictions of temperance, expressed in the words of Socrates, find their basis in the concept of συμφωνία, which refers to the possibility of melodic lines on different pitches, contrarily to the term ὁμοφωνία, which was also widely used in Plato's time and would mean that each member of the Republic choir would have to perform the melody the same way. This idea is further confirmed by defining the symphony of the Republic as διὰ πασῶν – harmony through all the sounds or strings. We can notice how music, similarly to the case of cosmic realm, becomes the means to speak about the non-musical set-up of reality, where harmonising and implementing the right measure becomes its most distinctive feature. The musical descriptions extend to the

[123] Cf. similar explanations on justice in Plato's *Republic*, 441d-e, 443d.

[124] Lynch, T. (2017), *op. cit.*, p. 23.

discussions of various subjects, such as virtuousness, individual or political temperance, the abstract theoretic contemplations on the coherency established from the differing elements, or the cosmic world.

The notion of cosmic or political music will be discussed more at length further in this thesis, though what is most relevant at the moment is that in Plato's work musical terms have the descriptions that do not come from the realm of the performative human practices, and that this "music" is not necessarily audible. There are more examples of such usage, and we are going to discuss them in our further analyses. For now, it is highly relevant to note that there is "music" defined as a philosophical concept, and such usage of the term could either be explained as a figurative language or as an extension of the semantic range of the concept of *mousikē*.

Some scholars discuss similar passages as metaphors that establish a parallel between the complex cosmic world and the very familiar and easily recognisable practices of music. We are going to look for the explanations that would allow us to discuss them as a consistent part of the system of musical thinking and allow us to avoid the reductive paradigm of 'metaphoric' reading. Such choice is mostly related to the problems arising on the discourse of musical *ēthos*: if we take into account that many Greek authors, including Plato and Aristotle, attributed music with a power to significantly affect the human character, and at the same time we acknowledge that the non-practical musical references are mere metaphors, we find hard to explain the presuppositions of the musical power, that is, we cannot explain what allows music to have such a powerful mimetic impact. For instance, why the innovative musical pieces, including those that do not have words, are considered to be dangerous for the individuals or for the well-being of a polis (Pl. *Resp*. 424c). Francesco Pelosi also noted the difficulty to explain such discrepancies. According to the scholar, "Plato reflects on the sensible component of music, but in the area of a reflection for which music is an experience of the soul. In an attempt to avoid music becoming an affair of the senses, Plato runs the risk of confining it to a *mentalist* dimension. A similar danger seems to appear in the seventh book of the *Republic*, when all contact is lost with the sensible component of musical experience. We encounter an analogous risk emerging in the *Timaeus*, where the fundamental explanation of the ways in which music involves *psychē* and body seems at times to cut out the

sensible dimension."[125] Our analysis will further enquire about the relationship between the acoustic and the philosophical notions of music. We will endeavour to find the linkage that would allow us to reasonably argue, why such a thing as several wrong sounds in a musical tune is considered to be destructive for a polis and to answer why such a practical musical question becomes worthy of the attention of a great philosopher.

In an effort to find reasoning for these issues, we must first pay attention to the significance of proportion for the beforementioned universal harmony, as well as for their terrestrial applications in the various forms of artistic practices. In the following sub-chapters we are going to analyse the conceptual framework of both the acoustic and the philosophical notions of music, in an effort to determine in what sense the cosmic or political structure is denominated as 'music', and to question whether these 'musics' are conceptualised to be of the same or of the different nature.

2.2.1. MUSIC AS AN INAUDIBLE PHILOSOPHICAL CONCEPT: THE DISCOURSE ON PROPORTION

The connection between the ethical and the aesthetical dimensions is considered to be very natural in the Ancient Greek thought. This could already be noticed from their concept of *kalokagathia*. This unity of good and beautiful cannot exist without one fundamental part, that is, proportion[126]. It enables some particular object or activity to become harmonious, and at the same time good and beautiful, whereas the lack of proportion does exactly the opposite. The universe in the Ancient Greek philosophical thought is seen as harmonised, and similar mathematic proportionality is expected from the works of art. Furthermore, a human being is able to notice both the correspondence to the correct ratios or the lack of it in the existing world, and, as a part of that world, he participates in the discourse of proportion by balancing or not balancing his emotions to a proportionate measure.

[125] Pelosi, F. (2010), *op. cit.*, p.8

[126] From the perspective of the history of literary theory, the significance that the right measure, proportion and the right order had in the Ancient Greek thought, can already be noticed in their tendency towards a strict classification of the various art forms and genres, as well as the canonisation of the artistic practices.

That beauty and goodness are closely related to proportions, is well described in Plato's *Timaeus*, which exclusively highlights the significance of harmony and establishes the connection between what is good and what is beautiful:

> Now all that is good is beautiful, and what is beautiful is not ill-proportioned. […] The mathematician, then, or the ardent devotee of any other intellectual discipline, should also provide exercise for his body by taking part in gymnastics, while one who takes care to develop his body should in turn practice the exercises of the soul by applying himself to the arts and to every pursuit of wisdom, if he is to truly deserve the joint epithets of "fine and good." (Pl., *Ti.* 87c–88c, transl. by Zeyl. [27])

This passage already indicates the inextricable connection between the body and the soul[127] – a topic which we will discuss at more length afterwards. For now, as a comparison regarding the relevance of beauty and proportion, we should take a look at Aristotle's *Poetics*[128], where the author shares similar thoughts:

> […] beauty consists in magnitude and ordered arrangement. From which it follows that neither would a very small creature be beautiful – for our view of it is almost instantaneous and therefore confused – nor a very large one, since being unable to view it all at once, we lose the effect of a single whole. (Arist., *Poet.* 1450b-1451a, transl. by Fyfe [31])

Therefore, something that is good and beautiful, is at the same time harmonious and proportionate[129]. These requirements apply both when judging the various entities that are already present in the universe, as well as the objects that are being crafted by human beings. A good work of art can be described as composed from the separate parts, as having these parts arranged in a well-proportioned way, and as an entity that can be comprehended as a consistent whole. Here, proportion is the primary and essential quality, defining the other parameters, such as the material, the colour or similar attributes that have an external form.

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[127] For an extensive analysis of the musical ideas from the point of view of the body and the soul in Plato's works, see Pelosi, F. (2010), *op. cit.*

[128] Cf. Arist. *Ph.* 188b; *De an.* 407; *Eth. Nic.* 1105b.

[129] For the context of harmony in technical arts and poetry, cf. Pl.; *Resp*, 401a; Arist., *Pol.*, 1284b.

The crucial importance of proportionality is also evident in the cosmological contexts. This can already be seen from the concept of orderly *kosmos* (κόσμος), a term which literally signifies an 'order'. In *Timaeus* Plato provides the reader with a narrative about the possible creation of the Universe, which resonates with our discussion:

> This was how the body of the universe was created from these constituents, four in number, with correspondence making it a concordant whole. And as a result affinity came to be a property of the world, and affinity unified it so thoroughly with itself that it can be taken apart only by him who bound it together. The formation of the world occupied each of the four in its entirety; the maker made it out of the totality of fire, water, air, and earth, leaving unused no part or property of any of them. His purpose was to ensure, first, that the world should be as complete a living being as it possibly could be, a totality consisting of the totality of its parts. Second, he wanted it to be one, and so he ensured that there was nothing left over from which another similar universe could be created. Third, he wanted it to be unageing and free from sickness, because he realized that when things that are hot, cold, and so on — things with strong properties – surround a compound body and strike it from outside, they break it up before its time, bring on disease and old age, and waste it away. This was the god's thinking, and this was why and how he ensured that the structure he made was single, a totality consisting of all totalities, complete, unageing, and untroubled by disease. (Pl., *Ti.* 32c–33a, transl. by Waterfield [23])

This passage incorporates the ideas that we already covered in the previous sub-chapter and describes the possible way of how a harmonised totality from the differentiating parts was created by *demiurgos*. Similar to how in music there are separate sounds that are harmoniously connected to compose a unified musical piece, the cosmos is harmoniously united from the separate elements, namely, fire, earth, water and air. Even though these substances are conceived as different in nature, it is particularly because of this discrepancy that they do not mix with one another and are able to create a united whole. We are also presented with a description that all of the elements must have been included in the process of ordering, and that all of them were eventually connected into a coherent totality.

We have already discussed that the relevance of proportion is understood as being common for the cosmic and material world, though it also applies to the human soul. In Plato's *Timaeus* this is described by discussing the probable circumstances of the generation of the soul:

In between the *Being* that is indivisible and always changeless, and the one that is divisible and comes to be in the corporeal realm, he mixed a third, intermediate form of being, derived from the other two. Similarly, he made a mixture of *the Same*, and then one of *the Different*, in between their indivisible and their corporeal, divisible counterparts. And he took the three mixtures and mixed them together to make a uniform mixture, forcing the Different, which was hard to mix, into conformity with the Same. Now when he had mixed these two together with Being, and from the three had made a single mixture, he redivided the whole mixture into as many parts as his task required, each part remaining a mixture of the Same, the Different, and of Being. (Pl., *Ti.* 35a–b, transl. by Zeyl [24])

Evidently, the several quoted passages are only a few of the possible examples that highlight the relevance of the correct ratios. For our purposes, it is necessary to pay attention to the very broad spectre of the discourses where such considerations take place, namely the one on the cosmos, the soul, and the works of art. Such thinking is in line with our previous considerations on the universal laws of harmony which applies to any existing realia, and which are ensured by maintaining the proper proportion. It is necessary to note that harmony, symmetry, consonance and ratios are the terms primarily related to the numerical nature, and these terms are being used in judging the aesthetic qualities, thus beauty is conceptualised as a form of reality with an inherent mathematical logic.

It is now more reasonable to discuss the musical matters, since music is an art where both harmony and proportion are considered essential. The purpose of music, therefore, cannot be limited to the analysis of its acoustic form or practices of the musical activity, such as poetry, since it was conceptualised broader: it was not only a medium for transmitting tradition, as we discussed earlier, but also an extremely powerful form of art of mathematical nature.

Because of its mathematical qualities[130], music could be invoked for training the mind. Plato refers to the Pythagoreans and defines harmonics as belonging to the sister sciences[131] (*Resp.* 530d) of mathematical nature[132], and for this reason, next to the

[130] Cf. Burnyeat, M.F. (2000), *op. cit.*

[131] On "sister sciences" and the formation of "mathemata", see esp. Cattanei, E. (2013). Mathematics and its reform in Plato's Time. In: Vegetti, M. et al., eds., *The Painter of Constitutions: Selected Essays on Plato's Republic*, Sankt Augustin: Academic Verlag, pp. 215–243.

[132] Cf. Archytas' fragment DK 47 B1 where geometry and arithmetic, astronomy and music are presented as *mathemata adelphea.*

physical and moral training, music and harmonics in particular, is presented as the mathematical exercise necessary to train those of the highest intellectual capabilities and best nature – philosophers and politicians (Pl., *Resp.* VII).

Pythagorean ideas encompass the efforts to understand the laws of cosmos, and music is discovered as a form of reality that expresses them. These goals and effects of musical-mathematical exercises are well commented by Barker, who contends that in *Republic* Plato prescribes mathematical sciences, including harmonics, because they are "best suited to the task of elevating the mind from a concern with what is perceived to an investigation of more fundamental realities, those that are intelligible but not perceptible".[133] We will return to discussing the question of how music works when it is not being exercised consciously, though for the moment it is crucial to highlight the connection between musical harmonics and mathematics.

Those forms of art that reach the perception of a human being, be it through eyes or ears, are expected to have the possibility to influence a person towards the beauty of reason. The mathematical knowledge contributes to understanding musical theory and, because of its mathematical nature, music, in turn, has a possibility to contribute to the intellectual training of the mind. Barker has rightfully noted that it is not the task of Plato's harmonics to analyse any musical systems in actual use, just like how astronomy is not a science that aims to describe accurately the observed movements of the heavenly bodies. He comments as follows: "[…] both sciences, if they are to have more than a humble, mundane utility, must seek to reveal truths of a higher order, transcending the sphere of perception. Just as geometry has as its subject matter such intelligible entities as the square and the circle, which are not things that can be perceived, and is not concerned with the description of the individual, perceptible and approximate squares and circles that it uses in its diagrams, so astronomy and harmonics are concerned with an ideal mathematics of motion. The visible movements of the stars and the audible movements that constitute sounds are to be treated merely as 'diagrams' or perceptual aids, from which the mind can be led to a grasp on the intelligible mathematical principles that perceptible movements may imperfectly exhibit."[134]

[133] Barker, A. (1989). Plato, *op. cit.*, p. 53.

[134] Ibid.

Musical harmonics is one of the most evident examples of the application of mathematical proportions and because of its nature, it can take part in the training of the mind. However, limiting the importance of music for mathematical perception would also be an oversight. Primarily because in the Classical Greek thought, even the instrumental, non-verbal, music does not cease to have power on a human soul when it is not being comprehended, as we have already indicated in the first chapter and will elaborate several paragraphs below. In the 7th book of *Republic* Plato criticises the instrumental attitude both towards the numbers and the sounds:

> […] they measure heard concords and notes against one another, and so labour to no purpose, just like the astronomers. […] 'Their behaviour is quite ridiculous, when they name some things "pyknomata" and incline their ears as if hunting out a sound from next door, some of them asserting that they can still just hear a sound in between, and that that is the smallest interval, by which measurement is to be made, while others take issue with them, saying that the notes sounded are already the same, each group putting their ears ahead of their mind. […] They do the same as those concerned with astronomy: they seek the numbers in these heard concords, but do not rise to problems, to investigate which numbers are concordant and which are not, and why each are so. [...] it is at any rate useful […] in the quest for the fine and the good, whereas if pursued in any other way it is useless. (Pl., *Resp.* 531 a-c, transl. by Barker [18]).

This passage is a great example for demonstrating the expectations towards the analysis of musical and astronomical[135] phenomena. What is expected from the information that becomes available through the senses of eyes or ears, is not to enjoy the perceptible, not even to train the mind as a mathematical exercise, but to uncover the deeper truths about the ideal world, that is, to contribute to the studies of philosophy instead of applicable mathematics or musicology. For this reason, the studies of Ancient Greek music not only allow to explore the musical practices in their social contexts but take part in theirs philosophical explorations of the world.

Although Plato does mention musical technicalities, they do not become the focus in his discourse on music[136], quite contrarily, they are indicated as parts of the greater philosophical agenda. This is mostly dependent on his goals because *The Republic* and

[135] Cf. Pl., *Resp.* 528b-529e.

[136] Similarly, in his *Politics* 1339a, Aristotle too enquires, why should the youth learn the art of music themselves, instead of judging the music that is played by the others.

The Laws are not written as the guides for musicians, they are the guides for the virtuous and wise future rulers of the state. It is presumably for this reason that Plato does not immerse himself into the analysis of the musical theory and for the questions of this sort, he refers to Damon instead. As it is noted by Tosca Lynch, "in Book 3 Damon seems to deserve Plato's respect for his truly 'technical' expertise, which can be usefully employed in researches about musical (and particularly rhythmical) ethics, but not his complete admiration, because he did not take the additional step of assessing the true ethical *value* of the contents he could handle so precisely."[137]

This additional step of overstepping technicalities becomes the focus in Plato's greatly elaborated philosophical discourse on music. Aristotle, even though he allows the broader spectrum of the functions of music, also agrees to the claims that music has an impact on the ethical dispositions of a person and that it takes an important part in a political life (Arist., *Pol.*, VIII). Such descriptions, although they can only be seen as taking part in the greater political framework, provide us with the knowledge on a different kind of music which is conceptualised in a complex philosophical system instead of being discussed as a simple sonic phenomenon. This is the kind of music where musical theory, musical practices or even the sound become of secondary significance, leaving the central part to the philosophical notion, linked to the abstract reasoning and dependent on the arguments on cosmology, ethics, and politics.

The recently quoted passage has four crucial points for our purposes: that Plato criticises those analyses of the phenomenon of music which focus only on the sonic aspects; that he indicates not the ears, but the mind as the only preferable and worthy judge of the musical phenomenon; that such analysis should eventually lead to the question of "why" some things are concordant while others are not; and that this line of research is described as the most important, leaving all the other musical explorations with the status of being useless.

Plato considers the inevitable failure of perception by the senses in regard to the ideal world. Exploring the acoustic sounds is analogous to exploring the visible heavenly bodies, on which he concludes that:

[137] Lynch, T. (2013). A Sophist 'in disguise': a reconstruction of Damon of Oa and his role in Plato's dialogues. *Études platoniciennes* (10), 2013.

These can be apprehended only by reason and thought, but not by sight. (Pl., *Resp.* 529d, transl. by Shorey [16])

Similar ideas are told about any artistic practices of the human world. The imitators, occupied with figures and colours, as well as with music, are deemed to be not necessary for the perfect and healthy state (*Resp.* 373b and *Resp*. *522b*); the terrestrial form of the imitations, as well as the artistic activity itself, is seen as unimportant, unless it is connected to the abstract reasoning and as images for the soul to seek the higher truths[138]. The discussions about music as the sonic art in *Republic* are presented as having to face the same conclusions as the astronomic explorations: it is not the acoustic expression, but the structural correspondence to the universal laws of harmony and proportion that is the most valuable part of the discourse of musical thought.

Such definitions of music as an entity that does not necessarily have an acoustic expression, is not an innovation of Plato, although he significantly developed and complemented the ideas of his predecessors[139]. Perhaps one of the best examples of music that does not come from the practice of a human activity is the notion of heavenly music. When the cosmic world is being discussed, the term 'music' becomes a semantic substitute for 'harmony'. For instance, in the reception of the Pythagorean tradition, music becomes the means of speaking about the world, and the most evident example of such connection is naming the cosmic harmony as 'music of the spheres'. Many authors, including Iamblichus and Porphyry, tell that legendary and divine Pythagoras was the only one who could actually hear this kind of music.[140] To all the others, such music remained inaudible. This melody was conceived as being more intense than any other sounds available to human perception. In this case, the concept of music indicates the harmonious cosmic structure – a heavenly melody, based on the right consonances, emitted by the planets and the surrounding stars. A description of the cosmic harmony defined in the terms of music can also be found in the previously discussed passage from

[138] Cf. Pl., *Resp*. 510e-511a.

[139] See e.g., Sassi, M.M. (2015), *op. cit.*

[140] Porphyry. De Vita Pythagorae [49], fr. 30; Iamblichus, *Life of Pythagoras or Pythagoric Life*, transl. by Taylor, Th., Krotona; Hollywood, Calif: Theosophical Publishing House, 1918, p. 36.

Plato's *Resp*. 617b. This is also attested and referred to by Aristotle in *De Caelo*, where he disagrees and contends the impossibility of the sonic nature of the cosmos[141].

Reading the before-mentioned passage of *Republic* together with the other quoted excerpts and taking into account that this passage strongly emphasises the importance of harmony, it seems very reasonable that Plato's description of cosmic music did not necessarily indicate the sonic qualities or that these qualities did not bear the most relevance. Rather contrarily, it discusses harmony together with music as a philosophical concept that we have already introduced in the preceding paragraphs. As it is noted by Naglis Kardelis in his introduction to Plato's *Timaeus*, "All the world is ruled according to the consistent numerical patterns that are defined by the three concepts: proportion (ἀναλογία), harmony (ἁρμονία) and consonance (συμφωνία). The body of cosmos […] is arranged by means of proportion, the soul of cosmos – by means of harmony, and due to the consonance of all of the things, the Wholeness sounds like a majestic symphony."[142] The cosmic realm has an inherent mathematical logic, and because of its proportionate structure it can be seen as concordant, as well as musical, though not necessarily sonic.

In fact, Plato clearly indicates that it is harmony which is the primary goal of the acoustic expression of music, and not vice versa:

> as the eyes are framed for astronomy so the ears are framed, for the movements of harmony; and these are in some sort kindred sciences, as the Pythagoreans affirm and we admit. (Pl., *Resp.* 530d, transl. by Shorey [17])

It is in this sense that we can primarily understand the music of the Cosmos – not as a sensibly perceivable sound, but as the concordant mathematical intervals that are

[141] It is worth to note that *De Caelo* presents a description of the physical world, therefore, Aristotle stays loyal to the strict classification and defines the Pythagorean cosmic structure as entirely sonic, in other words, in this work "cosmic music" is equal to music in its acoustic form, which is not necessarily the case in numerous passages from Plato's works. Cf. Halliwell, S. (2006). An Aristotelian Perspective on Plato's Dialogues. In: Herrmann, F.G., ed., *New Essays on Plato*. Swansea: The Classical Press of Wales, pp. 189–211; Johansen, T. (2009). From Plato's Timaeus to Aristotle's De Caelo: The Case Of The Missing World Soul. In: Bowen, A.C. and Wildberg C., eds., *New Perspectives on Aristotle's De Caelo*, Philosophia Antiqua 117. Leiden, Boston: Brill, pp. 9–28.

[142] Kardelis N. (1995). Įvadas. In: *Timajas*. Vilnius: Aidai, pp. 17–18. Author's translation.

embedded in its structural organisation. In addition to the initially discussed concept of music where it is described as a self-sufficient phenomenon within the limits of musicology, music also takes part in the philosophical considerations. In the latter case, the ideas on music and harmony are founded on the other theoretical concepts and music is conceptualised as their representation, for e. g., as the expression of the primordial number or an imitation of the ideal world. The goal of music, therefore, is the abstract knowledge and at this point, we are able to contend that in such philosophical conceptualisation, the purpose of the music is not the hearing, but the comprehension of the universal laws of harmony and their concrete representation through an acoustic medium, for which the ears fulfil only the instrumental role.

In the universe, where everything is governed by harmonious ratios, they, however, are not so evidently noticeable. Rather contrarily, recognising the patterns requires the work of mind for such ratios to be uncovered. This direct connection between harmonics and mathematics, is attested on the level of language, as it is already noted by Barker: "the principles on which the structure of harmonic systems is to be analysed and by which their coherence is to be explained are mathematical. More generally, the proper language for the rigorous discussion of harmonic issues is that of mathematics, of which harmonics is a branch: it is not an autonomous discipline to be discussed in an independent terminology developed out in the professional patois of practicing musicians."[143] In this line of thinking, we are faced with the notion of *mousikē*, where it is conceived as a reflection of harmonious ratios, and because of this, it can be used for the cognitive training and the comprehension of the abstract ideas. Given that harmonics is a mathematical science next to number theory, plane geometry, solid geometry and astronomy[144], it is clear how music as a mathematic exercise can contribute to a person's intellectual training. As it is stated by Anthony Long "[…] reason for Plato is not restricted to mathematics, but mathematics gives us the best guide for elucidating what he means by reason. For Plato good rule is the application of reason, where reason

[143] Barker, A. (1989). Introduction, *op. cit.*, p. 8.

[144] Barker, A. (1989). Plato, *op. cit.*, p. 53.

involves making correct calculations concerning what is best for all concerned, whether the scope of that is the individual soul or the state at large."[145]

Continuing our research on the requirement of proportion, we must note that it also applies to the discussions of the human soul. In *Republic* Plato describes how the different parts of the soul have to be harmonised similarly to the notes or intervals:

[…] justice is indeed something of this kind, yet not in regard to the doing of one's own business externally, but with regard to that which is within and in the true sense concerns one's self, and the things of one's self – it means that a man must not suffer the principles in his soul to do each the work of some other and interfere and meddle with one another, but that he should dispose well of what in the true sense of the word is properly his own, and having first attained to self-mastery and beautiful order within himself, and having harmonized these three principles, the notes or intervals of three terms quite literally the lowest, the highest, and the mean, and all others there may be between them, and having linked and bound all three together and made of himself a unit, one man instead of many, self-controlled and in unison, he should then and then only turn to practice if he find aught to do either in the getting of wealth or the tendance of the body or it may be in political action or private business, in all such doings believing and naming the just and honorable action to be that which preserves and helps to produce this condition of soul, and wisdom the science that presides over such conduct; and believing and naming the unjust action to be that which ever tends to overthrow this spiritual constitution, and brutish ignorance, to be the opinion that in turn presides over this. (Pl., *Resp.* 443d-444a, transl. by Shorey [15])

The following passage from Plato's *Timaeus* highlights the interlinkage of the elements we discussed so far, namely the music, mathematics, cosmic harmony and the soul:

The god invented sight and gave it to us so that we might observe the orbits of intelligence in the heavens and apply them to the revolutions of our own understanding. For there is a kinship between them, even though our revolutions are disturbed, whereas the universal orbits are undisturbed. So once we have come to know them and to share in the ability to make correct calculations according to nature, we should stabilize the straying revolutions within ourselves by imitating the completely unstraying revolutions of the god.

Likewise, the same account goes for sound and hearing – these too are the god's gifts [...]. Speech (*logos*) was designed for this very purpose – it plays the greatest part in its achievement. And all such composition (*mousikē*) as lends itself to making audible musical sound (*phonē*) is given in order to express harmony [...]. And harmony, whose movements are akin to the orbits within our souls, is a gift of the Muses,

[145] Long, A. A. (2015). Politicized Soul and Reason. In: *Greek Models of Mind and Self*. Cambridge (MA): Harvard University Press, pp. 132–133.

if our dealings with them are guided by understanding, not for irrational pleasure, for which people nowadays seem to make us of it, but to serve as an ally in the fight to bring order to any orbit in our souls that has become unharmonized and make it concordant with itself. Rhythm, too, has likewise been given us by the Muses for the same purpose, to assist us. For with most of us our condition is such that we have lost all sense of measure and are lacking in grace. (Pl., *Ti.* 47 b–e, transl. by Zeyl [26])

This extensive passage is in accordance with the current conclusions of this part of our research, which was dedicated to analysing the significance of the proportion in the conceptualisation of music as a philosophical argument and discussing the possibility of the non-acoustic notion of music. The quoted excerpt presents us with a discussion where music in its acoustic form is analysed in connection to the cosmic laws. We can also notice a clearly defined hierarchy in which the sonic music is subordinated to the universal harmony, and which highly decreases in value in case it is not able to achieve the correspondence to it. The excerpt also names music as the "gift of Muses" and highlights that it is not some irrational pleasure that one should expect from music, but the proper ordering of the soul, since the cosmic and acoustic forms of music have a deep interconnection. The perceptible form of music in this passage is presented as an intermediary, a connection between the soul of the human being and the cosmic reality – between the perceptible and the abstract. Such connection allows the one who engages in musical contemplations to come closer to the fundamental nature of this phenomenon, and to the better understanding of the structure of the world.

A human being finds himself in between the ideal music graspable by the mind and the regular music as the entirety of common artistic practices. He is not, however, left without any guidance since the human soul is related to the soul of the world. Their relationship is that of a micro and macro cosmos[146], and the former aims to match the order of the latter. This is well described by Kardelis in his introduction to *Timaeus*: "The cosmos of Timaeus is not antagonistic to a human being. […] The whole sphaira (sphere) of cosmos is like a spatial τέμενος, with an Earth settled in its centre […] In order to overcome (or reduce) the abyss between a human being and the Wholeness, the latter is depicted as a living creature (virtually, as macro-human), and a human being (especially his spherical head) – as micro-Wholeness, micro-cosmos, where the rotations of thoughts

[146] Cf. Pl., *Ti.* 29d-47e; *Phlb.* 28d-30d.

within a human head repeat the rotations of Same and Different in the sphairos of the Cosmos."[147] In the Platonic framework of cosmology, a human being takes part in the proportion based bilateral correlation of macro-cosmos and microcosmos and the same laws of harmony and proportion are applicable to his soul.

The philosophical conceptualisation where music is primarily viewed as a representation of proportion and harmony, allows us to reconsider the before-mentioned narrative on Pythagoras where he is described as the only one who can hear the cosmic harmony. It allows the possibility to understand cosmic music not as a physical sound (which was the basis for Aristotle's critique), but as the equivalent of proportionality. In this specific sense, Pythagorean spheres can "sound" because the numeric cosmos is inextricably connected to the numeric structure of the human soul. This conceptualisation of music goes beyond the definition of an acoustic phenomenon, and in this context, the question whether the cosmos emits any sound loses its significance.

Similar reading on Pythagorean notion of cosmic music can be found in several other sources, for instance, in Pseudo-Plutarchus *De Musica (Περί Μουσικῆς).* Although this work is dated to be from the 2nd to 3rd century A.D., it is significant for us as a historical work which presents the compilation of the ideas on music by the earlier philosophers.[148] Here we find a passage that contends that it was unacceptable for the revered (σεμνός) Pythagoras to judge music based on the senses:

> The grave Pythagoras rejected the judging of music by the sense of hearing, asserting that its excellence must be apprehended by the mind. This is why he did not judge it by the ear, but by the scale based on the proportions, and considered it sufficient to pursue the study no further than the octave. (Ps. Plut., [*De mus*] 1144f–1145a, transl. by Einarson and De Lacy [46])

Such description is not the only one, as can be seen from Porphyry's *Life of Pythagoras*, which reads that "Pythagoras thought that only mind alone sees and hears"[149], or Ovidian reception of Pythagoreanism, which reads that: "all that Nature has

[147] Kardelis, N. (1995), *op. cit.*, pp. 18–19. Author's translation.

[148] For the dating of the sources in Ps. Plutarchus *De Musica*, see Pöhlmann, E. (2011). Ps. Plutarch, "De Musica". A History of Oral Tradition of Ancient Greek Music. *Quaderni Urbinati Di Cultura Classica* 99(3), new series, pp. 11–30.

[149] Porphyrius, *De Vita Pythagorae*, fr. 46, transl. by Guthrie, K.S [51]; cf. fr. 47.

denied to man and human vision, he reviewed with eyes of his enlightened soul."[150] Similar descriptions of music as a divine harmony can be found when referring to the Pythagoras, Archytas, Plato and other philosophers:

> But in fact, my friends, the greatest consideration, one that particularly reveals music as most worthy of all reverence, has been omitted. It is that the revolution of the universe and the courses of the stars are said by Pythagoras, Archytas, Plato, and the rest of the ancient philosophers not to come into being or to be maintained without the influence of music; for they assert that God has shaped all things in a framework based on harmony. It is no time now, however, to expatiate further on this subject. Nothing is more important or more in the spirit of music than to assign to all things their proper measure. (Ps. Plut., [*De mus*] 1147, transl. by Einarson and De Lacy [47])

As mentioned by A. Barker, in the early Pythagorean thought, however, there was no such clear distinction between the intelligible and the perceptible[151] and Plato criticises the Pythagorean attitude in *Resp.* 531a-c. Sheramy Bundrick has noted that "While texts like [...] the pseudo-Plutarchean De Musica provide much information about earlier periods, they also contain hearsay and inaccuracies, having been written decades or even centuries after the fact."[152] Therefore, such considerations mostly reflect the later reception of the Pythagoreanism, just as the more complex analyses of the concordant intervals are of later origin and many discoveries and developments are the latter attributions to Pythagoras[153]. Even though in the works of Plato we find many ideas, similar to the Pythagoreans, it is Plato who provided them with a significantly explicated theoretic discourse. Our reading could resemble the Pythagorean reading on Plato, though it is actually vice versa – it is only because of the Platonic reception of Pythagoreanism that we can draw the conclusions not about the symbolic numbers or musical experiments, but about the unified correspondence of proportionate entities within the cosmos – both in the astronomic and terrestrial world, transfusing every aspect of the human life,

[150] Ov. *Met.* XV, 63–64, transl. by More B. [52].

[151] Barker, A. (1989). Pythagoras and Early Pythagoreanism, *op. cit.*, p. 28.

[152] Bundrick, S.D. (2005). *Music and Image in Fifth-Century Athens*, New York, NY : Cambridge University Press, p.2.

[153] Barker, A. (1989). Plato, *op. cit.*, p. 54; Burkert, W. (1972), *op. cit.*

including both ethics and aesthetics, and eventually leading towards the abstract understanding of the ideal world.

From the discussed passages, we are able to contend that music and harmony are understood as parts of the same philosophical discourse, though it is a complex multi-layered discourse where the musical terms can appear conflicted unless they are analysed together in a systemic way, such as clearly differentiating among the different conceptual layers. We can now confirm the initial hypothesis that there are several layers of the concept of music, namely the contemplative, the technical and the perceptible. They include a great variety of definitions of the term "music", which are mostly dependent on the specific contexts that are discussed, though all of them can be analysed from the point of view of these three categories that we distinguished.

Taking into account the broad notion of music which oversteps the perceptible realm, it is not surprising that in *Phaedrus* it receives praising status and is placed next to philosophy:

> […] the soul that has seen the most shall enter into the birth of a man who is to be a philosopher or a lover of beauty, or one of a musical or loving nature, and the second soul into that of a lawful king or a warlike ruler, and the third into that of a politician or a man of business or a financier, the fourth into that of a hardworking gymnast or one who will be concerned with the cure of the body, and the fifth will lead the life of a prophet or some one who conducts mystic rites; to the sixth, a poet or some other imitative artist will be united, to the seventh, a craftsman or a husbandman, to the eighth, a sophist or a demagogue, to the ninth, a tyrant. (Pl., *Phdr.* 248d-e, transl. by Burnet [8])

At this point, it is still necessary to look for the possibility of the unifying points that would allow discussing all the three conceptual layers of music in a consistent systematic way. For it is not as clear yet what is considered to be the conceptual grounds that enable shifting the attitude from the mathematical considerations to the actually hearable piece of music and, more importantly, from the acoustic sound to goodness and virtue. Pelosi has outlined that music has a place in the curriculum of dialecticians and it allows a conversion from the perceptible to intelligible. He claims that "it is on this occasion […] the equilibrium breaks, in favour of the intelligible component, and contact is lost with the sensible dimension of music."[154] For our research purposes, it is of utmost

[154] See Pelosi, F. (2010). Introduction, *op. cit.*, p. 11.

importance to understand what is the relationship between the perceptible and intelligible, and to find out whether the contact with the perceptible dimension is truly lost. For if this question is ignored, we could not deny a possibility that instead of one consistent concept of music there are two concepts, namely philosophical and acoustical musics, which are conceptualised independently. We are going to explore why Plato is so insistent on the rules of music and why he discusses the very possibility of people listening to the wrong music or even to bad sounds, as being dangerous. We will enquire into the relationship between mathematical notion of music, musical influence on the person's soul, and playing an actual instrument, in order to understand how the ears or hearing is related to the influence music has on a person's soul, and how it is developed into a discourse on the level of ethics and politics. The ideas previously analysed in this chapter allow us to reconsider this connection and propose the reading where the acoustic and philosophical music belong to the same conceptual system, in which proportion and the common mathematical nature, even in its perceptible form, is conceived as the uniting element.

2.2.2. THE POWER OF MUSIC

The previous considerations about the philosophical concept of music, which has to do with harmonising and the Cosmic ratios, are necessary for our further research of how this notion of music as a structured entity could be related to the simple acoustic music that any person can listen to, even without involving himself into the intellectual work of recognising and comprehending these structures. This would lead our discussion even further to the analysis of why the power of music is described as universal, affecting everybody, even those listeners who do not understand the music they listen to: neither its words nor the unity of the separate musical components.

It is a long lasting *topos* in the Ancient Greek thought which considers music as having power to influence a human being, starting from the mythical realm[155] and epic poetry to the philosophical traditions, such as Pythagoreans, Plato and Aristotle. Various musical modes[156] such as Dorian, Phrygian, Lydian, and others were conceived with influencing a character in a certain way. Moreover, *mousikē* not only had a possibility to imitate a particular character in a poetic performance but was conceived as powerful enough to form or change the ethical dispositions of an individual. Different modes represent different characters: like the Dorian mode, named after Dorians, was considered to be noble, majestic, exceptionally Greek[157], and, for example, Ionian and Lydian are considered to be slack.[158] The different elements of a musical piece, such as the words, rhythm[159], or *harmoniai*, were conceptualised as powerful enough to affect the listener in

[155] See Murray, P. (2020), *op. cit.*, pp. 13–24; Rocconi, E. (2012). Aristoxenus and Musical Ēthos. In: Huffman, C., ed., *Aristoxenus of Tarentum: Texts and Discussion. Rutgers University Studies in Classical Humanities XVII.* New York: Routledge.

[156] For the historical and social contexts in which these modes were employed, see Rocconi, E. (2007), *op. cit.*

[157] Barker, A. (1989). Introduction, *op. cit.*, p. 14.

[158] Cf. Pl., *Resp.* 398e-399b, Arist., *Pol.* 1342a-b. On the differing positions, see Rocconi, E. (2015), *op. cit.*

[159] See Butcher, J.G. (1951). Poetry and Fine Art. In: *Aristotle's Theory of Poetry and Fine Art*. New York: Dover Publications, pp. 121–162; Pelosi, F. (2010). Musical education of sensibility, *op. cit.*

a positive or negative manner, and these qualities were discussed in the educational context as means for directing people towards virtue.[160]

One of the most evident examples of the power of music, is the story attested in multiple Greek and Latin sources[161], which tells about the incident of Pythagoras and a young man he saw in Tauromenium. The story reads that while Pythagoras was looking at the stars, he noticed a man driven by jealousy, copious drink, and Phrygian pipe-music played by the pipe player. This man was preparing to set fire to his mistress's door, and Pythagoras managed to calm him down simply by persuading the piper to play a more dignified melody in the Dorian, instead of Phrygian, mode. Similarly, both Iamblichus and Porphyry describe how Pythagorean teachings developed the ideas about musical therapy[162] as well as its manipulative usages, and some of these musical pieces are reported to be only instrumental[163], without words.[164] Pelosi, commenting on the instrumental function of the power of music, has elegantly pointed out that "Music contributes to the philosophical cure of the soul as a very efficient manner of treating a vast array of psychic responses ranging from perception emotion and desire to rational content. It is evidently a question of a powerful and versatile instrument, and one that is highly appropriate when dealing with a complex reality, the soul, the cure of which requires the use of diverse stimuli and processes."[165]

For our purposes, the primary task is to analyse what establishes this ethical potential of music to affect a human being in such a powerful and universal way. In other

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[160] See esp. Rocconi, E. (2019). Music and Dance. In: Cairns, D., ed., *A Cultural History of the Emotions: In Antiquity*, pp. 47–61. London, New York (NY): Bloomsbury Academic, Bloomsbury Publishing Plc.

[161] See West, M.L. (1992), *op. cit.*, p. 31, Rocconi, E. (2019), *op. cit.*

[162] The considerations on number in relation to both the human soul and body, are present not only in the musical texts, e.g., they are also used in medicine to analyse in which months the born babies are viable, and in which ones they are not, see. e.g., Pelosi (2016), *op. cit.*, Restani (2016), *op. cit*. It is not within the scope of this thesis to explore the relationship between the soul and body at large, though this relationship is a significant part of the conceptual framework even in the discussions of music. It is only in connection to the body that music can affect a human soul: see Pelosi, F. (2010), *op. cit*. Our task here is different, that is, to analyse not only the connection between the acoustic music with one's body or the mind, but also the presuppositions that allow such mediation in the first place.

[163] Porph. fr. 30; Iambl. fr. 64, 164.

[164] See West, M.L. (1992). Music in Greek Life, *op. cit.*, pp. 31–38.

[165] Pelosi, F. (2010). Introduction, *op. cit.*, p. 6.

words, the issue that concerns us is not the explorations of how music was employed in the social practices to contribute to the education but distinguishing why it was conceptualised as having the ethical potential in the first place. It must be noted that the understanding that music possesses such quality is rather ancient even for the Classical Greece, and it is mixed with the traditional beliefs.[166] Our aim, however, is to explore how it is incorporated in the philosophical systems of Plato and Aristotle, for it is evident that both authors agree upon the fact that music has the power to change a person's *ēthos* in a significant way.[167] As we will notice later on, their further positions on what kinds of music are appropriate for the society and what functions it should have, are dependent on their notion of *mimesis*[168] as well as the acceptance or denial of the existence of the ideal transcendent forms. Nevertheless, both authors agree upon the fact that different musical modes have a specific effect on a person's *ēthos*. These considerations are most evident if we consider the passage from Aristotle's *Politics*:

> But melodies themselves do contain imitations of character. This is perfectly clear, for the *harmoniai* have quite distinct natures from one another, so that those who hear them are differently affected and do not respond in the same way to each. To some, such as the one called Mixolydian, they respond with more grief and anxiety, to others, such as the relaxed *harmoniai*, with more mellowness of mind, and to one other with a special degree of moderation and firmness, Dorian being apparently the only one of the *harmoniai* to have this effect, while Phrygian creates ecstatic excitement. These points have been well expressed by those who have thought deeply about this kind of education; for they cull the evidence for what they say from the facts themselves. With rhythms the situation is the same. Some of them have a character that produces stability, others one that produces movement, and of the latter some have movements of a more degenerate sort, while others have ones fitting for free men. From all this it is clear that music is capable of creating a particular quality of character in the soul, and if it can do that, it is plain that it should be made use of, and that the young should be educated in it. (Arist., *Pol.* 1340a-b, transl. by Barker [34])

The place that music occupied in the Greek education is probably one of the most explored topics in the scholarly discourse on the Ancient Greek music. For instance, Eric

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[166] See Fiecconi, E.C. (2016). Harmonia, Melos, and Rhythmos: Aristotle on Musical Education, *Ancient Philosophy* 36(2), pp. 409–424.

[167] Cf. Pl., *Resp*. 522a, 395d; *Ti.* 47 b-d; Arist., *Pol.* 1340a-b.

[168] For the musical *mimesis* in Plato and Aristotle, see Halliwell (2002), *The Aesthetics of Mimesis: Ancient Texts and Modern Problems*, Rocconi, E. (2020), *op. cit.*

Havelock discussed it as a transition from the poetic to the philosophic tradition, from images to concepts[169], Eleonora Rocconi has extensively analysed its mimetic character and influence on emotions, as well as the ethical power of music, Francesco Pelosi has considered music from the point of view of psychophysics and as a dialectic tool, Massimo Raffa explored the musical education in the society[170], and Andrew Barker paid great attention to the education in relation to harmonics[171]. We are not going to plunge into an extensive description of the educational impact of music in its entirety, especially because this topic has already received a lot of scholarly attention, but we are going to discuss how the rules that are expected from the socially approved musical practices can be discussed together with the philosophical notion of music, which we presented in the previous sub-chapter.

The current scholarly discourse mostly analyses music as the social practices and as an acoustic phenomenon, to which various rules or even laws must apply. That is, they analyse which kind of musical practices are understood as the best ones for leading a person towards virtue. However, the conceptual layers that we identified before clearly indicate that acoustic understanding of music is only part of the whole conceptual system, therefore, such approach removes the possibility of discussing the power of philosophical, non-acoustic, notion of music, which is described by Plato as being the most important one. This is a significant omission in the explorations of the concept of Ancient Greek music, since in many cases, at least since Plato, music was not conceptualised as a self-sufficient acoustic phenomenon detached from the other philosophical considerations. Discussing the isolated meanings of music creates a significant problem, for we lose the opportunity to evaluate that the acoustic and cosmic music is of the same nature and that they can be seen in the same consistent conceptual system. It is, then, easy to disregard that for the acoustic sounds and cosmic structures, the same word of "music" is being used, and this can be better explained as a connection rather than coincidence.

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[169] Havelock E. (1963). The Supreme Music is Philosophy, *op. cit*.

[170] Raffa, M., (2020). Music in Greek and Roman Education. In: Lynch, T.A.C., and Rocconi, E., eds., *A Companion to Ancient Greek and Roman Music*. Hoboken: Wiley, pp. 311–322.

[171] Barker, A. (2007). *The Science of Harmonics in Classical Greece*. New York: Cambridge University Press.

The important point to note is that explaining music through its relation to education tends to focus on the social aspects of musicianship. For instance, it concerns itself with the ways of establishing the right kind of music in a polis or habituating the people to listen to the already established practices. However, the discourse that deals with choosing those correct practices in the first place and, most importantly, what is the reasoning for such choices, deserves much more research. It is only after the justification of its correctness that the requirement of following the norm becomes valid, as well as the discourse on the necessary education that subsequently follows.

The idea that in Antiquity the cosmic proportions were understood as having correspondence in the musical field, is not new. For instance, Andreas Kramarz comments on Plato's *Timaeus* and states that "the cosmic and human soul are governed by the same principles, and music, being based on mathematically describable proportions, forms the link between the two. Thus, to music corresponds the role of "tuning" the soul according to cosmic harmony."[172] What interests us, however, is not only the analogy, but the naming of these proportionate structures, which are conceptualised as "music". Our aim is to highlight the omission that it is not only a parallel between the cosmic or human proportions that is being discussed, but between the cosmic and human music, and this puts the concept of "music" in the very centre of the cosmological, ethical or political philosophical discussions. Music in the ancient texts greatly differs from the modern meaning of the term, and in Plato's works it is primarily seen as inaudible harmony or harmony-enabling principle, which can also be applied to all the different realms of the world. This is what establishes the plausibility of the discourse on the cosmic music, the political music or the connection between music and *ēthos*. Therefore, musical analogies are not used for the mere explanatory purposes or for understanding the abstract ideas; they are discussed as part of the proportionate world, for it is through music that the profound rational nature of the world presents itself in a perceptible form.

We have already indicated the close connection that exists between the aesthetical and ethical categories in the Ancient Greek world. Every kind of craftsmanship (*technē)* has a clear purpose, and the goals of the artistic practices cannot be separated from the goals of a human being. Therefore, the discussion of the goals of music is directly linked

[172] Kramarz, A. (2017). Is the Idea of 'Musical Emotion' Present in Classical Antiquity? In: *Greek and Roman Musical Studies* 5(1). Leiden: Brill, p. 9.

to the ethical goals of the political community, and they cannot be analysed ignoring the philosophical discourse on the universal ratios. *Mousikē*, as a phenomenon consisting of words, sounds and physical movements, most obviously presents itself as a visible and audible phenomenon, though in the philosophical writings this is not why it was valued the most. It is for this reason that it is necessary to re-focus the studies on the musical phenomena in Antiquity from music as an acoustic practice to the musical effects and the presuppositions of why this effect was understood by the Ancient Greek philosophers as possible in the first place.

This allows to develop further the perplexity of the relationship between words and sounds that we discussed in the first chapter of this thesis. A great variety of elements are involved in creating musical meaning and musical effect. In the philosophical notion of music, all the elements, including the words, the instrumental part of the music, the rhythm and the instruments, become the constituents of the harmonious entirety of the musical piece which is in direct connection with the realm of metaphysics.

It is now clear that this question deserves more attention and a more complex approach. It leads us to questioning what are the presuppositions for choosing which kinds of music and which musical modes are right, and which are the wrong ones? In the Greek discourse on musical *ēthos*, two answers become evident: 1) we learn about the appropriate modes from the examples of the good men, and 2) we judge which modes are the right ones by the qualities and character of the modes themselves. In the first case, the evident perplexity is that when the good men choose or learn from the others about the right examples of good music, we are still left without the understanding, what defines a piece of music to be right or wrong, good or bad. Plato partially addresses this question when he takes up to consider the discourse of innovation versus the established musical practices[173] and claims that the innovations might disbalance the stable life of a polis[174],

[173] See esp. the discourse on "New music": Csapo, E., (2004). The Politics of the New Music. In: Murray, P. and Wilson, P., eds., *Music and the Muses: The Culture of 'Mousikē' in the Classical Athenian City*. Oxford: Oxford University Press, pp. 207–249; D'Angour, A., (2006). The New Music – so what's new? In: Goldhill, S. and Osborne R., eds., *Rethinking Revolutions through Ancient Greece*. New York: Cambridge University Press, pp. 264–283; Salappa-Eliopoulou, A. (2012). Music Evolution in Ancient Greece and the Value of Music Education in Pseudo-Plutarch's De Musica. *Schole* 6(1), pp. 76–86.

[174] Cf. Pl., *Resp.* 424b-c.

or challenge the established traditions. Though at this point it is still unclear, why the older practices are objectively more founded than the new ones.

The second answer, which would suggest that musical modes themselves have certain character-moulding qualities, poses a problem about deciding on the nature of the mode. This could be done by learning from the examples of the good and experienced men, or from the effect it has on a person or on a *demos*. The very fact that a musical mode has an effect already means that a certain character was conceived as being already within a structure of a musical mode, not only in the words or the other elements constituting a musical piece. If acoustic and rhythmical qualities indeed were not too significant and completely dependent on the text, there would simply be no possibility of a wrong accompaniment, there could be only imprecisions or inaccuracies. Admitting that they are inappropriate, would create no need to take such drastic measures as to eliminate that kind of music from a polis. On the other hand, if we accept the possibility of wrongness[175], we must accept that acoustic music has an additional layer of meaning that contributes to the words rather significantly – in fact, it becomes so significant that a wrong mode or a wrong instrument could even ruin a musical piece and turn a whole performance into being both illegitimate and dangerous. Here, we are discussing the layer of the instrumental music and not of the words that it accompanies. Also, not the practices of the "New music" that Plato criticises together with the professionalism and improvisation on the traditional tunes. If indeed there was no *a priori* understanding that instrumental music (and different *harmoniai* or instruments) can affect a person's soul, there would simply be no need to be so dismissive of the professional musicians who start experimenting. The important aspect here is that Plato does not criticize them just for endangering an established tradition of practising music – he criticises them for endangering the soul, the *ēthos* and the psychological state of the listeners.

After these considerations we could suggest that the plausible answer to knowing which ratios are objectively right and beautiful, is that they are the same ones that can be found in the universe when looking at the sky. Similarly, one can face them when researching what is concordant in music, because harmonious ratios were conceived as universal for all the objects that are possible to be created. Nature in the Ancient Greek

[175] Cf. Plato's *Laws* and the usage of the term "nomoi" which refers both to "a musical piece" and "a law".

thought was understood as a source of knowledge and an object of explorations. Music, which has an ontological status, is a part of that pool of knowledge, even prior to being composed by the human musicians. There is a strong connection between music and the other realms of the world, mainly because the intellectual thought on music began not from the analyses of the acoustic phenomena, but from the explorations of the physical world and the efforts to explain it. Music was found to be a spectacular discovery that has correspondence to the mathematical ratios indicated to us by reason. Therefore, by exploring the musical phenomena, it also becomes possible to explore the most important truths about the nature of the human soul, the ethical life of a polis or the laws of the Cosmos. Music takes a fundamental part in the education, though this education is not about the music, not even about the society, but about the universal laws of natural consonance or dissonance. Consequently, the good and proportionate music sounds good to the trained ear, because it is good in its very essence and can be judged objectively.

Taking into account all the previous considerations about the role of music in the discourse of cosmology, proportion and harmony, the moral effect on a human soul seems to be very natural, for it is through music that not merely musical, but cosmical or divine[176] harmony finds its perceptible expression. It is reasonable to contend that music is philosophically conceptualised as sensibly perceived mathematics, mathematical proportions that can be heard and subsequently conceived by reason.[177] In this sense, the concept of music does not only attain the meaning of a sonic sound, but the meaning of the harmony, established from the proper arrangement of proportions. As it is rightfully noted by Pelosi, "In Platonic reflection the authentic interlocutor of music is the soul."[178] This idea, however, can be applied to the much wider spectre of the authors and texts which conceptualise music as having a power upon the ethical dispositions of the listener. It is not only the ears, but the soul, to which the ears serve instrumental purpose, that perceives music. Such idea can be developed further since the soul of a human being is

[176] Cf., for example, Ps. Plut. *De Musica* refering to the discourse on divine music in the authoritative sources, such as Homer, Aristotle, Pythagoras, Archytas, Plato.

[177] On the significance of the conceived music vs. the music perceived irrationally, see Pelosi, F. (2010), *op. cit.*

[178] Pelosi, F. (2010), *op. cit.*, p. 2.

in an inextricable relationship with the cosmic world, and the necessity to conform to the universal harmony is also present in the realm of a social or political life.[179]

Similar thoughts can be found both in Plato and Aristotle, independently on their differing views on mimetic representation or the definition of the ideal world. Despite the fact that Plato approves only Dorian mode to be of highest influence towards virtue and Aristotle accepts various modes in order to balance the unbalanced emotions of a human being[180]; or the fact that Plato sees the importance of acoustic music only in relation to becoming more virtuous while Aristotle approves various uses, including music for pleasure and relaxation[181], both of the authors agree that different modes have different, yet universal, effects on the ethical realm.

Even though Aristotle criticises the possibility of the actual sound coming from the heavenly spheres[182], his narrative on music retains the reasoning of the objective and universally effective musical melodies. He states that "among the objects of the other senses - those of touch and taste for example - there are no likeness of character [...] But melodies themselves do contain imitations of character"[183], and explains that different *harmoniai* have particular, yet universal, effects experienced by the listeners. This means that these melodies are still considered to have the ethical foundation in the real world that enables such effect, and there is only one clear element that actually differs among the modes – it is their structural composition. This ideal world, unlike in Plato's vision, is no longer external, but even in the actual world it is particularly the structural arrangements in music that create a specific and clearly defined ethical effect, which is then transmitted to the listeners through the medium of sound.

Different modes (that is, different proportional structures) become the deciding factor on what this influence is going to be – whether it would provide a person with courage, virtue, or lead him towards lamentation. The psychological or psychagogical[184]

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[179] Cf. Pl., *Resp.* 443d-e; *Ti.* 32c–d; Arist., *Pol. VIII*.

[180] Arist., *Pol.*, 1342b.

[181] On the goals of music in Plato and Aristotle, see Schoen-Nazzaro, B.M. (1978), *op. cit.*

[182] Arist., *Cael.* IX.

[183] Arist, *Pol.,* 1340a.

[184] See Rocconi, E. (2007), *op. cit.*; Pelosi, F. (2010), *op. cit.*; Barker, A. (2005). *Psicomusicologia nella Grecia antica*. In: Angelo Meriani (ed.). Quaderni del Dipartimento di Scienze dell'Antichità; Università degli Studi di Salerno. Napoli: Guida Editore.

effect, then, has its foundation in the universal laws of *harmonia* and proportion, therefore, even though music which has words is easier understood by the listener, it is not the words but *harmoniai* that have a direct effect on the soul. The beforementioned etymologic link among *ararisco*, *harmonia*, *aruthmos* and, in the latin tradition, *ars*, after our considerations, appears to be very much in line with our conclusions. It allows us to notice a linkage, at least on the level of language, which finds correspondence in the layered conceptualisation of a united concept of *mousikē*.

The basis for the *harmoniai* lies in their numeric intervals. Proportion, then, is that linkage which establishes the connection between the acoustic and philosophical notions of music. Music is potent to have an effect on a human soul because the proportions and ratios which are required for balancing/disbalancing the soul according to the world-soul (for Plato) or as the combination of the proportionate patterns that create different mimetic effect (for Aristotle), remain in the musical acoustics and they retained this effect independently on whether a listener understands the *logoi* or the elements constituting a musical piece. It does not even depend on whether a listener understands proportion, because the right proportions are embedded in the structure of the universe and the same right and wrong applies for the musical piece. It goes without saying that the cosmic music cannot be completely replicated by the human musicians, though by arranging the sounds according to the cosmic ratios or by ignoring them, the human craftsmen generate melodies that, based on their partial correspondence, have the different ethical consequences to their listeners.

For instance, we read that with music Pythagoras calmed down the soul and body[185], that he could hear the harmony of universe, and understand the music of spheres that the others were not able to hear because of their limited nature. However, it does not mean that a proportionate cosmic music had an effect only on Pythagoras, but, rather contrarily, it impacted all the people. The purpose of music is to harmonise the listener's soul according to the soul of the Cosmos, which becomes possible, for in this line of thinking, the soul is also numeric and rational in its nature. Therefore, when we take into account that music, soul and cosmos are numeric, this explains how the piper in our

[185] See Provenza, A. (2015). Correcting ēthos and Purifying the Body. Musical Therapy in Iamblichus' De vita pythagorica. *Greek and Roman Musical Studies* 3, pp. 94–115.

previous story about Pythagoras could change a man's mind, calm him down to a level where he no longer acted upon his wish to burn the house of his mistress.

It is important to pay attention that in Plato's *Timaeus*, time is defined as a numerical structure as well (37c-39e), and it is precisely the soul that perceives it: in this sense, music can affect a human being both through the number and its temporal instead of the spatial form. As it is noted by Kardelis, "[…] the feature of understanding time (as a numerically described sequence of events) is characteristic to the soul, which is created by means of the three tunes (arithmetic, geometric and harmonic), and not to reason, which is a structureless monad, indescribable by any number and thus not being able to relate to the numerical nature of time, which arises from the numerical structure of the soul of the world. In other words, a similar entity can feel another of the same kind and it is commensurable to it: the human soul is commensurable to the soul of the universe and the basis for this commensurability is the numerical structure of both of them; likewise, the reason of a human being is commensurable to the reason of the cosmos and their commensurability arises from the structureless nature and inner unity."[186] The conceptualisation of music as harmonised numeric patterns of proportions indicates a linkage between the temporal form of the musical piece, and the soul, which perceives its temporal essence.

After these considerations, we could remember the previously quoted example from Plato's *Laws* about the Corybantic mothers that slowly rock and sing to their new-born children. It is important to note that harmony, established by differing musical elements, in Plato's texts works irrespectively of whether a listener is aware of it or not, that is, music's effect on the human soul is not necessarily related to the reflection of the phenomenon. The discussed passage (Pl., *Leg.* 790e–791b [5]) describes how mothers wishing to calm down their sleepless children provide them with motion, slowly rocking them instead of holding them steady. And this is done not in quiet, but in an environment of song, therefore by dance and song (χορείᾳ καὶ μούσῃ) they cast a spell on them (καταυλοῦσι) like in a Bacchic frenzy. In the mentioned fragment mother suppresses the emotion of a child and replaces with a different one – one which ensures the state of calmness and temperance[187]. Pelosi too has commented on this Corybantic passage and

[186] Kardelis, N. (1995), *op. cit*., p. 23. Author's translation.

[187] See Schoen-Nazzaro, B.M. (1978), *op. cit.*

came to the conclusions that music works in the following way: "The disquiet of infants is similar to the madness of the Corybantes, because both of the emotions carry a fear, due to a condition of weakness in the soul (790e8-9): such a condition is an internal movement *(kinesis)*, triggered by fear or madness. The musical remedy consists in producing an agitation, an external movement that dominates the internal one. The consequence of this domination is the restoration of calm in the soul and the normalization of the heartbeat, perturbed in both conditions."[188] This great comprehensive description provides us with the understanding of the physical power of music and Pelosi claims not the *harmoniai*, but the musical movement and the shaking created by it to be the defining principle of its power: "Musical movement helps instil regularity and measure, through elementary stimuli that act on the body and the soul. The remedy enters by the same route through which the disorder was introduced: sensation."[189] These descriptions already provide us with the important information of "how" the music works, though they leave aside the "why" it has the potential to instil the regularity and measure in the first place, and what founds the nature of such a powerful mimetic effect that music creates. However, this issue would gain some clarity if we considered that a representation which reaches a human being in a form of "enchantment", has a rational basis in the structure of the Universe, and because of its proportionate structure, it can affect a human soul.

Throughout his dialogues Plato discusses the two realms, that is, the human world with his senses, his habits and the circles of the soul, as well as the circles of the soul of the Cosmos, and these two realms in the Platonic system are connected in a profound relationship. In the already quoted passage from *Timaeus* 47 b-d, music is described as means for allowing to harmonise a human soul according to the soul of a cosmos. When we possess the knowledge of how the Cosmos is structured to be harmonious, we can order our souls accordingly. Thus, the phenomenon of music in its cosmic sense exists prior to being perceived and, because of this, the explanation of its conceptual content cannot suffice with the physical descriptions of its perceptive qualities. This abstract concept could be described using the tripartite scheme, where music 1) exists as a separate, proportionate, harmonised ontological entity, 2) gets into contact with the

[188] Pelosi, F. (2010). Musical education of sensibility, *op. cit*. p. 16.

[189] Ibid., p. 19.

human soul (this is why *harmoniai* are the fundamental part in the constitution of the musical power), and 3) this happens through the perceptible medium.

This scheme applies for the theoretical reflection of the phenomenon of universal music and its laws, though when the central object in the discussion becomes not the music *per se* in its cosmic sense, but a kind of music that is created by the human artists, we would have to redefine this scheme by introducing several changes. The perceptible music, which is created by the human artists, is either in concordance to the right universal ratios, or in discordance to them. Therefore, the harmony in a technical sense, as well as the rhythm, the words, or the choice of an instrument, have to be arranged together into the proper harmony in a broad sense – to correspond to the universal laws of proportion. This united harmony established from the differing elements becomes powerful enough to influence a character of a human being, because of the correspondence or the difference from the rational laws of the harmony of the universe. The presuppositions for the power of music lie beyond the sphere of acoustic practices and the musical pieces apparently are not created by the individual artists at all. The work of the music-makers is not to create, but to arrange the pre-existent elements into the musical patterns that are objectively right or wrong, based on their numeric ratios. This right or wrong does not emerge from being pleasurable or because of its technical skill, not even from corresponding to the traditional values. It comes from the correspondence to virtue, which has its ontological foundation outside the sphere human craftsmanship. Therefore, we can now see that there are two different parts in the Greek philosophical discourse on music: the one regarding the phenomenon experienced by the subject, and secondly, the music as a self-sufficient object which does not depend on the human ability to perform it, for it is an element embedded in reality itself.

This part of the conceptualisation is of extreme significance, for it is common to analyse ancient music only as the compositions or the activities undertaken by the craftsmen musicians, as well as to focus on the human-invented musical theories. However, from our previous discussion it is evident that in some cases, this approach provides only partial understanding, for the musicians only re-arrange the pre-existing inaudible music and put the objectively concordant tunes onto the different mediums of instruments or voices. Musical harmony, however, as well as the musical concords, cannot be created by any artist: the right and wrong ratios, as well as the right and wrong

musical intervals exist and can be conceived by reason prior to them gaining an acoustic form. It is now reasonable to contend that the power of music may not lie in its acoustic or perceptible qualities at all, but in the mathematical proportions that act through the medium of sound.

With regard to the perceptible music when the central part of the discussion becomes musical artistry instead of music *per se*, our tripartite scheme changes as follows: 1) discovering the connection between mathematics, cosmos and music, 2) discovering that musical proportions have correspondence to the cosmic proportions and that they have power to affect a person's soul, 3) applying these universal principles when creating a musical piece in order to achieve a particular effect – harmonise or disharmonise the soul. Music, then, is a two-way process: an artist can put the sounds into some order, but the right order already exists. It is based on the mathematical ratios, and good compositions are those that would have a good effect on the soul. As it is noted by Barker, "Plato seeks principles that constitute harmonic order at a mathematical and metaphysical level: if the musical systems of actual human practice fail to exhibit this order, that merely shows their imperfection and the inadequacy of human perception to judge what is truly harmonious."[190] This distinction between the truly harmonious entities (or the cosmic music) and the performances that do not necessarily conform to the universal harmony, is of utmost significance – we must note that harmony was understood as something above the human music and that the musical realm was just means to express it.

Another important point is that the mathematical truths cannot be "applied" to music since they are already embedded in the essence of every musical phenomena. In this context, we cannot discuss music aside from the concept of harmony and its musical expression. Harmony in Classical Greece was not conceived as created by the artist *ex nihilo*, but as something that exists in the world before we even start arranging it. In such context, the composers are not the music "makers", but the craftsmen, who work with their tools (instruments, etc.), and put the various intervals into selected order. In a strict sense, the work of a musician is not a creation, but the interaction with the universe, trying to determine the potentially right or wrong tunes.

[190] Barker, A. (1989), *op. cit.*, p.54

Based on these considerations, we could question whether we do not usually attribute the artists with more contribution to the musical compositions than they were thought to have. For instance, if we remembered the discourse on inspiration, the poet could be inspired by the Muses and become an intermediary who only retells instead of inventing.[191] This could seem to be a confusing topic, for the Muses would not convey the wrong compositions[192] that do not correspond to the requirements of leading the soul towards virtuousness, and yet the poets, who are inspired by the Muses, do create wrong and dangerous tunes. At this point, we must consider that when the poets create their compositions, their representations do not necessarily conform to the right songs which would be provided by the Muses, and this becomes a distinction between the good and the bad craftsmen of the musico-poetic performances.

In a sense, during the musical events or poetic competitions, a certain amount of artistic hubris as well as the human input must be allowed, because otherwise this would not be a competition among the poets, but among the Muses, which is not possible. The poets, as well as musicians, can create on their own, though their creations are not necessarily the good compositions in an objective sense. There is an ideal world with the perfect narratives and the perfect musical compositions; there is a hypothetical opposite of the worst possible creations, fulfilled by the men who do not arrange any right harmony at all; and there is a real world where the Muses inspire, and the poet contributes to this inspiration. The errors of the wrong musical compositions are left to be on the side of the poet, and the ideal version is always attributed to the Muses. Considering the philosophical notion of music, we can contend that it exists as part of the world and represents natural correctness, though because of the skill-less musicians, it can be re-presented wrongly, which could consequently desynchronise the soul of a listener.

The complex architectonics of musical conceptualisation proves the necessity of not isolating the different notions of music (namely, the acoustical and philosophical) in the academic discussions. In the dialectics of the perceptible and conceivable, there is no one without the other[193], and the perceptible realm of sound is not conceived to be the

[191] Cf. Plato, *Ion*.

[192] Cf. Pl., *Leg.* 669c–670d.

[193] Music, as well as other perceptible stimuli, lead to the abstract knowledge only because the soul is seen in connection to the body, see esp. Pelosi, F. (2010), *op. cit.*

final goal of musical phenomena. We could find correspondence and methodological remarks in Plato's *Timaeus*, where he discusses the significance of overstepping the perceptible realm:

> We are bound to affirm that the only existing thing which can properly possess intelligence is soul, and soul is invisible, whereas fire, water, earth, and air are all visible substances. So anyone who desires understanding and knowledge must look for his primary causes to that which is essentially intelligent, and look for his secondary causes in the domain of things that are moved by other things and in their turn move others by automatic necessity. (Pl., *Ti.* 46d-e, transl. by Waterfield [25])

Similar thoughts are echoed by Aristotle in his discourse of systematisation of reality: he indicates the significance of describing the essence instead of the particularities[194], and insists on the superiority of wisdom to the accidental descriptions of the objects.[195]

The performed music takes only a part in the overall philosophical discourse on music. It is conceptualised as a medium through which the universal harmony can present itself, and as a human activity *per se* it would not bear high importance. In the first chapter of this thesis, we have already posed questions that indicate a much more delicate relationship between words and music than is usually presumed. We have analysed that music is a very broad and differently conceptualised concept. The most important contradictions arise from the contexts in which music is being discussed, and from the selected discussion register, such as contemplative, technical or perceptible. In this chapter we have also indicated the two approaches that the primary texts use to discuss music, namely, those where the central role of the discussion belongs to the music *per se* or to the music as a human activity. A broad notion of music as well as the different subjects that become the centre of a discussion naturally create an entanglement of various meanings, and lead to the ambiguities when comparing the separate passages that are always within their own context and the layer of meaning. Our effort in this dissertation is to entangle this complexity and demonstrate that all these different usages of musical terms can be seen as belonging to the one coherent conceptual system.

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[194] Arist., *Metaph.* 980a–981a.

[195] Cf. Arist., *Poet.* 1451b.

At this point, if we add together the two popular claims that music is only an accompaniment to the verbal text and that music in some mysterious way (as enchantment) can affect a person's soul, regardless of whether a listener is aware of it, or not, we cannot avoid noticing that there is a huge gap in our definitions. Furthermore, we could not explain the "magical" power of music unless we analysed how it is conceptualised in a philosophical instead of musical realm.

We should now consider a very rich passage from Plato's *Symposium*, which discusses the distinction between the two different kinds of love (ἔρως) parallelly to the different kinds of music: the one belonging to the heavenly Muse while the other is described as popular and requiring caution.

> Rhythm is created when elements which were originally in disagreement, namely the fast and the slow, are subsequently brought into agreement. Here it is music that creates agreement in all these things by implanting mutual love and unanimity between the different elements, just as in the previous case it was medicine. Music too, therefore, is knowledge of the influence of love, in this case in respect of harmony and rhythm 'Now, in the construction of harmony and rhythm there is no difficulty in discerning the influence of love, and love as a duality is not as yet in evidence here. But when it is a case of employing rhythm and harmony in real life, either when creating new music, that is to say in composition, or when making correct use of tunes and metres that already exist, that is to say in education, at this point difficulties arise and there is need of a skilful practitioner. We return yet again to the same theme, that it is the well-ordered individuals, including those who, while not yet well-ordered, will be helped by love to become so, who should be gratified, and their love safeguarded. Theirs is the beautiful, the heavenly Love, the Love that comes from the muse Urania. But the other Love, the common one, comes from Polymnia, and should be used, if at all, with caution, so that the pleasure he brings may be enjoyed but no licentiousness implanted. Similarly, in my own profession, it is no small effort to deal properly with the appetites stimulated by cookery in order that the pleasure this brings may be enjoyed without ill effect. So, in music, in medicine and in every thing else, human as well as divine, one must, so far as possible, watch out for both kinds of Love; for they are both present. (Pl., *Symp.* 187c-e, transl. by Howatson [22])

The dual register of definitions where some particular subject is discussed both as a mere technical skill versus an abstract theoretic concept, does not apply only to the discussions on music. For instance, we could see correspondence in the usage of mathematical knowledge, on which music and harmonics are based. As Elisabetta Cattanei points out, in Plato's time, the status of mathematical disciplines, which are included in the educational curriculum, fluctuates between technique and science, they

were practiced both at an elementary level as a set of techniques used in everyday life, and at an advanced level, as types of intellectual and scientific knowledge.[196] It is not the technical level that bears the highest interest[197], but the linkage that allows to overcome technical understanding and approach the abstract truths. Cattanei has discussed the same issue with regard to mathematics: "Socrates and Glaucon are looking for a kind of mathematics that "must lead the people who practise it to 'look at what is' (7.52 ld4) and not – as technai do – to 'base' activities such as commercial trade (7.525c3-4). Even more importantly, they must not lead to focus one's attention on 'the world of becoming' (7.526e6-7), where objects either 'come into being and perish'."[198] Similarly, in the Platonic context, the technical analyses of music are not understood as fruitful for the philosopher. This allows us to see that the expectations when developing the discourse on music, were not related to the technical, but to the intellectual activity.

When Plato discusses the need to banish the poets from the ideal polis (*Resp.* 398c–401b), this critique it is not actually pointed against the phenomenon of *mousikē* itself, but against *mousikē* as a human *technē* and against the wrong (in an objective way) practices that were disseminated in the society, that is, against "the other Love, the common one, [which] comes from Polymnia". The expectations that are held towards music, are not limited to its technical performance, but towards the non-sonic – in particular, the proportionate and rational potential – that can influence a person's soul in one way or the other. If the music is discussed only as a human[199] *technē*, then it is not a discourse worth developing in the philosophical writings and suffices with the references to Damon. For Plato, music gains philosophical interest only when the relation between music and rationality, music and number are established.

It is worth pointing out that in this tripartite scheme of cosmic, political and also technical music, it is primarily the proportions and not the sound that is considered

[196] Cattanei, E. (2013), *op. cit.*, p. 215.

[197] For the analysis of the dialectics between the banausic vs. philosophical in relation to *technē*, see Cattanei, E. (2013), *op. cit.*

[198] Ibid., p. 217.

[199] It is worth noticing that some kinds of music, for instance, cosmic music and partially, political music as well, are a different kind of techne, where the craftsmen or musical technicians can have very limited or zero influence.

important. These remarks gain special significance in trying to determine, what was the status of music in the ancient societies, since it is still common to focus on the discussions of *mousikē* as a human *technē*. Such analyses usually uncover what were the employed musical practices and the relevance they had, though in the discussions of the philosophical writings of Antiquity, it must be related to the more profound questions of why was music important in the first place and what are the preconditions that lead to this importance.

The Classical discourse on music, then, is the confrontation between a very broad conceptualisation of music as expressions of the mathematical ratios, which is considered to be of the highest importance in the Greek thought, and the technical musical practices, which, if isolated from the other realms of reality, loses its significance. We can now see that Plato's conception on m*ousikē technē*, is actually directed against the *technē* as technicality, and against the work of technicians.[200] Therefore, the scholarly tendency to focus on the musical *technē* when analysing the philosophical works, seems to be a paradox, for in our sources it is not the *technē* that was considered important, but the profound connection that these technical practices allow to uncover. The primary task when confronting the Classical Greek philosophical works of music, therefore, is to analyse what is this discourse on music really about. From what we already discussed, it is not only about music as a song, not even about music as a poetic tradition of words, but about the nature of music, which allows to see the linkage of the musical practices, their acoustic form, the ethical power of music and the abstract notion of the cosmic or the ideal music. In this line of thought, the acoustic music is only means that can help the listener to pursue the knowledge leading to virtuousness. In such a system, music cannot be separated from the discourse on mathematics and number, the proportion, the ethics, and virtuousness.[201]

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[200] Cf. Roochnik D. (1996), *op. cit.*

[201] A reader may benefit from reading the passage from Aristoxenus *Elementa Harmonica*, 30-31, which provides a description on the lectures on goodness in Plato's Academy, as well as the different expectations that the participants had since they did not expect the good to be explained by "sciences and numbers, and geometry, and astronomy, and of good and unity as predicate of the finite" (Macran's transl. [35]). On this topic see Gaiser, K. (1980). Plato's Enigmatic Lecture 'On the Good'. *Phronesis* 25(1), pp. 5–37.

In the philosophical writings from Classical Greece, we read that people can benefit from the musical education in various ways: it can be a dialectic exercise of mind – from being unaware of the musical qualities they eventually learn to grasp them intellectually[202]; it is also an activity that implements right habits and virtuous characteristics, which are attained from the imitations of the right sort, from memorising the words, as well as from the appropriate rhythms or the noble-sounding *harmoniai*. However, the education from the audible music is only part of the Platonic discourse, it is only valid to that register of the discussion, where the central part is given to the human musical activity. The notions of political or cosmic music, nevertheless, share the same name, and take part in the same complex conceptualisation of the concept of *mousikē*, therefore, they must be included in the discussions on music and education as well.

At this point, it is necessary to come back to the effects that the music has as an external stimulus even in those cases when it is not grasped by reason. The previously quoted passage on Corybantic mothers that ensure the appropriate and right (ὀρθός) state of the soul in their new-born children could significantly benefit from a comparison to the passage from Plato's *Republic*:

> Let our artists rather be those who are gifted to discern the true nature of the beautiful and graceful; then will our youth dwell in a land of health, amid fair sights and sounds, and receive the good in everything; and beauty, the effluence of fair works, shall flow into the eye and ear, like a health-giving breeze from a purer region, and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason. […] musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul, on which they mightily fasten, imparting grace, and making the soul of him who is rightly educated graceful, or of him who is ill-educated ungraceful; and also because he who has received this true education of the inner being will most shrewdly perceive omissions or faults in art and nature, and with a true taste, while he praises and rejoices over and receives into his soul the good, and becomes noble and good, he will justly blame and hate the bad, now in the days of his youth, even before he is able to know the reason why; and when reason comes he will recognise and salute the friend with whom his education has made him long familiar. (Pl., *Resp.* 401c-e, transl. by Jowett [11])

We have already discussed a passage from *Timaeus*, where music is described as means for balancing the soul according to the soul of the Cosmos. In the Corybantic passage, the

[202] See Pelosi, F. (2010). Musical education of rationality, *op. cit.*, pp. 114–151; Rocconi, E. (2007), *op. cit.*; Rocconi, E. (2019), *op. cit.*

mothers sing to their children who do not understand the words yet, and the music still has affects them in a direct way. Here, in the third book of *Republic*, Plato also writes about music without words – he presents us with the example of the children who perceive music even before they can understand the lyrics. In this excerpt, all kinds of craftsmen (δημιουργός), and especially musicians, are required to comply to the requirement of virtuousness. Two points from this passage are of the most significance for us. First is the fact that music, more than anything else, through harmony and rhythm finds its way "into the inward places of the soul". Second, that it imparts habits[203] by working in a not noticeable way: "he will justly blame and hate the bad, now in the days of his youth, even before he is able to know the reason why." In the Greek text the hidden effect of the unconceived music is more evident[204] than in the translation, for the chosen word is λανθάνω – to escape notice, to be hidden. Therefore, from what we discussed, it is clear that music works in a not noticeable way and has a direct effect on a person's soul. This means that the discourse on music does not present a simple analogy between the human music and the soul, but the actual structural similarity, because both music and the soul take part in the realm of universal harmony and the harmonised cosmos.

In this line of thinking, Plato's views towards the strict, state-level regulations of music, which should be implemented by the laws, can be considered as a very natural successive step of his philosophical musical theory. In *Republic* 424b-c, Socrates demands that no innovations would be made in the musical field and later states that it is not just the songs, but the styles of music that are dangerous:

> When someone says that "People praise more highly the song // That is most newly come to ministrels' lips" they should fear that people might easily suppose the poet to mean not just new songs, but a new style of song, and that they would applaud the latter. Such a thing should not be applauded, nor should the poet be so understood. "People should beware of change to new forms of music, for they are risking change in the whole [i.e., in the whole constitution and fabric of the state]. Styles of music are nowhere altered without change in the greatest laws of the city: so Damon[205] says, and I concur. (Pl., *Resp.* 424b-c, transl. by Barker [13])

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[203] Cf. Pl., *Resp.* 522a., 395d.

[204] "ὥσπερ αὔρα φέρουσα ἀπὸ χρηστῶν τόπων ὑγίειαν, καὶ εὐθὺς ἐκ παίδων λανθάνῃ εἰς ὁμοιότητά τε καὶ φιλίαν καὶ συμφωνίαν τῷ καλῷ λόγῳ ἄγουσα." In: Plato, *Platonis Opera*, ed. John Burnet (1903). Oxford: Oxford University Press.

[205] The reference of Damon does not apply to the whole conclusion, cf. Lynch T. (2013), *op. cit.*: "Socrates strategically presents Damon's assertion as a legitimate conclusion of the previous argument, which focused

Our initial question was to find out whether the nature of the philosophical and acoustical music is the same, and we can now contend that the proportion and harmony establishes the linkage between them, thus the acoustic music, consequently, can have an effect on the human soul. The scholarly work that covers the social issues arising from the changes in the poetical-musical tradition, the differing stance on what is the psychological influence of different melodies, or the "education crisis", as Havelock calls it, regarding the narrative of poetry vs. abstract thinking, doxa vs. epistēmē – all of these issues are only partial explanations on why some types of music were considered ineffective or even dangerous. This happens primarily because the acoustic or social analyses, which are dominant in the historical approach towards Ancient Greek music, are simply not sufficient for the discourse of Plato, and in his conceptual framework they cannot be separated from the realm of the harmonious ratios of macrocosm. All the social, political or ethical implications depend on the notion of music which is conceptualised through the realm of metaphysics.

After discussing the broad conceptual framework of *mousikē*, we can now take another look at the ironic passage from Plato's *Phaedo* where Socrates talks about his dream:

> The same dream came to me often in my past life, sometimes in one form and sometimes in another, but always saying the same thing: 'Socrates,' it said, 'make music and work at it.' And I formerly thought it was urging and encouraging me to do what I was doing already and that just as people encourage runners by cheering, so the dream was encouraging me to do what I was doing, that is, to make music, because philosophy was the greatest kind of music and I was working at that. But now, after the trial and while the festival of the god delayed my execution, I thought, in case the repeated dream really meant to tell me to make this which is ordinarily called music, I ought to do so and not to disobey. (Pl., *Phd.* 60e-61a, transl. by Fowler [6])

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on the need to maintain unaltered the musico-poetic style established in Book 3; however, taken on their own, the words attributed to Damon here do not necessarily imply the whole argument of this Platonic section. Damon's words underline only the existence of a connection between musical styles and political phenomena, but do not entail as a consequence that the forms of μουσική and γυμναστική should be kept unaltered."

This passage is rich of ideas corresponding to our previous considerations. Here we find an already discussed distinction between the two kinds of music – the one of the philosophers, and its counterpart – the music of the craftsmen. Philosophy, which is undoubtedly of greater value than any technical work, is attributed with a name of the "greatest music". This passage has already been discussed as a conflict between the philosophical and the poetic traditions as well as the incompatibility of wisdom vs. the "know-how" of the craftsmen[206]. However, it is also worthy to analyse it by leaving the social and historical contexts aside as an additional knowledge. It is the notion of "music" that is primarily discussed here, therefore, all the other indications are extraneous and can provide the additional knowledge after the musical references become clear. Certainly, this could only be said if we accept that the allusions to music are not accidental or used only as mere analogies.

In this case, we could notice that this passage is in line with our previous conclusions, to which we arrived by following the direction led by the different descriptions of only musical phenomena. We shall suggest that this particular excerpt presents us with a conceptual distinction between the music that does not require a listener, which is the object of the explorations of the philosopher, related to exploring the hidden harmonious structures of the world; and the practical music, which puts the artist in the centre of the musical discussions, as we have explained before. It is eminent to note, however, that in this passage, the object of the discussion in both cases is called "music", and both of the notions can be analysed as belonging to the same conceptual framework of mind. Therefore, the conflicts between poetry and philosophy, as well as wisdom vs. technical skill, are valid, though they could only be understood as secondary conclusions after the conceptual extent of music and its place in Plato's dialogues have been established. It is only after the concept of the philosophical (including cosmic and political) music and its relation to acoustics has been discussed, that we can truly appreciate the significance of the quoted passage.

From the historical point of view, the instrumental music alone, as well as the experiments with melodies and virtuosity, were started to be appreciated by part of the society, as can be seen from the development of the "New music" in the 5 century B.C.,

[206] Kramarz, A. (2017), *op. cit.*; Havelock, E. (1963). The Supreme Music is Philosophy, *op. cit.,* p. 284.

when, next to the theatrical innovations, the exclusively instrumental nomes were elaborated. From what we discussed, the musical tradition and innovation are seen as two incompatible oppositions.[207] In those theories where the ethical power of music is acknowledged, all the innovations and the technical professionalism invoked by the musicians are not merely a choice of liking. They represent the status of the divine order, communicate the right soul-balancing ratios, and have a corresponding mimetic influence, thus when a professional composer innovates on those orderly tunes or creates the new ones, it is not only a different choice or a different musical tradition: such choice leads to a great danger of disbalancing a person's soul and, subsequently, to the disbalanced the ethics of a polis. The wrong kinds of music are not only ineffective in creating the mimetic effect, but contrarily, their effect is different, and this is why they become dangerous. Not only music affects our emotions[208], but the inherent musical proportions directly interact with the proportions of the listener's soul. Therefore, it is particularly this power and not the aesthetic experience that determines its value. The wrong kind of music would not only make a listener happy or sad, not only influence him towards lamentation or being slack, but it would lead to the structural change in his *psuche*.

The danger is even greater because of the linkage between music and pleasure[209]. It is pleasant to listen to music, though because of this pleasant nature, it becomes dangerous, for a listener does not notice how it affects him.[210] Even the wrong songs which act as disbalancing, can lead an uninformed listener to the enjoyment, and consequently, to the lack of virtue on a personal or political level. It is particularly for this reason that the right education becomes a necessity:

'But what if he […] has no association of any kind with the Muse? If there was anything in his soul that loved learning, then because it is given no taste of any learning or enquiry, doesn't it become weak and deaf and blind, since it is not awakened or fed, and its powers of perception are left unpurified?' (Pl., *Resp*. 411d, transl. by Barker [12]).

[207] Cf. Pl., *Leg.* 700a-701b.

[208] See Kramarz, A. (2017), *op. cit.*

[209] Cf. Pl., *Ti.,* 47c; Arist. *Pol.,* 1339a.

[210] Cf. *Resp.* 387b,

It is worth noting that instead of the simple and habituating training of the ethical tendencies, Plato is concerned with the love of knowledge, from which the conclusions of the ethical education are drawn. The realm of music aids in such education and provides instructions that the soul is able to perceive. The art, especially music, is conceived as a very suspicious matter. Firstly, because it only imitates the objects of reality and imitates them incompletely, providing only a misleading image of an object; secondly, because it might represent it in such an incorrect way that it might even be dangerous for the virtuousness of the society. On the other hand, if used correctly, it may be employed in the education in virtue which uses the pleasurable nature of music to establish the tendencies towards the right ethical dispositions. It is reasonable to contend that Plato does not speak about music only as a poetic education, but as an education which is connected to the rules that govern the heavenly order, and it is for this reason that it is invoked not for the irrational pleasure (*Ti.* 47 b–e), but for the synchronisation of the human soul instead.

The kind of pleasure, which is encouraged and not condemned by Plato, arises from experiencing the harmonious nature of music, and not from the simple perception of the sounds. Listening to the harmony in the musical tunes is an exceptional feature of the human beings, and it is aimed at "the perception of order or disorder", which consequently leads to pleasure, as can be seen from the passage of the *Laws*:

> Other creatures, we are told, have no perception of order or disorder – what we call rhythm and harmony – in these motions. But in our case, the gods we said were given to us to be our companions in the dance – they are also the ones who have given us the ability to take pleasure in the perception of rhythm and harmony. This is their way of moving us and acting as our chorus-leader, joining us one with another through song and dance, and giving this the name 'choir', from the word 'cheer' that captures its nature. (Pl., *Leg*. 653e-654a, transl. by Griffith [3])

The relation between music and pleasure is more thoroughly analysed in Aristotle's 8th book of *Politics*. He points out the three aims of music: education, leisure (*scholē*) and amusement, of which the latter two are strongly connected to pleasure (1339b)[211]. Rocconi, commenting on Aristotle's *Politics*, has noted that "music,

[211] See Schoen-Nazzaro, M.B. (1978), *op. cit.*

being naturally among the things that give delight, is outstandingly useful in education because it is capable of creating a particular quality of character in the soul more than any other art, and it is an extraordinarily effective means of doing so, thanks to the fact that "there seems to be a close relation of some sort between the soul and *harmoniai* and rhythms, which is why many wise men say either that the soul is a *harmonia*, or that it contains one."[212] In Aristotle's works pleasure is not condemned[213] and may even be encouraged, unless the other, more important goals are overshadowed by it: he contends that in case music would be understood only as a source of pleasure, the place of music in the curriculum of education could be doubted.[214] Even though pleasure is necessary, it should not become a thing of the greatest importance, since this would mean that a person lives a life of an animal, a life of enslavement, which is contradictory to the nature of a free man[215]. Therefore, the nature of music is seen as more noble and, similarly to our previous considerations, as not limited to the pleasure-oriented practices.[216]

Acoustic music, just as any sound, is primarily linked to the auditory experience which reaches a listener as a perceptible phenomenon. At this point, we could remember a passage from *Republic* (341e, 346a), where we read that every kind of art (τέχνη) is not an end to itself. Every art has its object, like the art of medicine provides us with health, captaincy with safety at sea, etc. Following the same logic, music also has its object, though it is not the sound, but the harmonising qualities in various realms (cosmic, political, psychological or acoustical), where the differing elements are present. In 341e, as well as in 353b, we have an indication that the ears are in need of the art of hearing as eyes are in need of the art of seeing. The word used in this passage is not music, but *akoē* (ἀκοή), that is, the hearing, or the hearable sound. It is essential to note that the role of ears is discussed in the sphere to which the art of acoustics is related, that is, the perception of sounds. Hearable sounds, therefore, is the art for the ears, and not for the soul, the latter of which was chosen to be conceptualised as the art of *mousikē* instead.

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[212] Rocconi, E. (2012), *op. cit.*, on Aristotle's *Politics* 1340b.

[213] See Stamou, L. (2002), *op. cit*; Schoen-Nazzaro, M.B. (1978), op. cit.

[214] Arist. *Pol.* 1337b.

[215] Cf. Arist. *Nic. Eth.*, 1095b, 1099a, *Pol.* 1337b; Plato *Resp.*, 403a.

[216] Cf. Arist., *Pol.*, 1337b.

The function of the ears is to provide with hearing, and hearing is not necessarily related to music, as we are used to think. It is evident that not only the sounds that are structured in a certain way could be called music, and that discourses on sounds and music do not always go together. Likewise, given what we discussed previously, it would also be a mistake to treat music only as an acoustic medium, perceivable by the sense of hearing. We have established that the discourse of music is linked to the processes of harmonising and unifying separate elements, as well as to the intellectual process of recognising such structures in a musical piece (either acoustic, cosmic, or political) and comprehending them. Therefore, the sound cannot anymore be perceived just a stimulus of senses. An acoustic expression corresponds to the hidden principle of nature, embedded in all the entities of the world, which can only be approach by its mathematical explorations.

We can now notice that both Plato and Aristotle agree upon the fact that music gives delight, though it does not become central feature determining its value. They also agree upon the educational nature of music and claim that music is powerful enough to influence person's *ēthos*. As it is noted by Schoen-Nazzaro, who analysed the functions that music was expected to fulfil, "In spite of a difference in emphasis, Plato and Aristotle would seem to understand the nature of the ends of music in basically the same way, and to see these ends as ordered to each other in essentially the same way. Any opposition between them in these matters is only superficial. There is actually a fundamental similarity in their views on the ends of music and how they ultimately serve man's perfection."[217]

What is different, however, might be understood as arising from the differences in the conception of *mimesis* or the attitude towards the ideal world of forms. Aristotle rejects the notion of art as a complete replication of reality[218]: a poet combines what is true and false, and by doing this, he leads the spectator and the listener of the tragedy towards the experience of catharsis. According to him, the nature of art is different from the scientific research[219], therefore, the artist can arrange various elements in his work to have a desirable mimetic effect. In terms of music, the required effect can be attained by

[217] Schoen-Nazzaro, M.B. (1978), *op. cit.*, p. 273.

[218] Cf. Arist., *Poet*., 1460a, 1451b.

[219] Cf. Arist. *Poet.* 1447b.

invoking various musical modes,[220] not only the Dorian or Phrygian, as Plato insisted: depending on what is needed to reach the balance and establish the golden mean, a human soul might as well benefit from the modes of lamentation, or relaxed melodies for amusement. Aristotle accepts the relevance of proportions and the idea that different kinds of melodies have different, yet universal effect, though his discourse on musical *mimesis* indicates a change towards a more psychological and technical notion of music compared to Plato. Nevertheless, he concurs with the idea of the ethical power of music, and this power is established from the arrangement of the different musical elements that are being used to create a particular *mimetic* effect. The musical *mimesis* is established not from a direct representation of the ideal world, but from a particular arrangement of musical elements. As it is well described by Spencer A. Klavan, "for Aristotle, poets and the poems they create are defined according to a single concept of composition which includes both music and language: an instrumentalist, a Homeric rhapsode and a lyric soloist all perform poetic μίμησις and thus all accomplish what is essentially one and the same act. This act brings about a particular kind of change which may be described metaphorically in material terms: Aristotle, like many others, often refers to the events and emotions which poets or rhetoricians convey as ὑποκείμενα, the 'underlying matter' which, though itself not essentially poetic or rhetorical, can be given qualities which make it so by the right kind of artist. […] What poets are fundamentally doing, then, is giving to narrative events (πράξεις) the particular expressive format which makes them into a poetic μίμησις. This may entail suggesting narrative or conveying emotion via purely instrumental music, as in the expressive sound-effects of the Pythian nomos. It may entail communicating a story in 'bare' (ψιλοί) words without instrumental melody, as in a spoken recitation of Homer. It may entail depicting a series of events and actions using rhythmic language sung to instrumental accompaniment, as in a tragic choral ode. But whatever collection of features may be present or absent in an individual work, the τέχνη ποιητική remains essentially an art of tone, rhythm and language."[221] The power of the proportion and arrangement is seen as objective, and the different musical modes have different effect, though they do not come from a correspondence to the transcendent forms. For Plato, however, the musical *harmoniai* do not represent the imitations created

[220] Cf. Arist., *Pol.* 1342b.

[221] Klavan, S. (2019), *op. cit.*

by the artists, but they are conceptualised as direct imitations of the metaphysical world, therefore the wrong usage of *harmoniai* is conceptualised as more dangerous and more able at desynchronising the soul. It is precisely the modes that can affect a person in one way or in another, because they embody certain interval sequences. Considering that the expectations set for music are the nobleness and the imitation of virtue, it is, then, extremely important to determine and select the best means for achieving this aim, and to establish this kind of teaching as a part of citizens' education.

What is now left unclear in this discourse on musical ontology, is the question of why it is chosen to speak about the structure of the world, the power of different harmonies on a person's soul, or even about the political structure of the polis through the terms of music. For instance, there is no notion of cosmic sculpture or cosmic architecture, despite that the discourse on ratios and harmony apply to them as well; there is only cosmic music. If we researched the realm of music as social practices isolated from the previous considerations of universal harmony, we could, as it is usually done, claim, that music is an analogy or a very clear example from the everyday world, and this could serve as some kind of explanation. Though we have already indicated the essential change in the direction required for this kind of research: it is not the considerations of the acoustic music that are applied to the astronomy and the abstract though as analogies or metaphors, but, contrarily, the acoustic music is only a part of the greater philosophical discourse on harmony and proportion, and it is only because of its structural similarity that it can be used in the explanations of the cosmic or ethical harmony. It is not the acoustic music that is the first premise in discussing the world, but the cosmic music and the cosmic order to which the acoustic music only corresponds to.

Consequently, the widespread philosophical considerations of the cosmic music are not merely analogies based on the perceptible music: it is not only a way to metaphorically discuss the nature of the world while employing the terminology of a known acoustic phenomenon. In the case of acoustic music, the mathematical expressions (which is the object of the philosophical explorations of music) embody themselves into a perceptible form (they makes themselves sound), but it is music as a universal phenomenon of harmonising instead of sound that earns this phenomenon actual philosophical significance.

In this line of thinking, the broadest notion of music becomes almost equal to 'being proportionate', and it is necessary to understand, why it is not the 'proportion' itself, but 'music', that is chosen for the descriptions on the proportionate harmony in the astronomical contexts, as well as the society, the human soul or the arrangement of sounds. There cannot be a definitive answer, though such choice in terminology is an issue worth considering. It would seem more than reasonable that the subjects of the most relevance, such as the cosmic, political, ethical and social structures would be described, for instance, by employing the harmonious analogies from the visual world, for there are many references claiming the superiority of visual arts and sight altogether, in comparison to the other arts and the other senses[222].

On the conceptual level, the term *theoria* (θεωρία) is presumably the most evident example, linking the speculative to the visual, and indicating both "looking at something" as well as "contemplation". The extant fragment of Archytus also vividly illustrates the superiority of sight and its connection to reasoning, and here we can already read that "[i]n all human things, wisdom is as superior as sight is to all the other senses of the body […]"[223] The visual arts, similarly to music, are also a domain of proportions, and the proportions determine their aesthetic value.

Music, however, has the most immediate form which makes it exceptional in comparison to the other forms of art. As it is noted by Tsugami, "[…] music is, seen materially, an ephemeral phenomenon of successive sounds, lacking any kind of solid substratum; it actually exists only when it is executed."[224] Even though the visual phenomena present themselves to the human senses more intensively, for they have special projection, colour and shape, they are also limited by the requirements of fabric or the objects they represent.[225] The beauty presents itself through proportion which is not evidently visible, because the represented object redirects some of the attention. In

[222] Cf. for e.g., Arist., *Metaph.* 980a-981a, Arist., *Sens.* 437a. For the view resisting to place the vision at the top and dissociate it from the other senses, see Butler, S. and Purves, A., eds. (2014). *Synaesthesia and the Ancient Senses*. New York (NY): Routledge.

[223] Archytus, fr. 1.6, transl. by Guthrie K.S.

[224] Tsugami, E. (1998). Vincenzo Galilei and Notated Examples of Ancient Music. *Aesthetics 8*, The Japanese Society of Aesthetics, p. 94.

[225] Cf., for e. g., Boardman, J. (2016). Classical Sculpture and Architecture. In: *Greek Art*, London, Thames & Hudson.

music, on the contrary, materiality becomes substantially limited, for it does not deal with the objects of reality that need improvement or idealisation, and in the musical piece, the proportion becomes an essential precondition of the harmonious tune.

Considering the relevance that the proportion has in the philosophical discourse of the world, it is not surprising that music above all the visual arts is selected for the discourse on harmonising and unifying the different elements of the world, for it is of mathematical nature and the proportionality in music presents itself in a rather pure form. In this sense, music is conceived as a divine medium that conveys the principles of the universe in a perceptible way, and it is also different from all the other arts, because music is immediate, less material, it has no need for being transformed or idealised, it corresponds to the requirements of measure and coherence, thus the perfection of a musical piece is ensured straight away. From all the possible types of art, it may be that visual arts are easier perceived by humans, though music (not because of its acoustic form, but because of mathematical essence) best corresponds to the divine order, and in this sense, it supersedes all the other forms of art, becoming the most suitable for the philosophical discourse on implementing love for the differing elements, or for the synchronisation between the worldly soul and the soul of a human being.

In those passages which discuss the perception of music instead of the phenomenon of music *per se*, the hearing is also conceptualised as important, though not for the sake of its own but because it perceives the sound, which is a medium for mathematical expressions. We cannot contend, however, that the sound is conceptualised as completely unimportant for otherwise music would not reach its listener and it would lose the connection to the human senses[226]. Nevertheless, it is the mind that comprehends all the value of the musical phenomena. This is why it is reasonable to contend that music was conceptualised as a medium through which the worldly soul finds its way to communicate with the soul of a man. Music participates in a reciprocal relationship between the human world and the Cosmos.

Nevertheless, the acoustic medium, that is, a sound, has some additional epistemological significance. The audible music embodies the universal laws of harmony and takes part in the greater discourse on knowledge. The first sentence of Aristotle's

[226] Cf. Pelosi F. (2010), *op. cit.*

Metaphysics claims that all men naturally desire knowledge[227] *(εἰδέναι)*, and Plato's allegory of cave clearly affirms the superiority of reason to the senses. In relation to these contexts, we can contend that there are two reasons of why music in such philosophical writings was held to have a special significance. Firstly, it is conceptualised as means that expresses the mathematical ratios (and it is through the sound that the harmony of the world presents itself in a perceptible form), and secondly, it allows the reason to recognise these universal laws of harmony. Music leads the listener towards the understanding of the universal truths at large. By listening to it, the ratios that are graspable only by reason become available to the senses and stimulate the mind. It is for this reason that studying music can take part as an epistemological tool: an educated listener gains certain clarity on various subjects available to reason, since music confirms whether some of the theoretical considerations about the nature of the world are valid or not.

In other words, the acoustic music becomes an epistemological tool that allows to re-evaluate the theories attained by reasoning: to determine what is harmonious, concordant and unifiable, as well as the opposite. Music is a proof that in the quest of understanding the world, a human being is not left only with the theoretic speculations and imagined theories composed by philosophers, which may not necessarily correspond to the actual principles of reality. It becomes a proof that the theoretic discourse on proportion and harmony is not merely an intellectual luxury that has no equivalent in the real world. That is to say, the philosophers may theorise on mathematics, hope that they have found the right intervals or created the right theories, though they can never be sure of it, unless those intervals function in our own, sensibly perceptible world. Therefore, music becomes a practice that brings this cosmic harmony we could only calculate and grasp by the mind, into our own world, something that we can actually hear.

As we have argued before, in the Platonic system, music can create a terrestrial analogue of the "music of the spheres", because the same mathematical ratios are applicable both to the cosmic and the terrestrial world: music is linked to mathematics, mathematics to harmony and proportion, and these, in turn, are connected to ethical dispositions of a human soul. Hence, the audible music is a cosmic harmony that comes into being through a perceptible form. Aristotle too admitted the incorporeal nature of

[227]Arist., *Metaph.* 980a [28].

music, although he did not dwell into exploring its ontological status in detail. Since the ideal world was not conceived in such a transcendent way, the discourse of music as having a direct correspondence had to be modified. The focus was shifted from the correspondence to the transcendent ideal world to the certain arrangements of musico-mathematical structures, which still had ratios as their essential quality, constituting the ethical effect. It is in this context that the ethical influence, as well as the other meanings of music that seemed ambiguous at the beginning, can now be discussed as very natural and coherent parts in the musical conceptualisation.

The diversity of its layers unveils a great complexity that was present in the conceptualisation of the phenomenon of music. Compared to the previous traditions, the Classical Greek discourse demonstrates a special interest in elaborating the theoretic arguments that justified the relevance of the audible phenomenon. It must be noted that in our texts music is not only conceived as an aesthetic or performative part of the culture: it has the ontological status, and it is precisely from here that the mathematically based ethical, existential and educational powers of the music stem. Such analysis allows a reconstruction of a complex, yet coherent reading of the musical passages in the philosophical writings of Classical Greece, which primarily refers not to the musical practices dispersed in the society, but to the understanding of music as a broader philosophical concept that has rather little to do with the sonic world, and that has its conceptual foundation in the metaphysics.

Our attempt was to show that the elements of a broad conceptualisation of music can be described as belonging to the one coherent conceptual framework, for there is a common feature, namely the numeric essence, that unites all of them, starting from the acoustic to the ethical, political, or astronomic notions music. Therefore, the polysemy that we indicated in the first chapter, arises from the deep interconnection of the conceptual elements.

The register on which the phenomenon of music is discussed in our sources (either the universal music as the proportionate entity *per se*, or as the result of the human craftsmanship) is also of crucial significance, and the value attributed to the musical phenomena highly depends on it. As an isolated acoustic phenomenon, music was not understood as having a great significance. Though because it was based on the universal proportions (the same ones on which the cosmic world is based), it can represent the

divine harmony in the right or in the wrong way, depending on the artist's skill. This right or wrong harmony influences the listener to a significant extent: it can balance or disbalance his soul, or even the ethical life of the whole polis. In other words, it is not the sounds that gain the central role in the Classical Greek discourse on music, but the question of why those sounds work in the first place, and what were the effects that the differently arranged elements could have on a person's soul.

As Barker has indicated, Plato's texts "contain discussions of harmonic theory, both actual and ideal, and apply musical ideas to the study of the structure of the universe."[228] Nevertheless, from our previous reading we may extend this description further and infer that the notion of "music" is not limited to the concept of the acoustic sounds, therefore, the direction of this relation is the opposite. It is not music that is applied to the study of the universe, but music is seen as a part in the structural and numeric nature of the cosmos, rendering the acoustic music to be conceptualised as only one of the possible correspondences to the music of the Universe. It is both integral to it and dependant on it, hence music is not merely a metaphor that is used for describing the rules of the heavenly bodies.

Therefore, not only musical theories explain the world, but the world itself presents its foundation through the medium of sound. In this case, music attains a status of the divine harmony presented itself to the humanly world through a sensibly perceptible acoustic medium. To the divine mind, the cosmic music is graspable without the need of hearing, unlike to the mind of humans, who are more dependent on their senses. Plato criticised Pythagoreans for the irrelevant extensive calculations and he was not too involved in these kinds of calculations himself. What he did, however, is he pointed out that the numeric structures are embedded in the world itself, in the human soul, in all the arts, including music, and in time – the dominion which music belongs to. Such focus on the interrelation among the different elements belonging to the same complex structure, allows to notice and explain, how such quality as sound could have an actual influence on a human soul. In this line of thought, the audible qualities of these ratios are only of secondary relevance, for the essence of music is the proportion and harmony. It is for this reason that, even though it is rather common and reasonable to

[228] Barker, A. (1989). Plato, *op. cit.*, p. 53.

discuss music as a *technē* in a sense of human craftsmanship, in Antiquity *mousikē* goes way beyond a notion of a human skill. It can be conceived as an audible phenomenon that is listened to for various means, including pleasure; it can be a mind-training exercise of musical harmonics; or become the *greatest music*, that is, philosophy, which notices the structural commensurability within the different layers of the broadly conceptualised Mus(e)ical gift of the gods.

3. THE RECEPTION AND THE DEVELOPMENT OF THE CLASSICAL IDEAS ON MUSIC IN THE STOIC THOUGHT

Our previous chapters disclosed how ambivalent the discussions of ancient music can be. Especially considering that even in Antiquity the musical terminology had a very broad conceptualisation that encompassed a variety of different meanings. The interdisciplinary and intertextual approach in this case is extremely helpful. It allows to avoid the quotations being taken out of the particular context or the situations when they are analysed separately, without including other textual works which would have significant complementary value. This led us to draw some methodological remarks relevant for the contemporary scholars who analyse *mousikē* based on the textual works from Antiquity. Especially because some ideas, for instance, that instrumental music only followed the lyrics and did not bear higher significance, or that music was merely perceived as an artistic practice, nowadays became too much considered as common knowledge, without questioning it any further or without taking into account the conflicting textual passages. We have also highlighted the extremely large gap between our contemporary understanding of the term "music" and the one which belongs to Classical Greece. In the latter case, even the traditional musicological point of view is bound to fail, since in many philosophical passages it is not music as a performative activity, but music as a harmonious proportionate entity that was being discussed, and this kind of music (not necessarily audible) exists independently from whether humans practiced musical art, or not.

The Stoic school, to which we are now going to direct our research to, is particularly suitable for our further discussion of the multifaceted concept of music. The Stoic discourse on musical phenomena seems to have inherited and rephrased a lot from the Classical Greek thought[229], yet music in Stoicism still remains one of the most unexplored topics in the studies of music in Antiquity. This is especially significant considering that music-related passages are rarely discussed in the broader conceptual framework by

[229] See Woodward, L. (2010). Diogenes of Babylon Reading Plato on Music. *Bulletin of the Institute of Classical Studies. Supplement* 107, pp. 233–253; Laurand, V. (2014). Les effets éthiques de la musique: la lecture problématique de Diogène de Babylone par Philodème de Gadara. *Méthexis* (27), pp. 197–214.

putting together various testimonia by the different authors. In this chapter, we are going to discuss various extant passages from the Stoic heritage and make an effort towards discussing them together. At the same time, we are going to pay attention to the well-known traditional ideas on music from their recent past, which we analysed in the previous chapter, and the context of the Epicurean philosopher Philodemus, who opposed the views on music held by the Stoics, in particular Diogenes of Babylon.

The first inevitable problem we must encounter when making an effort to analyse the Stoic thought on music is the sparse and scattered textual fragments. Almost none of the primary sources from the early Stoicism remain extant, and their main ideas are usually reconstructed using the later sources[230]. Their thought on music is even more perplexing than on the other subjects: in the writings by the ancient Stoics that we know of, none of them are specifically dedicated to music. We do not even know for sure if Diogenes of Babylon, who is one of the main authors with regard to the Stoic musical thinking, dedicated a whole work, or only a part of his work to such discussion, and before him, there was no work of this kind, at least not that we are aware of[231]. Furthermore, we have little information on any extensive passages aimed at discussing music. Apart from Diogenes, in the early and middle Stoicism music references were mostly used for the illustrative purposes or as a small contribution in the context of the other questions. The fact that we do not encounter numerous musical passages in the textual corpus of the Stoic heritage may not seem strange considering the problem of the lost sources, though even in the extant testimonia by various later writers, which introduces us to the Stoic views, music does not attain a place of a most relevant and worthy subject. This gap is already important, because it delineates a change from the Classical times, where music was a widely discussed and important subject, worthy of the attention of the greatest philosophical minds.

One of the most evident possibilities in explaining this lack of sources is that these writings were simply lost. It is to be said, however, that we must consider an alternative that there very few musical texts in the first place or that they were not conceived as bearing enough significance to be preserved or discussed any further. This too might be

[230] See Mansfeld, J. (1999). Sources. In: Algra, K., et al., eds., *The Cambridge History of Hellenistic Philosophy*. Cambridge: Cambridge University Press, pp. 3–30.

[231] Woodward, L. (2010), *op. cit.*, pp. 233–253.

the reason of why such few textual passages reach us from the later sources. The suspicion is strengthened by the fact that there is a considerable amount of information available on the other ideas of Stoicism, for instance, related to their teachings on ethics or logic. If we considered the second possibility, this would mark a shift in the tradition of the philosophical writings on music from the Classical period, where such discourse was rather popular. By pointing out this possibility and not dismissing it right away, we can read the extant material referring to the musical questions and check whether there were any significant changes in the further development of the philosophical thought that would explain the sudden disappearance of the lengthy philosophical writings on music. The kind of writings that considered a very broad notion of music or which tried to explain the usage of the correct and incorrect musical practices in a very regulatory manner.

Although the sources in our possession are very limited, we have sufficient evidence to claim that the subject of music was not completely out of the philosophical discourse and that music managed to retain its importance. Already in the thought of Zeno, musical terminology was employed to discuss the questions of virtuousness, the soul, and the right way of living[232], therefore, the terminology of music took part in the most relevant topics, and the musical framework of these discussions was further developed by his successors[233]. According to Philodemus, Cleanthes (Phld., *De mus. IV*, col. 142) claimed that rhythms and metric forms are the best way to approach the truth of the divine and considered such approach to be superior to the philosophical descriptions in prose. Chrysippus too acknowledged the importance of music and advocated for its ethical value (e.g., Gal., *PHP* 5.6.21–2 [55]; Quint., *Inst.*, 1.10.32-34 [53]). Diogenes of Babylon explored musical ethics in detail, as can be seen from the critique by Philodemus, and the very fact that Diogenes was criticised, even though we are facing a later source, indicates that the question of music was not completely forgotten. This being said, we must also note that the subject did not receive as much and as comprehensive philosophical discussions as it did in the previous times.

Even though the textual corpus of the primary sources, especially regarding music, is rather small, there is still considerable amount of testimonia to analyse. We will provide

[232] See esp. Long, A.A. (1996). Long, A.A., (1996). The harmonics of Stoic virtue. In: *Stoic Studies*. Cambridge: Cambridge University Press, pp. 202–223.

[233] Cf., for e.g., the passages on Cleanthes' views in SVF 1.502, 503.

the quotations of more than several extensive passages, with an effort to discuss the Stoic heritage of the musical thought under one discourse. One of the most extensive, nevertheless, significantly damaged, sources, is the papyri that contain the polemic on musical questions. We become aware of this polemic by reading the opposing arguments by the Epicurean philosopher Philodemus of Gadara[234]. It must be noted that the reconstruction of Diogenes' ideas becomes available to us through the text of his opponent, therefore, these references are of secondary nature, selective and never full. However, judging from the other texts by Philodemus, he does not seem to misquote his opponents, only to mock them or spare the detailed counterargument. When he actually refers to his opponents' views, he does not seem to misrepresent them[235]. Philodemus points his critique towards Diogenes of Babylon, who was an important figure in the history of Stoicism: he was a student of Chrysippus, a head of the Stoic school in the 2nd century B.C. after he replaced Zeno of Tarsus, and he was also a man of great reputation, for Cicero reports him to be "a great and highly esteemed Stoic" (*magno et gravi Stoico*)[236].

For our research purposes, Diogenes' ideas on music bear special significance. Firstly, because considering the lack of sources on music in the Stoic thought, his thinking is more accessible, owing to Philodemus' *De Musica*, which is now available to us through the reconstruction made by Daniel Delattre.[237] Secondly, in many of the passages discussing Diogenes' ideas on music we may notice how he follows Plato's arguments in an almost reciting manner[238]. Moreover, he pursues such questions as lyrics vs. instrumental music, music and education, its relation to pleasure, the ethical power of

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[234] Philodemus, *Περὶ μουσικῆς*, preserved in the papyri from Herculaneum.

[235] For the discussion on Philodemus' reliability as a source, see Woodward, L. (2010), *op. cit.*; Delattre, D. (2004), Vergil and Music, in Diogenes of Babylon and Philodemus. In: Armstrong, D., et al., eds., *Vergil, Philodemus, and the Augustans*. Austin (TX): University of Texas Press, pp. 245–263.

[236] Cicero, *De Officiis,* III XI 51, The Loeb Classical Library, transl. by Miller Walter, London: New York, 1928.

[237] Delattre, D., ed. (2007). *Philodème de Gadara. Sur la musique, Livre IV*. Paris: Les Belles Lettres. Previous reconstructions were based on the erroneous column numbering which resulted in the ideas being ascribed to Philodemus instead of Diogenes and vice versa; and the extant passages were considered as belonging to all of the four books, which was eventually proven to be false.

[238] See Woodward, L. (2010), *op. cit.*, pp. 233–253.

music – that is, the questions which constituted the axis of the musical reflection in the philosophy of Classical Greece.

We are going to consider the possibility that Philodemus' critique might have to do with the broader line of thought that the Stoics held towards musical phenomena. To demonstrate the roots of such critique, or, as we will later see, of this miscommunication, we are going to discuss the testimonia on the Stoic understanding of the phenomenon of music, to look for the presuppositions that establish the music-related framework of mind in the Stoic thought, and to analyse, why Philodemus has different expectations towards musical activities than Diogenes, as well as why such kind of critique towards the Stoic views on music was inevitable. Considering that the pool of philosophically relevant musical descriptions is very limited, any reasonable discussion of the concept must start with pointing out the contexts in which the extant passages appear. It is also necessary to avoid limiting ourselves with the analyses of the strictly musical descriptions. For this reason, we shall structure our further research according to the three goals: 1) to indicate the important aspects from the Stoic teachings on different subjects that the musical analysis would benefit from, 2) to explore the views held by the Stoic Diogenes of Babylon and understand why Philodemus is so critical of them, and 3) to check whether Diogenes' ideas on music were individual or do they find the correspondence to the textual passages of other authors, including the predecessors of the Stoic school. This chapter aims to consider the huge loss of sources, to at least partially fill in the gap emerging from the missing textual material and, more importantly, to contribute to our fragmentary knowledge on the subject of music in the ancient Stoic thought.

3.1. EXPLORING MUSIC – THE SHIFTING PERSPECTIVE

From the very beginning Stoics were interested in at least several topics that we discussed previously and which, as we have shown, in the Classical times were connected to the discussions of music. For instance, they took an interest in how the Cosmic world is related to the world of human beings or how to attain temperance and virtue – these are the questions which in the Stoic thought were well comprised under a discourse of why and how to become a *sophos*. Due to the connection with music that these subjects maintained at least in the Classical times, which are not always evident for the

contemporary reader, in order to begin the reasonable discussion on music in the Stoic thought, we must take into account not only the music-related textual passages, but also the context of the other ideas of Stoicism, such as their teaching on indifferents or the foundation of their cosmology and ethics. We can then enquire how these ideas are significant for their discourse on music, and in this context re-read the music-related textual material. This task requires a twofold approach. To begin the discussion on music, we will shortly revisit the main Stoic ideas on happiness and epistemology, which, in turn, will contribute to our understanding of the extant musical passages. Simultaneously, we will indicate the relevant conceptual context by analysing the remaining testimonia related to the musical subjects. Such analysis will allow us to point out the network of the music-related topics and provide the information required for the reasonable discussion of the contexts in which the musical passages are presented.

The following description from Aëtius already suggests some insights on the definition and the contexts in which the musical topics appear:

> The Stoics say voice/sound is body. For everything that acts and causes is corporeal and the voice/sound causes and acts. For we hear it and perceive it hitting our hearing and moulding it like a ring (pressed) into wax. Moreover, everything that moves [sc. something else] and distresses is body, and good music moves us while bad music distresses us. Again, everything that is moved is body; the voice is moved and when encountering smooth places reverberates, like a ball thrown against a wall. (Aët., *Plac*. 4.20.2 [SVF 2.387], transl. by Mansfeld and Runia [65])

It must be noted that music here is considered in relation to the discourse on voice, bodies and perception. This is not surprising considering that the Stoics conceived the world to be corporeal. As described by Jacques Brunschwig, in the Stoic philosophy there is no meta-physics, at least in its previous sense, because everything that exists is conceived as a part of the physical world: "No matter what we might mean by 'meta-', in more than one sense the Stoics have no metaphysics: for them, no science comes 'after' physics (again, in whatever sense of 'after' you like); neither is there any science studying entities which, in some sense, are 'over and above' physics or 'beyond' physics – that is, 'metaphysical' (literally, 'super-natural') entities. For them, 'nature' (*phusis*) encompasses everything, including things, phenomena, and events which in other

worldviews might seem to be 'super-natural' in some way."[239] In the next sub-chapter, we will discuss whether there are any other possibilities to conceptualise music and what happened to the very broad notion of *mousikē*. For the moment we will limit ourselves to the description by Aëtius, and it seems to have been the standard view[240], where music is presented next to the definition of a voice, as a set of sonic impulses of material nature and perceptible to the human senses, yet retaining the power to stimulate or disturb a human being. This description is elaborated even further by claiming that the views held by the Stoics are in an opposition to the previous philosophical tradition:

Pythagoras Plato Aristotle (say voice/sound is) incorporeal. For not the air but the shape around the air and its surface becomes voice/sound through a certain sort of striking. Every surface is incorporeal, for it moves together with the bodies, though it itself remains wholly incorporeal, just as when a cane is bent the surface is not affected, but it is the matter that is bent. (Aët., *Plac*. 4.20.1, transl. by Mansfeld and Runia [64])

These passages confirm the necessity to discuss music in the terms of material impact. The last passage also provides a hint that the views held by the Stoics are conceived as different compared to the Classical tradition, and it emphasises the corporeal nature to be the primary indication of this discontinuity. We will explore this issue more extensively in the subsequent sub-chapter, though for now our aim is to point out the contexts which could be essential in exploring the musical thought. At this point, it becomes necessary to shortly revisit some additional contexts of the Stoic framework of mind: the prerequisites of the material interaction between the subject and the object of perception, the possibility of perceiving the musical phenomena altogether, and the impact that a perceived stimulus would have on a person's soul. The quoted passages clearly indicate that music is conceived as having a potential of affecting a human being and this effect is explained through an analogy of impression that a seal ring leaves upon the wax – a rather common analogy, not limited to the musical contexts, for explaining how the external impressions interact with the soul.

[239] Brunschwig, J. (2003). Stoic Metaphysics. In: Inwood B., ed., *The Cambridge Companion to the Stoics*. Cambridge: Cambridge University Press, p. 206, pp. 206–232.

[240] Schenkeveld, D.M., and Barnes J. (1999). Language. In: Algra, K. et al., eds., *The Cambridge History of Hellenistic Philosophy*. Cambridge: Cambridge University Press, p. 185.

In the Stoic epistemology, the interaction between the external world and a human being was explained through the concept of presentation, or appearance (*phantasia*). Presentations were conceived as signs left by the actual realities of the world and opposed to the imaginative *(phantastikon*), fictitious entities. The real objects from the external world leave an alteration on a person's soul like a seal-print on a wax and, therefore, can both present themselves to the human senses and be grasped[241] by them as well. Experiencing the reality and attaining the real knowledge about it is conceived to be reasonable and it becomes possible due to the reciprocal, material interaction between the human soul and the surrounding world. Such teaching, ascribed to Chrysippus, is attested in the following passage by Aëtius:

> Presentation, then, is an experience which occurs in the soul and which, in [the experience] itself, also indicates that which caused it. For example, when we observe something white by means of vision, there is an experience which has occurred in the soul by means of vision; and <in virtue of> this experience we are able to say that there exists something white which stimulates us. And similarly for touch and smell. 'Presentation' [*phantasia*] gets its name from 'light' [*phōs*]; for just as light reveals itself and the other things which are encompassed in it, so too presentation reveals itself and that which caused it. The presented object is that which causes the presentation. For example, the presented object is the white and the cold and everything which is able to stimulate the soul. The phantastic is a groundless attraction, an experience in the soul which occurs as the result of no presented object, as in the case of people who fight with shadows and punch at thin air. For a presented object underlies the presentation, but no presented object [underlies] the phantastic. (Aët., *Plac.* 4.12.1 [SVF 2.54], transl. by Inwood and Gerson [66])

The real impressions are the object for human perception, and even though they are presenting the entities of the real world, it is always led by the interpretation and assent of a certain proposition, the latter of which can either correspond to the truth or eventually turn out to be false. As it is explained by Sandbach discussing the example of seeing the round object, "What 'appears' to me is not merely that there is a certain affect in my *hegemonikon*, but that there is an external round object. More than that, the object will normally be identified as belonging to some class of round object, as being orange or a cricket-ball; or even as a particular member of a class, as when we say, not 'that appears

[241] *Katalēptikē* is made from *katalambanein*, which signifies "to grasp", "to comprehend", though may have an active or passive sense unlike English "cognitive", which is always active. See: Sandbach, F.H. (1971). Phantasia Katalēptikē. In: Long, A.A., ed., *Problems in Stoicism*. London: The Athlone Press.

to be a planet' but 'that appears to be Venus'. The presentation, the *phantasia,* 'what appears' is at once an impression made through the senses and an interpretation of that impression."[242] It is through the senses that most of the world presents itself and the soul becomes aware both of the change that occurred and the object which led to such change. By reasoning correctly, a person improves his chance of acknowledging whether the presentation corresponds to the truth, or is it a false, deceptive[243] presentation. Therefore, the cognition is possible due to the learning to read the appearances correctly[244]. As we have already seen from the passage of Aëtius quoted above, music was also understood as an object belonging to such discussions, for it leaves the material impressions on a person's soul and leads to the certain changes of it.

Another line of the Stoic thought that music is directly linked to, is their ideas on indifferents, passions and happiness (εὐδαιμονία). The Stoics continue to describe happiness as the main goal of a human being and consider it to be attainable only by living in accordance with Nature (φύσις), which is conceived in a cosmic sense as alive, rational, divine, orderly structure[245]. Such indication of the goal of life can already be noted from the famous Zenonian formula: τὸ ὁμολογουμένως ζῆν, which was later developed into various different formulae[246], though always maintained its direct connection with rationality. In the discussion on music, it is also worth quoting another, slightly different formula, which introduces a notion of a concord: "living in accordance with a single and concordant (συμφώνων) rationale (or ratio)"[247]. Anthony L. Long, who is one of the most important scholars with regard to the history of Stoicism, explains that a concord, a musical term, is chosen as an opposition to "conflict" and that this formula "implies that the life so characterised has an orderly structure, that its constituents are in agreement

[242] Sandbach, F.H. (1971), *op. cit.*, p. 12.

[243] Cf. the example of Sphaerus in Diog. Laert., 7.177.

[244] Frede, M. (1999). Stoic epistemology. In: Algra, K., et al., eds., *The Cambridge History of Hellenistic Philosophy*. Cambridge: Cambridge University Press, pp. 295–322.

[245] On cosmology, see White, M.J. (2003). Stoic Natural Philosophy (Physics and Cosmology). In: Inwood, B., ed., *The Cambridge Companion to the Stoics*, pp. 124–152.

[246] We take this phrase as was formulated by Zeno, as it is attested by Diogenes Laertius (SVF 1.179). For the detailed discussion on different variations, see Long, A.A. (1967). Carneades and the Stoic Telos. *Phronesis 12(1)*, pp. 59–90.

[247] καθ' ἕνα λόγον καὶ σύμφωνον ζῆν: transl. by Long, A.A., (1996), *op. cit.*, p. 202.

with one another and in agreement with everything else to which they are related."[248] A virtuous person, then, lives according to the right reason and in this way fulfils both his particular human and universal nature (*phusis*), which in turn leads to happiness – *eudaimonia*. The objective cosmic rationality, the possibility of fulfilling one's personal nature, and the virtuous life are all conceived as closely interlinked among themselves and as the essential qualities for the human life. From the quoted passages we could already notice that music is not conceived as a simple sonic impulse, but rather as an impulse that has ethical implications, and, therefore, can contribute or damage the eudaimonious life. This is why music must be discussed within the context of the Stoic ethics, and we will continue this thread in the subsequent sub-chapter, where we will enquire on whether ratios and rationality have any significance in the Stoic musical thought, for as we have already seen, it constituted the axis in the preceding musical theory.

It must be noted, however, that the main ethical concept of *eudaimonia* does not suffice by the modern English translation to "happiness", especially in the Stoic system, where it has little to do with the intensive emotions. Analysing it in detail would require a separate discussion[249], though for now, and for our purposes, we shall only mention that in the Stoic thought, happiness is related to one's potential to flourish – to fulfil his nature, – to remain indifferent regarding the strong emotional stimuli that could disbalance a person's soul, to be free of the raging passions, and this consequently leads to the mindfulness and the stability of one's emotional state. In this line of thinking, a happy person is the one who uses reason correctly when making any judgements about the external reality, who is able to reason correctly, the one who understands that the external world is not dependent nor changeable according to ones' wishes and acknowledges that everything that happens takes part in the cosmic and divine plan. He also understands this plan as purposeful, and, therefore, by understanding the principles of Nature and necessity, becomes free of the negative passions, such as distress, fear, lust, or delight. Clement of Alexandria reports that Ariston even described these passions in the musical terms claiming that:

[248] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*

[249] See, for e.g., Long, A.A. (1996). Stoic eudaimonism, *op. cit.*, pp. 179–201.

against the whole tetrachord of pleasure, pain, fear, and lust, there is need of much exercise and struggle. For it is these, it is these that go through our bowels, / And throw into disorder men's hearts. (Clem. Alex., *Strom*. 2.20, [=SVF 1.370] transl. by Wilson [57])

Stoics believed that such emotions are based on false judgements which the sage could overcome if he followed the path of right reasoning. Living in accordance with Nature, in this case, means nothing else than learning to follow and comply to the Nature's way[250]. And this becomes possible by pursuing the knowledge of the divine and human things, that is, philosophy, as can be seen from the passage of Aëtius:

Now the Stoics said that wisdom is the knowledge of divine and human matters, while philosophy is the practice of an appropriate technique. There is (they say) just one virtue that is appropriate and supreme […] (Aët., *Plac.* 1.1.2, [=SVF 2.35], transl. by Mansfeld and Runia [67])

In the Stoic worldview, human beings are conceived as capable of reasoning and attaining the solid and legitimate knowledge about the world[251]. Philosophy acts as an exercise that helps in pursuing this goal. The very idea of following the Nature implies being able to differentiate of what is right to follow[252], and the understanding of how the world works according to the rational divine plan allows to comprehend the deterministic, yet internally free way of life. It frees a person from the excessive emotions and allows him to attain happiness in the mortal world.

It is due to this reason that the Stoic theory on passions is even more relevant for the musical discussion. One of the main ideas in their psychology was that false judgements, due to their nature being contrary to the right reason, lead to suffering. Diogenes Laertius provides us with a description of how this happens:

According to the Stoics there is an eight-fold division of the soul: the five senses, the faculty of speech, the intellectual faculty, which is the mind itself, and the generative faculty. Now from falsehood there results perversion, which extends to the mind; and from this perversion arise many passions or

[250] Cf. Plutarch, *On Stoic Self-Contradictions*, 1035a–d, Cleanthes', *Hymn to Zeus*.

[251] Except Ariston of Chios who held that physics and logic are beyond our reach: cf. Diog. Laert., 7.160.

[252] This will be emphasised by Diogenes of Babylon, our most extensive source on musical questions on Stoicism, who reformulated the *telos* of life as: 'reasoning well in the selection and disselection of things which accord with nature', Stob. 2.76,9–15 (Long – Sedley 58K).

emotions, which are causes of instability. Passion, or emotion, is defined by Zeno as an irrational and unnatural movement of the soul, or again as impulse in excess. (Diog. Laert., 7.110, trans. by Hicks [61])

Passions are defined by Zeno as the product of incorrect judgements (Diog. Laert., 7.110-111, Gal., *PHP* 5.1) which leads to the disturbance of the soul and, therefore, must be avoided. Music, even the instrumental one, as reported by Plutarch, reproduces "the judgements, the experiences, and the morals" (Plut., *De virt. mor.* 443), and, therefore, takes part in this discourse. Discussing the psychological doctrines of Chrysippus, Long has commented on how this irrational excess is formed. He claims that "Impulse is the faculty which gives living beings above the level of plants their ability to initiate purposeful movements. It constitutes their wants and aversions in response to awareness of objects in the environment or in response to their internal conditions. In non-human animals, impulse is non-rational and in children it is pre-rational. There can be no possibility of their impulses being commensurate or incommensurate with *orthos logos* since they lack rationality. In mature human beings, impulses have one or the other of these properties because they are, or are associated with, 'judgements' – correct or incorrect estimates of the value of objects. The mark of incorrectness is 'excess', hence such an impulse is called *pleonazousa*, one that 'goes beyond and disobeys the ruling logos'[…]"[253].

We can notice that music takes part in this discourse since it is a powerful tool that has a potential both to manipulate emotions and to contribute to the false judgements or disbalancing of one's soul. Diogenes of Babylon agreed on it and claimed that "music naturally puts in motion and pushes to action" (Phld., *De mus. IV,* col. 121). In this context we could also remember a passage from Athenaeus of Naucratis[254], who tells a story about Perseus and Zeno of Citium. We read that Perseus lived with Zeno in the same house and while being in the symposium, could not resist the Thessalian dancing-women, the aulos-playing girl in particular. The testimony of Athenaeus describes that music and dance took a part in seduction and amatory matters[255].

[253] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*, p. 209.

[254] Ath. Deipnosophists, 13.86, SVF 1.451.

[255] Cf. Phld., *De mus. IV*, col. 43, presenting Diogenes' position on melody in relation to the etymology of the Muse Erato.

In this context, it is now worth to reconsider the already discussed passage[256] about Pythagoras who was able to calm down the enraged man by asking the pipe player to play a more dignified melody. This famous story is retold by Galen (*PHP* 5.6), where the author objects to the Chrysippus' views on the effects that music has on the human soul. The story is very similar to the one we analysed before, though this time it is Damon together with Chrysippus, and not Pythagoras[257], who is presented as the authoritative figure of the ethical theory of music:

> Why was it, in heaven's name—I shall address this question also to Chrysippus' followers—that when Damon the musician came upon a flute-girl playing in the Phrygian mode to some young men who were overcome with wine and acting madly, he told her to play in the Dorian mode and the youths immediately dropped their wild behaviour? Obviously, they are not taught anything by the music of the flute that changes the opinions of their rational faculties; but since the affective part of the soul is irrational, they are aroused or calmed by means of irrational motions. For the irrational is helped and harmed by irrational things, the rational by knowledge and ignorance. (Gal., *PHP* 5.6, transl. by De Lacy [55])

It is rather common for the scholars to start the discussion on the effects of music in the Stoic thought from Galen's polemic statement towards Chrysippus, in particular his claim that music affects the irrational part of the soul[258]. From what we have discussed, there is enough reason to believe that the roots of Chrysippus' theory as well as the discussions of similar nature should go much further back. It was no surprise to anybody that music can have a positive or negative effect – it can be found in numerous sources, starting from the Greek myths to philosophical writings, including all of those that we discussed in the first part of this thesis. We will not go into Galen's polemic on the structure of the soul in detail, for it is reasonably discussed elsewhere[259]. It is enough to

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[256] The story is presented in the p. 72 of this thesis.

[257] Cf. Quintilian, The Orator's Education, 1.10, which retains the original story of Pythagoras, instead of Damon.

[258] On the academic discussions regarding the irrational and rational parts of the soul in this context, see Tieleman, T. (2003). Doxography. In: Mansfeld, J., et al, eds., *Chrysippus' On Affections: Reconstruction and Interpretation*. Leiden, Boston: Brill, pp. 61–88.

[259] See esp. Scade, P. (2017). Music and the Soul in Stoicism. In: Seaford, R., et al., eds, *Selfhood and the Soul: Essays on Ancient Thought and Literature in Honour of Christopher Gill*. Oxford: Oxford University

point out that Galen agrees with the long-lasting tradition on the power and the effects of music, though he argues against Chrysippus and claims that music affects the irrational part of the soul instead of its rational faculty. In fact, this tells us more about his own understanding of rationality compared to the Stoics, because for the Stoics, every emotion was conceived as having a rational foundation[260]. What interests us the most in this passage, however, is the context in which appears the reference to Chrysippus, who was an essential scholarch in forming the Stoic doctrine[261]. Galen's criticism can be seen as a testimony that the idea of music's ability to affect a person in a direct and significant way (in this case, that it may calm down the soul of the madly acting men) was still present in his times and that Chrysippus agreed with it. Similar acknowledgement on the emotional and ethical power is made by Plutarch with a reference to Zeno of Citium (Plut., *De virt. mor.* 443), and Diogenes of Babylon, as attested by Philodemus, agrees with these views on multiple occasions. In fact, in col. 77 of *De Musica*, Diogenes even claims music to be the only art of the soul (τῆς ψυχῆς μόνην τέχνην).

There are two points to note when discussing music within the context of the quoted passage. The first one is that music in the Stoic thought is classified as an external object, therefore, all the previously mentioned theoretic context of how the external reality interacts with a person's soul, can be applied to the discourse on music as well. This is a link through which any real ethical or emotional impact would need to be explained. The second point is that music is also discussed as a certain type of external goods, which fall under the discourse of indifferents. In this case, music, just as any other goods, would be considered not to bear any real value, for it is possible to live a happy life without it. Nevertheless, indifferents are divided into preferred or dispreferred ones (Diog. Laert., 7.104-105), and music is rather difficult to classify – it can either be a preferred or dispreferred indifferent, based on its ethical effect and a message it conveys. To classify it correctly, one must have a skill to consider the meanings that are embedded in the instrumental music and / or the text, as well as to be able to recognise the harmonic

Press, pp. 198–218; Gill, C., (2007). Galen and the Stoics: Mortal Enemies or Blood Brothers?, *Phronesis 52(1)*, pp. 88–120.

[260] For more on rationality in emotions, see esp. Scade, P. (2017), *op. cit.*; Schofield, M. (1999), *op. cit.*; cf. Cic., *Acad. Post.* 38.

[261] Cf. Diog. Laert., 7.183; Diog. Laert., 4.62.

influence that one or another musical mode would have on a person's soul. This introduces us to another fundamental part in the Stoic musical thought, concerned with the necessity to recognise the perceived impulses and to act accordingly.

The good or bad music, which in this case is conceived in a sense of a sound or a voice, stimulates or disturbs a human being. That means it can also be employed for these purposes, whether deliberately or accidentally. Music, in this case, conforms to the same criteria that a wise person must apply to any of the external stimuli. The sound is a body which has a specific effect, the sage is able to recognise it and proceed to the necessary actions – whether to let himself affected to a certain degree, or to disapprove these impulses.

We must note that the Stoic philosophy is primarily concerned with the right way of life. Although their teachings begin with the same task as of the previous thinkers, that is, to understand the world and how it functions, although they did not ignore the philosophical tradition of their ancient past[262], they also greatly emphasised the role of the individual. As it was pointed out by Long, "Of all the Greek schools, Stoicism was the most ambitious in its quest for a system that would explain how human nature fits into the world at large"[263]. The ancient Stoics were not interested in the scientific schemes or the classifications for the sake of their own and, more importantly, they were not the passive observers of their surroundings. The logic, physics, and ethics – three fundamental parts of the Stoic philosophical system – were employed to analyse how the world actively interacts with the human beings and vice versa.

Because of this, the ancient Stoics did not view the musical (or any other) impact on a human soul as straightforward as we encountered in the theory of Plato. The external world and right or wrong music is not necessarily enough to disbalance a person's soul, especially if that person is a sage or has undergone philosophical training. As it was explained by Richard Sorabji, for the Stoics, "Every emotion involves two distinctive value judgements. One is that there is good or bad (benefit or harm) at hand, the other

[262] Cf. Diog. Laert., 7.2.

[263] Long, A.A. (1996). Preface, *op. cit.*, p. xi.

that it is appropriate to react."[264] Music, as a natural phenomenon, exists in the world[265] and just as any other object of reality, provokes emotions. The phenomenon is neither good nor bad and as such it neither requires rejection nor appraisal. Nor it deserves a separate philosophical discourse anymore. Because it is not the external object that is responsible for the correct balance and *akrasia*, but the human being himself, who, according to the Stoic doctrine, must control his emotions in order to live a happy and virtuous life.

Although Stoics do not ignore the musical questions, in their extant testimonia we do not find an elaborated theory, unlike in the works of Plato, that would link together the ontological status of music, the cosmological explorations, and the questions of its ethical and psychological effect. In such a light, also taking into the account the quoted passages, we may now repeat our initial question – why we do not have any writings on music from the early Stoicism?

It seems probable that prior to Diogenes, music and aesthetic questions were indeed not too much explored separately, a possibility which was already indicated by David Sedley[266]. If we admit that the Stoic texts on musical questions might have never been written prior to Diogenes, the reason for this could be that the musical questions were dependant on the other philosophical arguments that they discussed, therefore, it is a possibility that they simply did not need a separate discourse.

The purpose of providing the descriptions of the above indicated aspects from the Stoic world-view is to highlight that music takes part in these discussions, namely the perception and the cognition of the external world, the emotional response to the stimuli, and, consequently, the potential of *eudaimonia*. These teachings constitute the axis of the Stoic worldview, and we have comparatively large number of the extant testimonia

[264] See Sorabji, R. (2002). The Emotions as Value Judgements in Chrysippus. In: *Emotion and Peace of Mind*. New York (NY): Oxford University Press.

[265] Depending on the conceptual extent, either as a creation by the artists or as an independent ontological entity – a possibility that we will discuss in the subsequent chapter.

[266] Sedley, D. (2003). The School from Zeno to Arius Didymus. In: Inwood, B., ed., *The Cambridge Companion to the Stoics*. Cambridge: Cambridge University Press, pp. 7–32; cf. Woodward, L. (2010), *op. cit.*, p. 18.

discussing them. Naturally, all the questions regarding the particular indifferents, including music as a sonic stimulus, could have been pushed to the periphery.

The change from the previous tradition which shifted the philosophical attention from the worldly music to the music that is being perceived by the listener, inevitably led to the different position on music with regard to the common, universal education of the citizens. As commented by Schofield, "Plato makes a heavy strategic investment in social stratification in the city as a whole and a regulated communism for the guardians in order to achieve his objective of concord. Zeno relies much more on the moral perfection of the individual. This difference is presumably reflected also in their provisions on education. Plato advocates a thorough overhaul of the ordinary education system, with censorship of poetry, reforms of music and gymnastics, and the introduction of higher as well as elementary mathematics. Zeno thinks that the only education we need is an education for moral simplicity, and no doubt rejects studies such as music and geometry as the Cynics did (D.L. vi.104)."[267] Schofield's remarks are of great importance, for they help us to realise the place that music, according to Zeno, was supposed to take in the educational system, and suggests revisiting why music was still considered important. As we shall see in the next sub-chapter, this is not to say, however, that Zeno denied the educational potential of music altogether, or that his ideas are in strong disagreement with Diogenes of Babylon, who advocated the need for the musical education. It only confirms the shift towards the significance of the individual perception, and that it had reflected on the musical discourse too. The relevance that Zeno attributed to the musical phenomena was not based on music as the poetic tradition or a universal educational tool. However, he, as well as many of his predecessors, focused on the intrinsic qualities of musical phenomena, such as the effect, established from the proportionate unity of the constituting elements.

The before-mentioned ideas have a strong resonance with a passage by Stobaeus, where he describes the Stoic views on being a music-lover:

[267] Schofield, M. (1999). Social and Political thought. In: Algra, K., et al., eds., *The Cambridge History of Hellenistic Philosophy*, Cambridge: Cambridge University Press, pp. 739–770.

'Pursuits', rather than 'sciences', is the name they [the Stoics] give to love of music, love of literature, love of horseriding, and love of hunting, both in general and with reference to 'curricular' expertises as they are called. The Stoics include these in virtuous tenors, and accordingly say that only the wise man is a lover of music and literature etc. This is their outline account of a pursuit: a method which by means of expertise or a part of expertise is conducive to the domain of virtue. (Stob. 2.67 [=SVF 3.294], transl. by Long and Sedley [62])

In the quoted passage, the love of music is conceived as welcomed into the life of the virtuous, though denied the status of being a science. It is discussed next to the other activities that might contribute to virtue if practiced properly, but it is not attributed with any exceptional qualities and does not earn the right to be called anything special. As noted by Margaret Graver, "Those who are wise invariably recognize that the objects of their favored activities are inconsequential to happiness, and do not waste their eupathic responses on them. They can be fond of music and still understand that playing music is not in itself a good thing, and that being thwarted in a wish to practice is not an evil."[268]

Following our previous discussion, we can notice that the indifferents, including music, were conceived as having some potential to contribute to achieving virtue or corrupting it, but they were not considered worthy of the attention on their own. For this reason, it seems probable that there was simply no need to analyse music separately, because it was consistent with the other questions that the Stoics discussed. Music was an important subject for the Stoics, though this importance was not based on the sonic qualities. This is why the analysis of the Stoic musical theory should involve a variety of their other philosophical arguments that we presented in the current sub-chapter.

3.2. ONTOLOGY OF MUSIC – TRACING THE IMPRINTS FROM THE CLASSICAL TRADITION

Music in the Stoic thought can be described in the terms of material interaction, it becomes an object that has an emotional impact, and it takes part in the discourse of indifferents. We have also indicated a possibility that as a subject in these discussions, music might not have taken a special place and was most probably positioned next to the

[268] Graver, M.R. (2007). Traits of Character. In: *Stoicism and Emotion*, pp. 133–148, Chicago & London: The University of Chicago Press.

other entities of the world that were discussed in a similar manner. This would explain a sudden change in the tradition of the extensive musical texts as part of the philosophical discussions.

We have already established that the musical questions were not completely ignored by the Stoics, even though at times they did not earn a separate discourse and took a part alongside other topics that were developed. Considering the importance that the Stoics maintained towards the material world and the sonic music, we shall now enquire whether the notion of inaudible music, which was the basis for the previous musical speculations, was now completely lost. Do we have any evidence to consider the inaudible music (or any other non-acoustic notions) in this tradition and if so, how could it possibly conform to the requirements of their corporeal worldview? We shall now discuss the testimonia which overcome the usual sonic definitions and provide the hints of the broad conceptualisation of musical phenomena.

3.2.1. THE LEGACY OF THE INAUDIBLE MUSIC – IS IT COMPLETELY LOST?

Taking into account the very broad notion of music, which was present in the Classical times, we can now look for the clues that would allow us to follow its transformations into the Stoic thought. Although we do not have as clear and explicit differentiation among the cosmic, political, ethical, philosophical and acoustic notions of music, as we had before, there are several points that allow us to discuss musical phenomena as not only limited to its material and instrumental function.

The first of these clues is the specific choice of language in the arguments that the Stoics developed. Similarly to the Classical period, musical terminology in Stoicism is chosen to discuss the cosmic and ethical matters – the ones which are considered to have the highest importance. Moreover, it is chosen to be the medium through which the very fundamentals of the ethical theory and of the functioning of a human soul is being discussed. As explained by Long, who made a significant contribution in exploring the links between the musical terminology and Stoic ethics, music is chosen by the Stoics to develop "their account of virtue and its identity with the art of living harmoniously"[269]. This, as we have seen, corresponds to the Stoic definition of the goal of a human life, and

[269] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*, p. 221.

the choice of the musical terminology indeed positions it as a phenomenon of some special importance. Simultaneously, such choice is already an indication that music retained some conceptual significance and that the sound was considered not the only characteristic and essential feature in music. Otherwise, there would simply be no grounds for discussing the sound as some sort of analogy for their ethical theory. Long's article was a starting point in the explorations of the boundaries of music as a medium through which the most significant philosophical arguments are being presented. The scholar notes that "The correct ratio that harmony in its musical sense manifests – concordance of high and low sounds – seems to function as the model for a mind that has its own correctly organised constituents, so that it is thoroughly in tune with itself and with external nature. If we substitute, for high and low sounds, verbalised thoughts and impulses, a theory is available for how the Stoics regarded a harmonious mental disposition: as exactly analogous to the well-tempered constituents of a musical scale."[270] According to the scholar, it is exactly the terminology of music instead of the visual arts, as was previously suggested by Dyroff[271], that attains the privileged position in the Stoic discourse for conceptualising their philosophical thought and we will now continue this discussion in trying to determine, why it happens to be music.

One of the critical arguments provided by Philodemus introduces us to the testimony (Phld., *De mus.* IV, col. 142) that Cleanthes, the second scholarch of the Stoic school, held music to have a special ability to contribute to the content of the words being said. Cleanthes claimed that philosophical discourse is sufficient, but the meters, the melodies and rhythms make it more suitable to approach the truth very closely in the contemplation of divine things:

> . . . if they do not wish to make statements similar to that of Cleanthes, who says that poetic and musical examples are better, and that even though philosophical discourse is able to express divine and human matters adequately, it does not as prose have expressions proper to sublime divine objects, while meters and melodies and rhythms come closest to the truth of the contemplation of the divine – a more ridiculous statement than which is not easy to find. [Cleanthes says]: "It is not that ideas [alone] are not helpful, but when they are set to music, the stimulus comes from both sides; for while there comes a more

[270] Ibid., p. 205.

[271] Dyroff, A. (1897). *Die Ethik der alten Stoa*. Berlin: S. Calvary & Co.

than just moderate stimulus from the thoughts themselves, accompanied by melodies it is even greater." (Phld., *De mus.* IV, col. 142, transl. by Thom [39])

This passage provides us with an indication that the constituents of the musical framework, such as the rhythms, melodies or the metric forms, are described as participating in the process of creating additional meaning compared to the bare text. They are presented as a special way that enables a different mode of communication, more suitable to the contemplation of the divine than a traditional philosophical discourse. This is a strong statement coming from a philosopher, which leads to questioning, what is so special about the musical qualities that they are attributed such importance? What presuppositions are behind the musical stimulus that take place when the described elements are activated in a musical or musico-poetic performance?

We shall now remember a rarely quoted and rather underappreciated passage in the Stoic musical discussions, which is brought to us by Cicero. In his work *On the Nature of the Gods*, Cicero presents the argument of the alive and rational cosmos, which was initially provided by Zeno of Citium. Along the way we encounter a musical parallel, which is indicated by Zeno as self-evident example, not requiring any additional argumentation. It states that musical qualities which the instruments are able to convey, are embedded in the material world itself, prior to the instrument being made. Cicero retells Zeno's ideas as follows:

If something lacks the ability to perceive, no part of it can have the ability to perceive; but some parts of the cosmos have the ability to perceive; therefore, the cosmos does not lack the ability to perceive." He goes on and presses his point even more compactly. He says, "Nothing which lacks life and reason can produce from itself something which is alive and rational; but the cosmos produces from itself things which are alive and rational; therefore, the cosmos is alive and rational." He also argues by means of a comparison, as he often does, as follows: "If flutes playing tunefully [*canentes tibiae nascerentur*] grew on olive trees, surely you would not doubt that the olive tree possessed some knowledge of flute playing? What if plane trees bore lyres playing melodiously? Surely you would also decide that there was musical ability in plane trees [*in platanis inesse musicam*]. Why, then, is the cosmos not judged to be alive and wise, when it produces from itself creatures that are alive and wise [*animantis atque sapientis*]?" (Cic., *Nat. D.* 2.21-22 [=SVF 1.112, 114], transl. by Inwood and Gerson [41])

For our purposes, this excerpt is of great importance. Firstly, it introduces us to the idea that the cosmic and human reality are inextricably connected (which will be

important in the discussion of musical ethics), and it clearly states that the cosmos is conceived as both wise and alive. Although music is not the main subject here, for this passage focuses on the rationality of cosmos, musical reference acts as the analogous means for the comparison. Nevertheless, we must notice that in the provided description music is described as a self-sufficient entity of the world, with the potential of aulos-playing or the musical ability already embedded in its material nature. An entity, which is independent (or at least pre-existing) in regard to the artistic practices undertaken by the human musicians.[272] The selected phrasing ("surely you would not doubt") only strengthens the idea that this notion in Zeno's times was not new, and we may see how music (similarly to the earlier times) is still conceived as a very broad concept. In this case, the author discusses the notion of music which is not executed by the human musicians and on which the artistic human practices are only based upon. Such testimonies provide an indication that the discourse on music as an entity that did not necessarily require human practice, may still have been present and actively used in Zeno's times.

Another, one of the most significant passages that discuss the non-human musical practices, refers to the ideas held by Diogenes of Babylon:

> Because of all the [arts of] imitation, it [music] is the one with which one should take the utmost caution. For, in the case of error, moral harm can be most great, and it is troublesome to recognize, because our poets are inferior in quality to the Muses. They indeed [the Muses] would never create their imitations by adapting melodies and rhythms for free men, [into those] for slaves and men who were not born free and vice versa, and they would not mix together the cries of wild beasts, men's voices, and all sorts of instruments ... [The poets], however, precisely because they are humans, by their senselessness in entangling such things and jumbling them up together, become objects of ridicule, because they separate rhythm and gesture from the tune, putting bare discourse into metre, whereas they isolate melody and rhythm from words, using the bare sounds of harp and flute, wherein it is almost impossible to understand what is intended by this wordless rhythm and harmony, or what noteworthy original it represents. One ought to realize that such methods are clownish in the extreme insofar as [they like] [much speed, mechanical accuracy, and animals' cries, and consequently employ the pipe. ...] (Phld., *De mus.* IV, col. 51, transl. by Woodward [36])

[272] For the critical arguments of such reasoning, see for e.g., Cic., *Fin.* 4.38, Arist. *Phys*. 2, 199b.

Again, in this passage we are faced with the notion of music which is in the Muses' disposition, and which is not presented as the invention of the human beings. "Poets are inferior in quality to the Muses", we are told, and the Muses would not mix the elements in the wrong order as well as they would not use the elements that are not appropriate to the virtuous melody. Such descriptions allow us to notice that the discourse on music as having power to affect a person in a virtuous and the complete opposite way was still present in the thought of Diogenes. Similarly, it was still possible to discuss the non-human music of the Muses, as in the previously discussed passage it was possible to discuss the music embedded in the world. This being said, we can notice that the main focus of this discussion is not the sound, but the musical effects and its embedded qualities. In fact, in col. 18 Diogenes states that music "possesses certain in-born natural virtues", which would only confirm the legitimacy of pursuing this course of the textual analysis.

We can already note that the Stoic notion of music is not limited to the definition of mere sound. The quoted passages provide us with the knowledge that music was conceptualised in connection with other intrinsic qualities that constitute its effect. These considerations confirm the necessity to explore what, according to the Stoics, constituted the power of music, and how to explain its broad definitions.

We have discussed several passages that involve a broad notion of music – Zeno has provided us the example of the musical artistry being encoded in the material world, Cleanthes spoke about the high influence of the particular musical elements, Chrysippus advocated for the ethical impact of musical performance, and Diogenes explicitly discussed the virtuous nature of music and its pre-existing qualities. This is a very different line of thought from the one we attributed to the Stoics in the very beginning of our analysis. It requires some additional remarks, for we need to clarify, how are these notions compatible to the acoustic definition of music – the one described in the material terms and having a sonic expression.

At this point we need to stop by the definition of music as a body. If it was indeed defined only as a material and temporary sound, it would be very problematic to speak about any of its universal effects on a human soul or about universally right musical practices. The question of musical ontology is as important for the Stoics as it was for the previous tradition and in order to continue our discussion, we must answer where is music

when it is not being played? Similarly, how could there be any universal embedded in a melody, if every musical performance is finite? In the Platonic tradition, music was considered to be in direct linkage with the realm of metaphysics and the Classical Greek philosophical thought linked the enquiry on music with that of ontology. If in the Stoic discourse there was no ideal or primordial non-acoustic music, we could only discuss the particular definitions of particular musical practices. In other words, if every-time when a musical execution ends there would not remain any musical body, there could not exist any reality-linked musical theory. In such case, either Stoics did have a concept of some kind of universal music – an abstract notion which was the pre-existing cause for any particular musical practices, or there would be no way to explain some of their claims, such as why some modes were considered to be universally virtuous, while the others were not.

Following the same logic, we could argue that when music is being played, some particular ratio-based structures are being activated, and this leads to a certain psychological effect. If music is conceived as the external stimulus that affects a person's soul in a virtuous way or the opposite, as we have already established for the Stoics to be true, this goal may be achieved in two different ways: either by enabling the individual response towards the musical stimulus, or music acts universally and has the same effect for everybody. The first option could be considered based on the idea that a human being is born as *tabula rasa*, which we know to be true from the following passage of Aëtius:

> The Stoics say: when a man is born he has the regent part of his soul like a sheet of papyrus well-prepared for making a transcript. On this he transcribes for himself each single one of his conceptions. The first [or: primary] manner of registration is through the senses. Suppose it is of a white something; when it has gone away, they have a memory of it. But when many memories of the same sort have occurred, then we say that they have an experience. For an experience is nothing but the multitude of impressions of the same sort. (Aët., *Plac.* 4.11 [=SVF 2.83], transl. by Mansfeld and Runia [63])

In this case, one might suppose that the musical presentations which interact with the person's soul similarly to the other external realia, are actually embedded into the memory of the listener. It would still have an ethical effect, though this effect would be individual and different for everyone who perceives it. As it is explained by Sandbach, for the Stoics "[…] the mind was at birth like a blank sheet of paper. It had powers but

no content. Sensation supplied the first content, and unless some of that was known to be reliable, no development of it by the mind could deserve any greater credence."[273] Based on these ideas, it would be possible to speculate that each person throughout his life would gather a set of musical experiences, which would have certain ethical impact. Eventually, they would have different sheets with the different musical experiences written upon. Over the years a wise man would learn to recognise the kind of musical presentations he experiences, and he would manage to act accordingly (either assenting to these presentations or not), in order to maintain the correct balance of his soul. This line of thought would not dismiss the possibility that various kinds of music would have a different effect on different people, and it could not maintain the idea that one or another musical structure is universally virtuous, or the opposite.

Such idea would even have some resonance in the later texts. For instance, in a passage by Clement of Alexandria listed in the SVF 2.350:

> The same item becomes the cause of opposite effects, sometimes due to the magnitude and power of the cause, sometimes due to the suitability of that which is acted upon. Due to the power's being such-and-such: the same string makes a high-pitched or a low-pitched sound, depending on the degree of tension. Due to the suitability of things acted upon: Honey is sweet for the healthy, but bitter for the feverish; one and the same wine makes some people angry, others merry; the same sun melts the wax and dries the mud. (Clem. Alex., *Strom.* 8, 100-101 [=SVF 2.350], transl. by Havrda [58])

In fact, Philodemus already indicates this point and uses such argument to criticise the views of Diogenes, stating that such attributions of the musical qualities are based on the opinions (*doxas*) instead of the analysis of the structural nature of music:

> […] both in the case of the Enharmonic and the Chromatic scale people differ, not in respect of the irrational perception, but in respect of their opinions (δόξας), some, like Diogenes, saying that the Enharmonic is solemn and noble and straightforward and pure, and the Chromatic unmanly and vulgar and mean, while others call the Enharmonic severe and despotic, and the Chromatic mild and persuasive; both sides importing ideas which do not belong to either scale by nature. (Phld., *De mus.* IV, col. 116, transl. by Wilkinson [37]).

[273] Sandbach, F. H. (1971), *op. cit.*, p. 12.

Nevertheless, it does not actually apply to the case of Diogenes or to the thinkers from the early Stoicism. According to Matyáš Havrda's commentary on Clement, despite being listed in the *SVF*, the notion of suitability was first introduced by Philo the Logician and it is not attested in Stoic sources[274]. Our discussed texts have different indications as well, for it presents music as having the universal in-born qualities.

This leads us to questioning, how can music have a universal impact if every performance is new and finite? We could even pursue this enquiry into asking where is music when nobody plays it, especially since it is defined as a corporeal body? The answer to this could lie within the Stoic definition of a body that does not dismiss the possibility of a remanant potential. As Brunschwig has explained: "If some entity can be described as a certain body disposed in a certain way, this entity can be categorized as being itself a body. Consider the fist, a typical example for the Stoics. What is a fist? Neither exactly the same thing as a hand, which is a body, nor a completely different thing, but a hand disposed in a certain way; hence, a body itself […] This tactic is also unobstrusively present in a number of Stoic definitions or descriptions that put the first the name of a body and second the mention of the way it is affected or disposed. For instance, vocal sound [*phônê*] is described as a body, not only because it is acting upon the hearers, but also because it is definable as 'air [i.e., a body] struck' in a certain way […]'."[275] Therefore, for the Stoics, music was considered a body when a musical piece is being played, though it still had certain presuppositions and embedded qualities that lead to its ethical effect. There is a notion of being "musical" even when there is no physical sound. As it is explained by Barker, in Diogenes' thought musical theory is not an independent enterprise and the task of it is "to identify in music such qualities as nobility (τὸ καλόν), ugliness (τὸ αἰσχρόν), appropriateness (τὸ πρέπον) and inappropriateness (τὸ ἀπρεπές)."[276] These are the in-born qualities (Phld., *De mus.* IV, col. 18) that take place in any acoustic performance and on which the musical practices can be objectively judged, though their virtuousness does not come from the sound itself.

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[274] Havrda, M. (2016). *The So-Called Eighth Stromateus by Clement of Alexandria*. Leiden: Brill, pp. 287–288, 300.

[275] Brunschwig, J. (2003), *op. cit*., p. 212

[276] Barker, A. (2001). Diogenes of Babylon and Hellenistic Musical Theory. In: Auvray-Assayas, C., and Delattre, D., eds., *Cicéron et Philodème: la polémique en philosophie*. Paris: Éditions Rue d'Ulm, p. 353.

On the contrary, we shall see that these virtues are embedded in the ratio-based musical structure, whereas the sonic form is just their perceptible expression.

We will now point our attention to what was considered essential in the constitution of the musical piece, and whether it has any resonance with the previous tradition. First, we shall explore the requirement of correct harmonising, which was emphasised by Diogenes in the last quoted passage above, and which is a promising remark, for it was central in the preceding discourse on music.

The question whether the Stoic musical theory was of Pythagorean influence and continued their tradition is still under discussion, for there is no direct and clear testimonia to confirm or deny it. From a testimony of Diogenes Laertius in his *Lives of Eminent Philosophers* 7.1, we are made aware that Zeno of Citium was familiar with the Pythagoreans and even wrote a work called *Pythagorean Questions*. However, we have no knowledge what it was about, if it was somehow related to the position Zeno advocated on music, and if so, to what extent. Zeno's views on music are also discussed with a reference to Pythagoreanism in the passage by Plutarch quoted below; and Quintilian in *The Orator's Education* (1.10) discusses the Chrysippus' thought on music next to the example of Pythagoras. Unfortunately, none of these mentions provide us with the clear and explicit discourse. Analysing the technical aspects of the musical thought of Diogenes of Babylon, Barker claims that it has nothing to do with the Pythagorean mathematical argumentation[277]. Woodward agrees with Barker's position on several levels, though does not draw the same conclusions and indicates that there is a lacunose fragment attributed to Diogenes, in which Pythagoras is mentioned[278]. Delattre writes that Diogenes familiarised himself with the preceding ideas and systematically collected a large body of material on musical questions.[279] Long, too, has written that "The Stoics' explicit interest in numbers, and their hypothesised interest in a connexion between musical harmony and character (*ēthos*), require us to think that the musical theory on which they may have drawn was predominantly Pythagorean."[280]

[277] Barker, A. (2001), *op. cit.*, p. 356.

[278] Woodward, L. (2010), *op. cit.*, p. 250.

[279] Delattre, D. (2004), *op. cit.*, p 245.

[280] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*, p. 214

It would seem that the answer to this perplexity depends on the elements we conceive as substantiating Pythagorean musical theory and on whether our approach is focused on their technical or philosophical discourse. Barker provides a detailed analysis of the technical aspects of musical theory and convincingly argues that Pythagorean calculations were not the basis for the Hellenistic theoreticians. Though what was considered important of Pythagoreanism in the Classical times and later on, were not the calculations themselves, but the emphasis on the ratio-based structures that are embedded in all the entities of the world and which can be expressed through the musical medium. It is clear that the Stoics considered music in their own framework of ideas, therefore, the Pythagorean influence can only be discussed as a potential starting point for their own thought rather than a prevailing musical theory. This is not something new, for Plato too developed them in a very sophisticated discourse of his own, and we can still consider the Classical discourse on music as a certain reception of the Pythagoreanism. Despite the lack of the sources, which significantly limits the potential of our discussion, there are several remarks to be made, for the Stoic musical theory was a transformation of the traditional views rather than a complete innovation[281].

In the extant corpus of Stoic fragments, we can see several traits that are too similar to the Platonic descriptions of music to be considered mere coincidences. It is more probable that these passages indicate a continuation of the Classical tradition with several significant transformations of the timely fashion. For instance, Linda Woodward has established that in his musical theory, Diogenes of Babylon retells Plato's passages in an almost verbatim manner. Woodward has analysed the parallels between Plato's and Diogenes' views on music and came to the conclusions that the parallels are just too great to be coincidental or that in some cases, the phrasing is almost identical. Diogenes claims music to have a special place among other arts; he highlights the distinction between the music of the Muses and that of men; states that it is not easy to understand wordless music and that it requires extreme caution; repeats the analogy of music and gymnastics; refers to Damon on the questions of musical ethos; is concerned about finding the correct musical practices that lead to virtue; and conceives the Dorian and Phrygian modes to be the most virtuous ones. Therefore, many ideas are similar and could be regarded as the

[281] See Woodward, L. (2010), *op. cit.;* Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*

continuance of the previous tradition. It is necessary to consider whether these ideas are consistent with the opinions of other scolarchs of Stoicism, or is Diogenes the only one who was appreciative of the preceding thought on musical matters.

One of the first and the most important common links with the Classical musical theory is the role of proportion. There could be many different ways to define music, such as based on its emotional impact, the virtuosity, the skill or the technical characteristics, though the discourse on proportions retained its relevance. There is evidence suggesting that already from Zeno, music was considered to be a subject where the proportions are the governing principle of the performance. One of the few descriptions on Zeno's views on music can be found in Plutarch's *Moralia*:

> But I fear that I shall be thought to be rounding out my discourse with instances which are altogether seductive and exotic, if I recount in full how harps and lyres, pipes and flutes (λύρας καὶ πηκτίδας καὶ αὐλούς), and all the other harmonious and consonant instruments which musical art has devised, void of soul though they be, accord in songs of both joy and grief, in stately measures and dissolute tunes, with human experiences, reproducing the judgements, the experiences, and the morals (τὰς κρίσεις ἀναφέροντα καὶ τὰ πάθη καὶ τὰ ἤθη) of those who use them. And yet they say that even Zeno on his way to the theatre when Amoebeus was singing to the lyre, remarked to his pupils, 'Come, let us observe what harmony and music gut and sinew, wood and bone, send forth when they partake of reason, proportion, and order.' (Plut., *De virt. mor.* 443 [=SVF 1.299], transl. by Helmbold [44])

Similar story is retold in more detail in Plutarch's *On the generation of the soul in the Timaeus* 33:

> Consider, however, whether the heavens and the heavenly bodies are not guided by the soul with her own harmonious motions when she has become most provident and most just and whether she has not become such by reason of the concordant ratios, semblances of which are incorporated in the parts of the universe that are visible and seen, that is in bodies, but the primary and fundamental property of which has been invisibly blended in the soul and renders her concordant and docile, all her other parts always agreeing with the part that is best and most divine. For the artificer, having taken over a jangling disorder in the motions of the discordant and stupid soul which was at odds with herself, distinguished and separated some parts and brought others together with one another and organized them, using concords and numbers by which when blended and fitted together even the most senseless bodies, stones and logs and the bark of plants and bones and beestings of animals, provide statuary of wonderful appearance and medicines and instruments of wonderful potency. Wherefore it was that Zeno of Citium summoned the lads to a performance of pipers to observe what a sound is produced by bits of horn and wood and reed and bone when they partake of ratio and consonance.

For, while it requires reasoned argument to maintain with the Pythagorean assertion that all things are like unto number, the fact that for all things in which out of difference and dissimilitude there has come to be some union and consonance with one another the cause is regularity and order consequent upon their participation in number and concord, this has not gone unnoticed even by the poets who call friendly and agreeable things befitting and enemies and foes unbefitting on the assumption that dissension is unfittingness. (De anim. proc. 33, transl. by Cherniss [43])

These two very rich passages confirm that Zeno did view musical performance in relation to the "ratio and consonance", and they offer a partial explanation to our previous remarks on questioning the presence of the Pythagorean tradition. These passages not only describe a story of Zeno and his idea that music leads to judgements, which is already a significant testimony, but also indicate, in a rather precise manner, what Plutarch considered to be significant in the Pythagorean thought with regard to the Stoic tradition. He does not dwell on the technical numeric explanations but speaks of concord which arises from harmonising and ordering the different instruments, discord and dissimiltude, as well as the disproportion altogether. This, as we have previously discussed, constituted the very essence in the formation of the musical thought of the Classical Greece, and was started to be conceptualised even earlier, especially in the philosophy of Heraclitus.

The similarity becomes even more evident if we take into account that the harmonising described by Plutarch is not limited to the musical analyses – it is employed while discussing the cosmic and ethical realm[282] as well. It is in these aspects that we can consider the continuation of Pythagorean tradition. Even though we do not have the same division where these ratios are conceptualised and named to be cosmic, political, philosophical or ethical kinds of music, the discourse of universal proportions retains its significance. The change in conceptualising and the choice of terminology is of high importance and we will come back to it later on. For now, we must note that there is a continuity on the discourse of proportions, on the different elements that are brought together into the coherent union by the correct ratios, and that these ratios are of universal nature, not limited to the musical art.

This can already be noticed from the Cleanthes' *Hymn of Zeus*, where Zeus is credited with the work of craftsman who orders the worldly disorder into a single

[282] Cf. Stob., *SVF* 3.560; Gal., *PHP* 4.2.

everlasting *logos*.[283] Similar description could be found on Apollo, where he was "represented as a musician and kithara-player because it strikes every part of the cosmos tunefully and makes it harmonious in all of its parts: none of them, of all that exists, can be considered out of tune."[284]

Our discussion could benefit from several remarks made by Long. The scholar noted that the musical terminology is chosen in the Stoic discussions because it has a mathematical foundation. He focused his research on the analogy between the musical and the ethical harmony and pointed out that living harmoniously "is a relational notion, and that Zeno in his definition of the goal of human life, has intended his formula to be understood in similar way.[285] Our quoted passages echo this view, for it is not the different constituents but the right ratios that establish the performative activity (and other similar structures) as a united whole. Long contends that *sumphonia* is conceptualised in conjunction with *logos* and, more importantly, points out that the translation of *orthos logos* to the "right reason", to which we are used to when discussing Stoic ethics, is insufficient. According to the scholar, it is necessary to emphasise that *orthos logos* is also a "right ratio" or "right proportion", which is of the essence for understanding the Stoic views not only in relation to music, but also to their ethics and cosmology. Such ideas find great correspondence in a passage of Diogenes Laertius, where the Stoic views on the perfect good are being discussed:

> The reason why they characterize the perfect good as beautiful is that it has in full all the "factors" required by nature or has perfect proportion. Of the beautiful there are (say they) four species, namely, what is just, courageous, orderly and wise; for it is under these forms that fair deeds are accomplished. (Diog. Laert 7.1, transl. by Hicks [59])

It is evident that proportions are conceived as constituting all the entities in the world and there is probably no music that cannot be measured in proportions. At least in Antiquity, this did not require any further explanation. Though what becomes worthy of a greater attention in the discourse of music philosophy is that it is not the proportions that are applied to the musical thinking, but the proportions of the world are explained

[283] SVF 1.537; Diog. Laert 7.88.

[284] Cornutus, *Gr. Theol. Comp.*, 32, transl. by George Boys-Stones = SVF I.503.

[285] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*, p. 202.

through music – either directly conceptualised as some particular types of music, as we noted in the works by Plato, or music is employed as an analogy to explain them. This can be said both about the Classical Greek and the Stoic thought. Therefore, proportions are not just a tool to indicate whether a musical piece complies with some specific conventional rules of a musical theory. They are the prerequisites of any song, and it is them in particular that constitute the ethical effect.

The broad notion of music in the Stoic thought, although different in several aspects from its predecessors, is still inextricably connected to the discourse on proportion. Different musical modes have a different impact (e.g., Phld., *De mus.* IV, col. 9), which depends on the ratios that are the essential part of these modes. Although it is common that music is described as sounds, it is not them that have the actual power and the main interest of the philosophers.

We may notice how the non-acoustic definitions of music were further employed and developed by the subsequent thinkers. For instance, Philo discusses the musical phenomenon in terms of divine, mathematical, ratio-based notion of harmony, which represents the transcendent reality. He employs a very broad definition, similar to the one we encountered in the thought of Classical Greece, and presents music as a uniting practice that joins together (not necessarily sonic) elements into a united whole:

> Music will charm away the unrhythmic by its rhythm, the inharmonious by its harmony, the unmelodious and tuneless by its melody, and thus reduce it discord to concord. Geometry will sow in the soul that loves to learn the seeds of equality and proportion, and by the charm of its logical continuity will raise from those seeds a zeal for justice. (Philo, *Congr.* 521.16, transl. by Colson and Whitaker [48])

Similarly, in *The Migration of Abraham*, 178 (SVF 2.95) he refers to the Chaldean explorations on astronomy and the analogy between the principles of the universe and human music, which can "exhibit a most perfect symphony as existing in the universe". The basis for this analogy is the "common union and sympathy of the parts for one another, which though separated as to place, are not disunited in regard of kindred." Philo comes back to the ancient definition of music as a practice of harmonising, that is, ordering according to the objectively right ratios, which can be recognised by exploring the structure of the world. As Carlos Lévy eloquently pointed out, in Philo's thought "Music is […] a path to transcendence, a threshold between the variety of sensation and

the perfection of the archetype that it reproduces. Thus man creates musical instruments by imitation of nature, but the music he creates is itself the imitation of an archetypal music. […] The human being is no longer defined as a merely rational being, as in the Stoic doctrine, but rather as a musical being. […] *Mut*. 184: "We are born in a form of mixtures where the divine and the mortal are mingled together and harmonized according to the perfect musical relations.""[286]

In the next subchapter we will continue discussing how the Stoics applied the discourse on proportions to their musical thought and how they explained the relation between the acoustic impact and the ethical dispositions of a human being, for in this aspect they differ from their predecessors. Nevertheless, our quoted passages indicate that the broad notion of music did not completely disappear and, as we shall demonstrate, was employed simultaneously with its narrow substitute.

The Stoic philosophers came back to the analysis of the rationality of the cosmic world in relation to a human being and they made it a centre of their theory. Due to this choice, we are faced with several similarities to Plato's position on music, and this is most evident in the thought of Diogenes', although it is now discussed within the material framework of mind. What has previously been conceived as transcendent music, in the Stoic thought belongs to the sphere of physics. Nevertheless, despite this important shift in epistemology, the main aspects of the preceding theory of music have the flexibility to be adapted to the Stoic discourse surprisingly well.

[286] Lévy, C. (2020). The Scala Naturae and Music: Two Models in Philo's Thought. In: Pelosi, F., Petrucci, M., eds., *Music and Philosophy in the Roman Empire*, Cambridge: Cambridge University Press, p. 32.

3.2.2. THE DISCOURSE ON MUSICAL POWER – AN INNOVATION OR CONTINUITY?

We can now enquire about the power that the Stoics attributed to musical phenomena. As indicated before, Zeno, Chrysippus and Diogenes all agreed that music can have a significant effect on a person's soul. By contrast, the Epicurean philosopher Philodemus of Gadara, through which we know so much on the ideas of Diogenes of Babylon, ridicules such claims by stating that music can be discussed as matter of pleasure but dismisses any possibility of its ethical impact[287]. According to Philodemus, it is the words that have a real effect and not the sounds, therefore, he denies the importance of music as an educational, virtue-bearing, or divinity-honouring activity.[288] In order to point out the preconceptions leading to the disagreement with Philodemus, we shall now direct our attention to the Stoic ideas on the ethics of music. The critique that Philodemus directs at Diogenes is a good starting point for the conceptual analysis, because it presents us with the two opposing attitudes and a hint of miscommunication.

First, we shall enquire whether in this battle of ideas, the opponents do, in fact, have the same object in mind. That is to say, whether they employ the same notion of music, and, if so, what exactly they refer to when discussing the musical questions. From what we explored previously[289], it is now clear that throughout the history of using the term, *mousikē* was employed in a great variety of contexts. The very fact that both authors use this word, does not necessarily mean that music for Philodemus has the same referent as for Diogenes. In fact, the problem that some concepts which Philodemus presents in his commentary on the ideas by Diogenes of Babylon, are not discussed in fairness, was already indicated by Delattre[290]. He notes that Philodemus strongly separates music from

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[287] Delattre, D. (2001). Vers une reconstruction de l'esthétique musicale de Philodème (à partir du livre IV des *Commentaires sur la musique*). In: Auvray-Assayas, C. and Delattre, D., eds., *Cicéron et Philodème: la polémique en philosophie*. Paris: Éditions Rue d'Ulm, pp. 371–384.

[288] See Ferrario, M. (2011). Parola e musica in 'Plutarco' e in Filodemo. *Quaderni Urbinati di Cultura Classica* 99(3), pp. 73–81, Laurand, V. (2014), *op. cit.*

[289] See the 1st chapter of this thesis.

[290] Delattre, D. (2000). Towards the musical aesthetic of Philodemus (*On Music*, *Book IV)*. In: Hickmann, E., et al., eds., *Musikarchäologie früher Metallzeiten* 18(2). Rahden: Verlag Marie Leidorf GmbH, pp. 287–293.

poetry (cf. col. 143), while Diogenes does not make such distinction[291]. According to the scholar, "if Philodemus' Stoic adversary, Diogenes of Babylon, could acknowledge that education and training in the virtues had major importance, it is because, as a man of the past […], he willingly continued to make no distinction between what in the fifth century B.C. was not yet really delineated anyway: the poetic text, on the one hand, and the melodies and rhythms in which it was sung, on the other. This is the fundamental error which Philodemus denounces constantly in his opponent of the preceding century, and which he deems all the less excusable because, in the second half of the fourth century, Aristoxenus, the great musician and disciple of Aristotle, had already distinguished the two very clearly, and in so definitive a way that the distinction has lasted to this day."[292] Although Delattre mentions only the opposition between sounds versus sounds and words[293], the discussion should not end here. We shall question if the Aristoxenian distinction was indeed so definitive. As Delattre himself indicated, Diogenes of Babylon continues the earlier discourse, though is he really the man of the past, who made a "fundamental error", or was this tradition simply not yet at its end?

The discussion on Diogenes' definition goes even further, for he agreed that even wordless music can have an effect on a person's soul. This can be noticed from the usage of the instrumental practices in the war, in the athletic activities or from the therapeutic effects that music is able to provide (e.g., Phld., *De mus.* IV, cols. 39–41). Diogenes' notion of music, then, encompassed both the arranged sounds together with words, and wordless music. Nevertheless, the topic that Delattre indicated is the conceptual one and it bears real significance. Although we have accepted Philodemus as a rather reliable source, based on his fairness in retelling the arguments of his opponents, this miscommunication is already one of the reasons for his criticism. Noticing such conceptual challenges and the different usage of the terms are of utmost significance, for they demonstrate that certain changes take place in the cultural paradigm of musical reception. As we have indicated in our previous subchapter, quoting the examples from

[291] Cf. Barker, A. (2001), *op. cit.*, p. 353.

[292] Delattre, D. (2000), *op. cit.*, p. 287.

[293] The opposition of wordless music and music that includes lyrics in Philodemus' work is also analysed by Woodward, L. (2009). *Diogenes of Babylon: A Stoic on Music and Ethics*. Doctoral dissertation, University College London.

Zeno to Philo, Diogenes was not the only one who attributed music a definition, not limited to its acoustic nature, and it becomes clear that both of these traditions were present at the same time, which, in turn, contributed to the disagreement on the musical questions.

Diogenes of Babylon clearly states that music is a very powerful tool that is directly linked to the ethical domain and that it could be used as a therapeutic tool. He advocates for musical practices in pursuing virtuous life and even claims that "music leads to Virtue, and even to a good number of Virtues, if not to all" (col. 49). In the recently quoted passage from col. 51, we could read that musical practices require the utmost caution, for they can also significantly damage the morale of the listener. Moreover, music is not only conceptualised as a tool that helps to attain virtue, but it can itself be virtuous or the opposite (e.g., col. 18, 20). The virtuousness of a musical piece depends on its structural properties. For instance, the enharmonic music is considered to be majestic, noble, simple and pure, while the chromatic one is considered to be unmanly, vulgar and inappropriate for the free men (col. 116). On this subject, Paul Scade has made an important contribution in exploring the Stoic notion of music with an emphasis on its rationality. He defined music as a kind of non-verbal language that can be used for communicating rational content. The scholar claims that "[…] music is a type of 'language' that provides an alternative, non-verbal means through which rational structures can be articulated and comprehended and that, and […] as such, music as the ability to be rationally persuasive in the same way as does verbalized language. Music is able to communicate the content of thoughts from the composer or the musician to the audience, and the listener is, likewise, able to comprehend the rational contents of the musical message, in principle at least."[294] Although the first part of the argument has a solid argumentation, the second part, which discusses the communication between the composer and the listener, deserves more attention.

As we have already indicated, certain musical structures were understood as having a particular, universal ethical impact. Scade's article discusses the inner-properties of the musical structures and after a detailed exploration comes to defining them as a rational content. This rational content is expressed through certain ratio-based musical structures

[294] Scade, P. (2017), *op. cit.*, p. 203.

and communicates certain qualities that make impact on a listener's soul. However, several questions could be raised towards the scholar's choice to shift a discussion on music as a communicative tool that encodes messages between the poet and the listener. Scade claims that "[…] musical composition involves the creation of an ordered structure of notes representing rational impressions in the soul of the composer; sound acts as a corporeal medium that is shaped to convey these rational musical structures; and, at the other end of the equation, the structures carried by the sounds are impressed on the souls of the listener and cognized in a rational manner. In short, music has its effect by communicating meaningful rational structures from one mind to another […]."[295] The consideration of music as a language that a poet could use to encode his messages, seems to be a rather modern approach. The primary attention of Diogenes of Babylon is directed not to the poet's messages, the music as a different kind of language, or a tool of communication. He focuses his discourse on the embedded qualities that any type of music inevitably conveys, for it always has a certain ratio-based structure. Music indeed "communicates" to the people, though this communication could alternatively be considered as a structural impact rather than a message. Similarly, the poets do not really create a message, but arrange the musical qualities in a certain way, so that it would have an acoustic and ethical effect they desire. The arrangement of ratios into certain structures that a poet executes, therefore, could be seen as his craft of power rather than a language to communicate a particular rational content from the mind of a poet to the mind of the listener. Such position would be strengthened by the fact that, according to Diogenes, music has an effect on animals (col. 49) and children, who are not yet at their cognitive capacity to comprehend the musical content.

A few paragraphs below we are going to discuss the role of the listener, for he too participates by perceiving music, and Diogenes considered it to be significant. Though for now we shall point out that a poet could "communicate" a message or create a certain effect on the listener's soul, only if he had the complete knowledge of the rational structures. In other words, only the sages could create real musical messages. Evidently, Diogenes is sceptical of such possibility – one of the main problems that he is concerned with, is that neither poets, nor the listeners do not always know what is embedded in

[295] Scade, P. (2017), *op. cit.*, 198.

music. This is why in col. 51 he discusses the problem of understanding what the wordless music means and claims that at such a loss, it is the words that might provide guidance.

Woodward has rightly compared[296] this passage to a similar excerpt from Plato's *Laws* (669b-e) and concluded that Diogenes repeats Plato's idea of the competent judges that must be found in order to ensure that the virtuous musical practices are employed. The scholar claims that "the teachers will ensure the child is exposed only 'to the right or appropriate music to habituate the child's ear to choose that kind of music, and to see value only in appropriate music, until at a later stage of development, the educated child will consistently select appropriate music through the knowledge he has acquired through education"[297]. As the quoted passage from col. 51 clearly presents, it happens to be so that the human poets are far inferior to the Muses and the listeners cannot so easily recognize the wrong kinds of music. The fact that Stoics thought of it as having the rational structure, does not negate the possibility of enraging the emotions of a person and leading a man towards virtue or its opposite.

This is because the nature of a rational structure (such as the virtuous or correct music) also indicates the possibility of an error. Diogenes is concerned with the unvirtuous musical practices and the incompetence of judgement regarding the musical structures. He proceeds with this argument by claiming that education in recognising the embedded musical qualities must be employed, for music belongs to the domain of ethics, and in case it is left without supervision, it can do a great harm to the virtuousness of people. As we have discussed in the first part of the thesis, finding the competent judges is only a secondary step, for something must determine whether a practice is virtuous or not in the first place. In the Ancient Greek framework of mind, those who judge must have a reasonable cause for their judgement, whether gained from the scientific evidence, calculations, or from the experience. Both in the Classical and the Stoic thought these judgements are dependent on the analysis of the musical structures, in particular their constituting ratios.

Our recently discussed passage confirms that for Diogenes, even if he already writes in the more technical way than Plato, the basis for the virtuous melody is the choice of the right elements and their correct harmonious order – an objectively right structure. We

[296] Woodward, L. (2010), *op. cit.*

[297] Ibid., p. 34.

can already suppose that the rightness of it can be determined by its correspondence to the rational principle – the all-pervading *Logos*. It is a completely different question of how to approach this rightness – either by years of experience of observing what effect the different kinds of music have; employing technical theories of music and analysing how the different elements should be combined in the final composition; or trying to calculate the right order mathematically. The main interest of Plato, as well as of Diogenes, was to indicate the problem altogether. It was simply not their goal to dwell into the very technical analyses of music and this is why they entrusted this responsibility to the competent judges. They both agree on the necessity for them to decide on the matter, but their primary concern is that *mousikē* is a very powerful phenomenon, that it conveys certain qualities or likeness of characters, and that it is indeed challenging to control.

It seems possible that this is the reason why Diogenes shifts so much of his attention to the listener and not the poet who encodes certain qualities in his musical messages. It takes a sage to check every poetic composition and decide on its compatibility with virtue. However, musical structures are perceived by the listeners, and could be cognised if a person has enough skill and knowledge to understand the encoded message. Scade has discussed this in great detail, and eloquently pointed out that "[…] it will only be people with adequate musical expertise who will be able to consistently identify complex structures in wordless music but this does not mean that wordless music fails to carry a rationally comprehensible message, only that not everyone has sufficient expertise to be able to understand it adequately at all times."[298]

Besides the idea that music can communicate certain ratio-based rational content, it is necessary to point out the increased role of the listener. We are no longer discussing only the competent judges who can define which practices are virtuous and vice versa, but the education of the listener who is responsible for reading the encoded ratios and their transmitted ethical predispositions correctly. According to Sophie Aubert, "Diogenes emphasizes that the Sage is able to make at every moment the most rational choice, *sc.* to model his reason on universal reason. Through this notion, the final end

[298] Scade, P. (2017), *op. cit.*, p. 204.

becomes a constant exercise of reason, a continuous realisation of universal harmony."[299] Diogenes' position is very much in line with our previous idea of a shifting tradition, where a particular listener is attributed with a responsibility to choose and assent to the external stimuli which do not harm their virtue.[300] In this case, it is not only the musical practices that affect a listener, but a listener is an active contributor in any musical activity.

Cicero seems to agree with this in his *On the Nature of Gods*, where he discusses the human senses and claims that musical piece has many embedded qualities that are perceptible to the human ears.

> The ears too possess a remarkably craftsmanlike sense of judgement, by which we can distinguish, in vocal music and in wind or string instruments, timbre, pitch and key, and a great many vocal qualities as well: a melodious or 'dark' voice, a smooth or rough one, a flexible or inflexible one. These distinctions are made only by the human ear. (Cic., *Nat. D.* 2.146, transl. by Inwood and Gerson [42])

The main points that Philodemus cannot accept is the idea that music could have an actual influence on a person's character, and that music and words should be comprised under one concept. For him, it is only words that have significance and can make actual difference for the listener. Music, therefore, is limited to the sphere of sounds, which, according to him, are not able to possess meaningful content. As Delattre points out, for Philodemus, "the material of poetry is essentially words, arranged of course in a certain order and according to a certain rhythm, but the combination of which is the bearer of meaning, whereas music is deprived of meaning (*asemantos*). In other words, the dividing line which Philodemus draws between poetry and music is precisely the one which separated the category of *logos* – of reason, language and the rational – from the category of the *alogon* – of what lacks and is irrational."[301] The last point on rationality is essential

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[299] Aubert, S. (2009). Stoic rhetoric between technique and philosophy: the example of Diogenes of Babylon. In: Woerther, F., éd., *Literary and Philosophical Rhetoric in the Greek, Roman, Syriac, and Arabic Worlds*. Hildesheim: Olms, p. 95-117

[300] For the view that a man is not always responsible neither for the health of his body or that of his soul, as a result of fated movements in the Universe, see Gould, J.B. (1970). *The Philosophy of Chrysippus*. Leiden: Brill, p. 151.

[301] Delattre, D., Towards the Musical Aesthetic of Philodemus, p. 287.

for our discussion. Philodemus positions music as a practice which takes part in the so called Aristoxenian tradition, and defines music as a self-sufficient discourse on sounds, arranged in a particular way. In such case, there is no place for the very broad definitions of the past, such as cosmic or political music, for his definition regards arranged sounds as belonging to the category of *alogon*. This is a technical approach where music is understood in a way, which for the earlier generations of Greeks was a rather "new" or at least rather uncommon[302] way of looking at what music is, though which is much closer to our contemporary understanding of musical phenomena.

If music would be limited to the perceptive field and the pleasure it provides, it would not be worthy of a philosophical discussion. In fact, this is what is said about the views of Epicurus:

> Epicurus in his *Problems* declares that the wise man is a theatre-lover, who gets more joy than anyone else from festival concerts and shows. Yet he allows no place, even at table, for issues of musical theory or for literary-critical questions. (Plut., *Non Posse* 1095c, transl. by Long and Sedley [45])

The Stoics, as we are told by Laertius, held the opposite views and maintained the traditional standpoint that it is not pleasure that constitutes the significance of musical phenomena:

> As for the assertion made by some people that pleasure is the object to which the first impulse of animals is directed, it is shown by the Stoics to be false. For pleasure, if it is really felt, they declare to be a by-product, which never comes until nature by itself has sought and found the means suitable to the animal's existence or constitution; it is an aftermath comparable to the condition of animals thriving and plants in full bloom. And nature, they say, made no difference originally between plants and animals, for she regulates the life of plants too, in their case without impulse and sensation, just as also certain processes go on of a vegetative kind in us. But when in the case of animals impulse has been superadded, whereby they are enabled to go in quest of their proper aliment, for them, say the Stoics, Nature's rule is to follow the direction of impulse. But when reason by way of a more perfect leadership has been bestowed on the

[302] Cf. Hibeh Papyri (1.13) dated to be late 4th or Early 3rd c. B.C. which argues that melodies are in no disposition to change the character of the listeners. The exact date of this document, however, remains a controversial topic. For instance, the recent edition of *Corpus dei papyri filosofici greci e latini*, *Parte II.1**, Frammenti adespotti*, dates the document to be even older (5th–4th c. B.C). For the discussion and arguments on the later date, see Wallace (2015, pp. 173–176).

beings we call rational, for them life according to reason rightly becomes the natural life. For reason supervenes to shape impulse scientifically. (Diog. Laert., 7.86, transl. by Hicks [60])

This allows us to point out the main disagreement between Diogenes and Philodemus, which is the existence of the rational content in the musical arrangement. We may note that such disagreements are highly dependent on the conceptual extent attributed to the term and that they are not only ideological, but also linguistical. The Stoics understood musical harmony as intrinsically rational structure, which is in this aspect similar to the structures of the cosmos or the soul. As explained by Delattre, "For an Epicurean […] imitations (*homoiomata* or *mimemata*), of whatever kind, cannot be in any way substituted for the real objects (*ta kyria*) of which they are the imitation. For they lack an essential characteristic, the third dimension, that of depth, which alone can give the 'atomic pulsation' internal to the real object or living body from which the sound comes. Music is then all the more a trompe-l'oreille, just as painting is only a trompe-l'oeil. In this way, he rejects one of the bases of his Stoic opponents system: the recognition of the eminent status of music by virtue of its allegedly exceptional mimetic character."[303] It is for this reason that Philodemus denies music a mimetic capacity[304] and ridicules it by giving a comparison to cookery:

For music is not an imitatory art (μιμητικὸν), as some people fondly imagine, nor does it, as this man says, have similarities to moral feelings which, though not imitative, yet express all ethical qualities such as magnificence, humbleness, courage, cowardice, orderliness and violence–any more than cookery (Phld,, *De mus.* IV, col. 117, transl. by Wilkinson [38]).

Music is also denied any philosophical conceptualisation, and subsequently the special status that this phenomenon maintained in comparison to the other arts, can no longer be justified. This is most evident from the cols. 148–149, where Philodemus claims that:

[303] Delattre, D. (2000), *op. cit.*, p. 289.

[304] See Wilkinson, L.P. (1938). Philodemus on *Ethos* in Music. *The Classical Quarterly 32(3/4)*, pp. 174–181; Wurster, S. (2015). Changing Perceptions: Philodemus and Epicurean Philosophy. *Iris, Journal of the Classical Association of Victoria* 28, pp. 13–28.

If the gods invented music, they gave the other crafts as well: but (these men) extol (them) as (having given) this one alone. (Phld., *De mus.* IV, cols. 148–149, transl. by Henry [40])

As discussed before, in the Stoic musical thought we can notice the continued discourse on the relevance of proportion. Therefore, music, as well as the cosmic world and the soul share the same principles of the harmony-establishing rationality. As it is summarised by Paul Scade, "Harmony is equivalent to beauty, health, proportion, and the rather enigmatic characteristic of 'having all the numbers', with all of these terms being used interchangeably to describe properly unified structures".[305] The indication of proportionate musical structures as the fundamental part of music is very much in line with the thought of the previous thinkers. However, in most of the cases, it is no longer conceptualised as different kinds of music, but as a sonic music that has proportions as its natural prerequisites. Subsequently, the definitions of music are then usually associated with sound, although they are still intrinsically connected to the discourse of proportion, ratios, universal and divine rationality. This difference in naming the objects, such as cosmic proportions vs. previous notion of cosmic music, marks not only a linguistic, but a conceptual change as well, which clearly demonstrates that the phenomenon of music was started to be understood differently. A change that was introduced in the discourse on music by the Stoics and which was probably inevitable, for the broad definitions and such wide usage of the term could, and did, complicate the possibility of a successful communication.

We can notice that the definition of music eventually gets narrower, and, in this aspect, it becomes alienated from the previous tradition of the musical thought. However, the Stoic notion of music was also not limited to the mere sounds. Instead, it was always inextricably linked to the arrangements of the ratio-based structures. The Stoic definitions of music as sounds, contrary to the views of Philodemus', are not self-sufficient, because they were conceived as interdependent on their other philosophical arguments. Even though we have very limited number of sources on the Stoic musical heritage, music can still be considered to be a subject of high relevance. For the Stoics, music was not the domain of the self-sufficient conventional musical theory, where it could be understood as a sound without any embedded qualities of non-sonic nature. The broad

[305] Scade, P., (2017), *op. cit.*

conceptualisation of music was not completely over – we could say that the way of defining it changed from the "cosmic music" to the "music in relation to cosmos", from "music of the soul" to "music in relation to soul", etc. The narrower definition of music as sound still involved discussions of the non-sonic qualities, though because of the smaller conceptual extent, it allowed to avoid certain terminological confusion. On the other hand, a noticeable change in the conceptual extent already marks a shift in the cultural consciousness and indicates that certain conceptual links eventually ceased to exist. [306]

Barker rightly noticed that the Stoic theory on music was neither truly Pythagorean, nor Aristoxenian[307], and this can also be said about their conceptual choice towards musical discussions. The Stoics incorporated the elements from both of the traditions, for up to a certain extent, in the period of Ancient Stoa they were both present. It would seem reasonable to discuss the Stoic thought as being in the midst of a shifting tradition, where the broad and narrow definitions of musical phenomena were both present at the same time, and where the philosophers strived to define music in a more understandable and a more univocal way.

However, several conceptual changes must have been introduced. For instance, instead of conceptualising proportions as numeric dispositions, the Stoics defined them through their discourse on tension and the intensity of pneumatic element. On this subject, one of the most valuable contributions is made by Paul Scade, who explained that "What causes a body to be a single unified thing, and what determines the qualities of that thing, is the tension between expansive and contractive forces, associated with the elements of fire and air respectively, in the *pneuma*. Different degrees of tension correspond with different qualities or dispositions and this enables us to say that states of the soul are determined by tensional ratios."[308] The elements of the world interact according to certain

[306] It is highly relevant to emphasise the remarkably long timeframe from the Early Stoic period to its later reception, such as the Aetian description which focuses on the sonic nature of music. Although we have discussed the sonic properties in relation to the well attested theory of indifference, the Ancient Stoics were much closer to the Classical tradition and, as can be noted from the passages quoted in the previous subchapter, they referred both to the sonic and the broader conceptualisation of the phenomenon.

[307] Barker, A. (2001), *op. cit.*, p. 356.

[308] Scade, P. (2017), *op. cit.*, p. 208.

ratios which result in creating tension. In the Stoic framework of mind, tension is the common element that establishes the connection among the cosmic, the ethical and the perceptible realm[309]. In the musical framework, it produces a hearable sound, though this sound is nothing else but an expression of a certain tension. Since the soul in the Stoic thought was also conceived as corporeal, the same principles apply, and this commensurable materiality establishes the grounds for the musical effect. This effect, similarly to the preceding tradition, was still conceptualised within the scope of a cosmological analysis. As explained by Long, "Viewed macroscopically, tension is that property of the divine *pneuma* or *logos* which makes it, in its interaction with matter, the universal principle of causation and dynamic coherence. Viewed microscopically and ethically, tension is a property of the human soul, which is itself a fragment of the divine *pneuma*."[310]

The Stoic discourse on music still deals with the conceptualisation of the correct and incorrect ratios, or rationality in music. Although the focus shifts from numbers and calculations to the different qualities that establish different kinds of tension, the ratios and musical structures still have mathematical background, even if it is not as explicit and did not attain the separate line of reasoning in the musical writings. Something is rational because it is corresponding to the rationality of the world, and this is why the *logos* which can be both translated as ratio and rationality, remains the topic of the highest relevance in the discourse on music, even in the Stoic thought. Therefore, music as a mathematical art may not attain such a great relevance as in the preceding tradition, though it still has mathematical implications.

The Stoics also continue to discuss music in relation to cosmology, to the rationality of the world, and the soul. The knowledge about these ratios can contribute to understanding the order and the unity of the musical piece that a person listens to, but it is not the only way it works, for recognising the rationality in music also leads to comprehending the order and the unity of the world at large.

It is now clear that the philosophical interest on music was based not on the analysis of the sound, but on its underlying qualities. Heraclitus proclaimed that "Nature tends to hide Herself" (DK22 B123). From our discussion, in which we covered the reception of

[309] Cf. Phld., *De mus.*, col. 77.

[310] Long, A.A. (1996). The harmonics of Stoic virtue, *op. cit.*, p. 212-213.

Pythagoreanism, the Classical and the Stoic thought, it is now evident that music took part in exploring this hidden Nature, for it was a medium through which the philosophers analysed the structure of the world, the soul and the matters of human perception.

After the Platonic notion where music is discussed as having correspondence to the transcendent ideal forms, Aristotle and the subsequent traditions where the ideal world is not conceived in such a separated way, had to re-conceptualise their discourse on music. We have already indicated that music was still conceived as an art based on the right or wrong proportions (numeric or qualitative) which enable the different structures (rhythms, modes or melodies) to constitute a different ethical effect. Therefore, apparently, there must be some theoretic presuppositions that allow to explain the power of music. Aristotle does not analyse the inaudible structures or the notion of the astronomic music, albeit he highlights the fact that the Pythagoreans who believed that the cosmic realm emits any sound, were wrong. This is not surprising, for here he takes sound as the essential quality of music – something which could not be said about Plato's musical theory. Aristotle does not question the prerequisites necessary for the ethical power of music and describes this power as an already established truth. It was Plato who examined how the acoustic music interacts with the other modes of harmonising and employed a broad notion of music which would be very close in meaning to an 'embodied proportionate entity' or "the means for harmonising". To Aristotle, music is a purposeful activity that has an effect on both the intellect and the psychological state, but he is more involved in researching its effects rather than its metaphysical implications. Nevertheless, he admits that certain structures have an effect on a human soul, and that the effect of these structures is universal.

The Stoics continue the previous philosophical discourse on music by considering it in relation to the cosmological and ethical questions. As we have already indicated, they could not allow the notion of metaphysics that we encountered in Plato's theory of forms. In the Stoic thought, the qualities of music are more often defined in the material terms and the term "music" is commonly used in its narrow meaning, limited to the acoustic definition. Therefore, the proportions of music are not conceived as direct representations of some external ideal intervals. Similarly, they cannot be discussed as having direct correspondence to some superior music or superior ratios. To them, all the ratios that exist, exist in the same physical world, where they are expressed in terms of tension. In

the Stoic thought, the proportions matter, though they are not the imperfect representations of some external ideas, but the structures that have an impact on their own. When a musical composition is played, certain structures, which are perceptible to the listeners as sounds, are being activated, they leave an imprint on a person's soul and this could lead to a certain change in his ethical dispositions or have an effect on his emotions. This effect is universal, for it is based on the intrinsic rationality that a musical medium delivers, and which is commensurable to the rationality of the human soul. Musical structures take part in the Natural world, governed by *Logos*, and the Nature too dictates its course through music as well as through any of the other material entities.

CONCLUSIONS

Our explorations reveal a journey that the conceptualisation of music has experienced throughout the times of various philosophical schools. It demonstrates how the concept of the very broad notion of inaudible music underwent a number of conceptual challenges, eventually diminished and lost several semantic links, which is an indication of a significant conceptual shift compared to the preceding philosophical thought on music. We have demonstrated that the philosophical argumentation took an essential role in conceptualising the phenomenon of music, and from the Classical Greek period onwards, the philosophical supplement became especially significant for determining its social and political relevance.

We have encountered an especially broad notion where music was defined as a variety of not necessarily audible harmonious entities. It was considered to be an art (not necessarily human art) that harmonises the different elements into a union. There was a definition of music which referred to "being proportionate", "harmonised", or "a process of establishing the right proportion". This constituted the foundation for the discourse of "music as philosophy" as well as for the "cosmic music" – the two notions without which the research on the conception of music in Ancient Greece can never be full.

Our research confirmed the initial hypothesis that it is not enough to analyse the concept of music only as a sound-related activity. Even though the sounds are important, their power to affect a human being has a considerably broader theoretical basis. The audible music attained philosophical relevance due to its numeric structure, which affected the listener through a sensibly perceivable form of reality – the sound. The sound was not considered to be significant because of its acoustic nature or the pleasure it provides. Rather contrarily, its relevance was based on the connection that allowed the acoustic medium to embody the cosmic ratios and to communicate them to a listener. For this reason, in the Pythagorean tradition, as well as in its later reception and development, music was not explored as a conventional system with its own rules, but only as an intermediary between the cosmic realm and the human soul which perceives it.

This allows us to explain another problematic issue that we encountered in the first part of this thesis – that is, to explain the ambiguous value that was ascribed to the musical phenomena. In the sources we discussed, music was not considered to have such a great

relevance as a performative practice, isolated from the theoretic argumentation. Therefore, in this framework of mind, the significance of music as a craft was only of secondary importance. Such remarks are especially relevant considering that a great number of scholarly studies focus particularly on these two aspects – the social practices or music as an art of sound. However, in our primary sources the greatest and the most valuable quality that the philosophical writings attribute to music is the potential to convey the ratio-based structures to the human soul. This constitutes the basis for the theoretic argumentation, from which the explanations about the great impact of the sonic music naturally emerges.

Such findings provided us with a conceptual link that allowed to answer our initial question – how could listening to the sounds lead someone to virtue or vice. Moreover, how could it affect the overall ethical choices of a person. It is this theoretical discourse of embedded proportionate qualities that constitutes the framework for the musical ethics. There is a direct correspondence between the cosmic ratios, and the human soul, which is also conceived as having a numeric foundation. Music, because of its inextricable relation to mathematics, is conceptualised as a medium which connects the cosmic and the terrestrial world. It is through music, which is the most direct mathematical medium compared to the other forms of art, that the cosmic numbers are perceived by the human senses and, therefore, depending on how the ratios are composed, they can have a very powerful ethical effect, since a human being takes part in the relationship of micro and macrocosm. Because of this relationship, some musical (and mathematical) compositions can disbalance a human soul or, contrarily, to harmonise it, depending on their correspondence to the cosmic ratios.

This line of thinking would also explain a certain strictness of why in Plato's case only the few musical modes should be employed, while all the other kinds of music must be avoided or forbidden, even by the law, because they are dangerous for the polis. The sound that a human soul perceives is not just a sound – it brings together the proportions which, due to the structure of the universe and its commensurability to the human soul, affects a listener whether he is aware of it or not. The notions of cosmic, political, ethical music or music of the soul are not only metaphors, for all of them have the same structural basis, either numeric or qualitative. Therefore, there is the audible music, which is heard as sound, but there is also the inaudible music (namely the music of the soul, the ethical,

cosmic or political music), and all of them are connected through the common philosophical argumentation on proportion. This leads us to the possibility of 'Philosophy as the greatest music', in a sense that it allows the possibility to acknowledge this hidden nature which would otherwise be limited to the sensual perception.

We have followed the development of these ideas to the subsequent philosophical traditions and made one of the first attempts to demonstrate how the individual Stoic testimonia can and should be interpreted against the background of their other philosophical arguments, such as their reasoning on the cosmological or ethical matters, and their theory of the soul. Even if the later sources adequately report the Stoic definition of the corporeal sound, we can still notice a rather clear trait, at least in the passages from the Early Stoa, that the definition of music was not always limited to the notion of the sound-sequences. They might not have had a dedicated explicit musical theory, though, considering the other subjects under which the musical topics appear, it becomes clear that a phenomenon of music had retained its philosophical relevance. Music was conceived as existent in the nature itself and as having a certain ethical effect, which points towards the broader scope of philosophical argumentation that the Stoics developed in addition to their arguments on the musical matters. In this thesis, we have delineated the contexts and the subjects under which these discussions take place and demonstrated an effort to connect them into a united conceptual vision based on the extant Stoic testimonia.

Musical practices and their acoustic nature undertook an important role already in the Archaic and the pre-Archaic world. Nevertheless, the descriptions of the sonic music cannot sufficiently express the complexity of the conceptualisation of the phenomenon which, on the other hand, becomes available through the arguments of its later philosophical conceptualisation. The cultivated philosophical mind introduces a change by emphasising the additional – primarily intelligible – elements, which are hidden in the natural structure of the world, and which provide the reasonable basis for constituting the significance of the musical practices. This is why shifting the scholarly attitude from the common definition of music as a sonic phenomenon or which focuses on the performative qualities of the musical experience, can, therefore, lead to the extremely fruitful results and provide us with the information about the cultural framework of mind in the Ancient Greek society at large.

ABBREVIATIONS OF THE SOURCES

Leg. = Leges

Phd. = Phaedo

Phdr. = Phaedrus

Phlb. = Philebus

Symp. = Symposium

Crat. = Cratylus

Ti. = Timaeus

Cael. = De caelo

De an. = De anima

Eth. Nic. = Ethica Nicomachea

Ph. = Physica

Poet. = Poetica

Sens. = De sensu

Strom. = Stromateis

PHP = De placitis Hippocratis et Platoni

De virt. mor. = De virtute morali

De anim. proc. = De animae procreatione in Timaeo

[De mus] = De musica

Non posse = Non posse suaviter vivi secundum Epicurum

Inst. = Institutio Oratoria

Acad. Post. = Academica posteriora

Fin. = De finibus

Nat. D. = De natura deorum

De mus. = De musica

Congr. = De congressu eruditionis gratia

Mut. = De mutatione nominum

APPENDIX

PLATO, CRATYLUS

1) Pl., *Crat.* 405a-b

ΣΩ. Εὐάρμοστον μὲν οὖν, ἅτε μουσικοῦ ὄντος τοῦ θεοῦ· πρῶτον μὲν γὰρ ἡ κάθαρσις καὶ οἱ καθαρμοὶ καὶ κατὰ τὴν ἰατρικὴν καὶ κατὰ τὴν μαντικὴν καὶ αἱ τοῖς ἰατρικοῖς φαρμάκοις καὶ βαῖ τοῖς μαντικοῖς περιθειώσεις τε καὶ τὰ λουτρὰ τὰ ἐν τοῖς τοιούτοις καὶ αἱ περιρράνσεις, πάντα ἕν τι ταῦτα δύναιτ᾽ ἄν, καθαρὸν παρέχειν τὸν ἄνθρωπον καὶ κατὰ τὸ σῶμα καὶ κατὰ τὴν ψυχήν· ἢ οὔ;

SOC. His name and nature are in harmony; you see he is a musical god. For in the first place, purification and purgations used in medicine and in soothsaying, and fumigations with medicinal and magic drugs, and the baths and sprinklings connected with that sort of thing all have the single function of making a man pure in body and soul, do they not?

2) Pl., *Crat.* 405d-406a

κατὰ δὲ τὴν μουσικὴν δεῖ ὑπολαβεῖν ὅτι τὸ ἄλφα σημαίνει πολλαχοῦ τὸ ὁμοῦ, καὶ ἐνταῦθα τὴν ὁμοῦ πόλησιν καὶ περὶ τὸν οὐρανόν, οὓς δὴ πόλους καλοῦσιν, καὶ περὶ τὴν ἐν τῇ ᾠδῇ ἁρμονίαν, ἣ δὴ συμφωνία καλεῖται, ὅτι ταῦτα πάντα, ὥς φασιν οἱ κομψοὶ περὶ μουσικὴν καὶ ἀστρονομίαν, ἁρμονίᾳ τινὶ πολεῖ ἅμα πάντα· ἐπιστατεῖ δὲ οὗτος ὁ θεὸς τῇ ἁρμονίᾳ ὁμοπολῶν αὐτὰ πάντα καὶ κατὰ θεοὺς καὶ κατ᾽ ἀνθρώπους· ὥσπερ οὖν τὸν ὁμοκέλευθον καὶ ὁμόκοιτιν ἀκόλουθον καὶ ἄκοιτιν ἐκαλέσαμεν, μεταβαλόντες ἀντὶ τοῦ ὁμο ἄλφα, οὕτω καὶ Ἀπόλλωνα ἐκαλέσαμεν, ὃς ἦν Ὁμοπολῶν, ἕτερον λάβδα ἐμβαλόντες, ὅτι ὁμώνυμον ἐγίγνετο τῷ χαλεπῷ ὀνόματι. ὅπερ καὶ νῦν ὑποπτεύοντές τινες διὰ τὸ μὴ ὀρθῶς σκοπεῖσθαι τὴν δύναμιν τοῦ ὀνόματος φοβοῦνται αὐτὸ ὡς σημαῖνον φθοράν τινα· τὸ δέ, ὥσπερ ἄρτι ἐλέγετο, πασῶν ἐφαπτόμενον κεῖται τῶν τοῦ θεοῦ δυνάμεων, ἁπλοῦ, ἀεὶ βάλλοντος, ἀπολούοντος, ὁμοπολοῦντος. τὰς δὲ Μούσας τε καὶ ὅλως τὴν μουσικὴν ἀπὸ τοῦ μῶσθαι, ὡς ἔοικεν, καὶ τῆς ζητήσεώς τε καὶ φιλοσοφίας τὸ ὄνομα τοῦτο ἐπωνόμασεν.

And with reference to music we have to understand that alpha often signifies “together,” and here it denotes moving together in the heavens about the poles, as we call them, and harmony in song, which is called concord; for, as the ingenious musicians and astronomers tell us, all these things move together by a kind of harmony. And this god directs the harmony, making them all move together, among both gods and men; and so, just as we call the ὁμοκέλευθον (him who accompanies), and ὁμόκοιτιν (bedfellow), by changing the ὁμο to alpha, ἀκόλουθον and ἄκοιτιν, so also we called him Apollo who was Homopolo, and the second lambda was inserted, because without it the name sounded of disaster (ἀπολῶ, ἀπόλωλα, etc.). Even as it is, some have a suspicion of this, because they do not properly regard the force of the name, and therefore they fear it, thinking that it denotes some kind of ruin. But in fact, as was said, the name touches upon all the qualities of the god, as simple, ever-darting, purifying, and accompanying. The Muses and music in general are named, apparently, from μῶσθαι, searching, and philosophy […]

3) Pl., *Leg.* 653e-654a

τὰ μὲν οὖν ἄλλα ζῶα οὐκ ἔχειν αἴσθησιν τῶν ἐν ταῖς κινήσεσι τάξεων οὐδὲ ἀταξιῶν, οἷς δὴ ῥυθμὸς ὄνομα καὶ ἁρμονία· ἡμῖν δὲ οὓς εἴπομεν τοὺς θεοὺς συγχορευτὰς δεδόσθαι, τούτους εἶναι καὶ τοὺς δεδωκότας τὴν ἔνρυθμόν τε καὶ ἐναρμόνιον αἴσθησιν μεθ' ἡδονῆς, ᾗ δὴ κινεῖν τε ἡμᾶς καὶ χορηγεῖν ἡμῶν τούτους, ᾠδαῖς τε καὶ ὀρχήσεσιν ἀλλήλοις ξυνείροντας, χορούς τε ὠνομακέναι παρὰ τῆς χαρᾶς ἔμφυτον ὄνομα.

Now, whereas all other creatures are devoid of any perception of the various kinds of order and disorder in movement (which we term rhythm and harmony), to us men the very gods, who were given, as we said, to be our fellows in the dance, have granted the pleasurable perception of rhythm and harmony, whereby they cause us to move and lead our choirs, linking us one with another by means of songs and dances; and to the choir they have given its name from the "cheer" implanted therein.

4) Pl., *Leg.* 669d-e

ταῦτά τε γὰρ ὁρῶσι πάντα κυκώμενα καὶ εἴ τι[2] διασπῶσιν οἱ ποιηταὶ ῥυθμὸν μὲν καὶ σχήματα μέλους χωρίς, λόγους ψιλοὺς εἰς μέτρα τιθέντες, μέλος Εδ' αὖ καὶ ῥυθμὸν ἄνευ ῥημάτων, ψιλῇ κιθαρίσει τε καὶ αὐλήσει προσχρώμενοι, ἐν οἷς δὴ παγχάλεπον ἄνευ λόγου γιγνόμενον ῥυθμόν τε καὶ ἁρμονίαν γιγνώσκειν ὅ τί τε βούλεται καὶ ὅτῳ ἔοικε τῶν ἀξιολόγων μιμημάτων.

For they behold all these things jumbled together, and how, also, the poets rudely sunder rhythm and gesture from tune, putting tuneless words into metre, or leaving tune and rhythm without words, and using the bare sound of harp or flute, wherein it is almost impossible to understand what is intended by this wordless rhythm and harmony, or what noteworthy original it represents.

5) Pl., *Leg.* 790d-791b

ΑΘ. Λάβωμεν τοίνυν τοῦτο οἷον στοιχεῖον ἐπ' ἀμφότερα, σώματός τε καὶ ψυχῆς τῶν πάνυ νέων τὴν τιθήνησιν καὶ κίνησιν γιγνομένην ὅτι μάλιστα διὰ πάσης νυκτός τε καὶ ἡμέρας, ὡς ἔστι ξύμφορος ἅπασι μέν, οὐχ ἥκιστα δὲ τοῖς ὅτι νεωτάτοισι, καὶ οἰκεῖν, εἰ δυνατὸν ἦν, οἷον ἀεὶ πλέοντας· νῦν δ' ὡς ἐγγύτατα τούτου ποιεῖν δεῖ περὶ τὰ νεογενῆ παίδων θρέμματα. τεκμαίρεσθαι δὲ χρὴ καὶ ἀπὸ τῶνδε ὡς ἐξ ἐμπειρίας αὐτὸ εἰλήφασι καὶ ἐγνώκασιν ὂν χρήσιμον αἵ τε τροφοὶ τῶν σμικρῶν καὶ αἱ περὶ τὰ τῶν Κορυβάντων ἰάματα τελοῦσαι· ἡνίκα γὰρ ἄν που βουληθῶσι κατακοιμίζειν τὰ δυσυπνοῦντα τῶν παιδίων αἱ μητέρες, οὐχ ἡσυχίαν αὐτοῖς προσφέρουσιν ἀλλὰ τοὐναντίον κίνησιν, ἐν ταῖς ἀγκάλαις ἀεὶ σείουσαι, καὶ οὐ σιγὴν ἀλλά τινα μελῳδίαν, καὶ ἀτεχνῶς οἷον καταυλοῦσι τῶν παιδίων, καθαπερεὶ τῶν ἐκφρόνων Βακχείων, ἰάσει ταύτῃ τῇ τῆς κινήσεως ἅμα χορείᾳ καὶ μούσῃ χρώμεναι.

ATH. Let us take this, then, as a fundamental assumption in both cases,—that for both body and soul of the very young a process of nursing and moving, that is as continuous as possible both by day and by night, is in all cases salutary, and especially in the case of the youngest: it is like having them always rocked—

if that were possible—on the sea. As it is, with new-born infants one should reproduce this condition as nearly as possible. Further evidence of this may be seen in the fact that this course is adopted and its usefulness recognized both by those who nurse small children and by those who administer remedies in cases of Corybantism. Thus when mothers have children suffering from sleeplessness, and want to lull them to rest, the treatment they apply is to give them, not quiet, but motion, for they rock them constantly in their arms; and instead of silence, they use a kind of crooning noise; and thus they literally cast a spell upon the children (like the victims of Bacchic frenzy) by employing the combined movements of dance and song as a remedy.

[…]

ΑΘ. Δειμαίνειν ἐστί που ταῦτ᾽ ἀμφότερα τὰ πάθη, καὶ ἔστι δείματα δι᾽ ἕξιν φαύλην τῆς ψυχῆς τινά. ὅταν οὖν ἔξωθέν τις προσφέρῃ τοῖς τοιούτοις πάθεσι σεισμόν, ἡ τῶν ἔξωθεν κρατεῖ κίνησις προσφερομένη τὴν ἐντὸς φοβερὰν οὖσαν καὶ μανικὴν κίνησιν, κρατήσασα δὲ γαλήνην ἡσυχίαν τε ἐν τῇ ψυχῇ φαίνεται ἀπεργασαμένη τῆς περὶ τὰ τῆς καρδίας χαλεπῆς γενομένης ἑκάστων πηδήσεως, παντάπασιν ἀγαπητόν τι· τοὺς μὲν ὕπνου λαγχάνειν ποιεῖ, τοὺς δ᾽ ἐγρηγορότας ὀρχουμένους τε καὶ αὐλουμένους μετὰ θεῶν, οἷς ἂν καλλιεροῦντες ἕκαστοι θύωσι, κατειργάσατο ἀντὶ μανικῶν ἡμῖν διαθέσεων ἕξεις ἔμφρονας ἔχειν. καὶ ταῦτα, ὡς διὰ βραχέων γε οὕτως εἰπεῖν, πιθανὸν λόγον ἔχει τινά.

ATH. Both these affections are forms of fright; and frights are due to a poor condition of soul. So whenever one applies an external shaking to affections of this kind, the external motion thus applied overpowers the internal motion of fear and frenzy, and by thus overpowering it, it brings about a manifest calm in the soul and a cessation of the grievous palpitation of the heart which had existed in each case. Thus it produces very satisfactory results. The children it puts to sleep; the Bacchants, who are awake, it brings into a sound state of mind instead of a frenzied condition, by means of dancing and playing, with the help of whatsoever gods they chance to be worshipping with sacrifice. This is—to put it shortly—quite a plausible account of the matter.

PLATO, PHAEDO

6) Pl., *Phd*. 60e–61a

ἦν γὰρ δὴ ἄττα τοιάδε· πολλάκις μοι φοιτῶν τὸ αὐτὸ ἐνύπνιον ἐν τῷ παρελθόντι βίῳ, ἄλλοτ᾽ ἐν ἄλλῃ ὄψει φαινόμενον, τὰ αὐτὰ δὲ λέγον, “Ὦ Σώκρατες,” ἔφη, “μουσικὴν ποίει καὶ ἐργάζου.” καὶ ἐγὼ ἔν γε τῷ πρόσθεν χρόνῳ ὅπερ ἔπραττον τοῦτο ὑπελάμβανον αὐτό μοι παρακελεύεσθαί τε καὶ ἐπικελεύειν, ὥσπερ οἱ τοῖς θέουσι διακελευόμενοι, καὶ ἐμοὶ οὕτω τὸ ἐνύπνιον ὅπερ ἔπραττον τοῦτο ἐπικελεύειν, μουσικὴν ποιεῖν, ὡς φιλοσοφίας μὲν οὔσης μεγίστης μουσικῆς, ἐμοῦ δὲ τοῦτο πράττοντος.

You see, it’s like this: the same dream often haunted me in my past life, sometimes appearing in one guise, sometimes another, but saying the same thing: ‘Socrates,’ it said, ‘cultivate the arts and work at them.’ And in the past I used to take this to mean it was urging and encouraging me to persist with what I’d been doing; like people encouraging runners, so too the dream was urging me to carry on doing the very thing that I was doing, cultivating the arts on the grounds that philosophy is the greatest of the arts, and this was what I was doing.

7) Pl., *Phd.* 86b-c

καὶ γὰρ οὖν, ὦ Σώκρατες, οἶμαι ἔγωγε καὶ αὐτόν σε τοῦτο ἐντεθυμῆσθαι, ὅτι τοιοῦτόν τι μάλιστα ὑπολαμβάνομεν τὴν ψυχὴν εἶναι, ὥσπερ ἐντεταμένου τοῦ σώματος ἡμῶν καὶ συνεχομένου ὑπὸ θερμοῦ καὶ ψυχροῦ καὶ ξηροῦ καὶ ὑγροῦ καὶ τοιούτων τινῶν, σκρᾶσιν εἶναι καὶ ἁρμονίαν αὐτῶν τούτων τὴν ψυχὴν ἡμῶν, ἐπειδὰν ταῦτα καλῶς καὶ μετρίως κραθῇ πρὸς ἄλληλα—εἰ οὖν τυγχάνει ἡ ψυχὴ οὖσα ἁρμονία τις, δῆλον ὅτι, ὅταν χαλασθῇ τὸ σῶμα ἡμῶν ἀμέτρως ἢ ἐπιταθῇ ὑπὸ νόσων καὶ ἄλλων κακῶν, τὴν μὲν ψυχὴν ἀνάγκη εὐθὺς ὑπάρχει ἀπολωλέναι, καίπερ οὖσαν θειοτάτην, ὥσπερ καὶ αἱ ἄλλαι ἁρμονίαι αἵ τ' ἐν τοῖς φθόγγοις καὶ ἐν τοῖς τῶν δημιουργῶν ἔργοις πᾶσι, τὰ δὲ λείψανα τοῦ σώματος ἑκάστου πολὺν χρόνον παραμένειν, ἕως ἂν ἢ κατακαυθῇ ἢ κατασαπῇ [...]

And in actual fact, Socrates, I do think you yourself have contemplated the idea that some such thing as this is what we assume the soul to be: just as our bodies are in tension and held together by hot and cold and dry and wet and other such things, our soul is also a mixture and a tuning of these same things when these are combined with each other in a good and balanced way. If therefore the soul really is some kind of tuning, it's clear that when our body is loosened or stretched out of proportion through diseases and other mishaps, necessity immediately begins to destroy the soul, no matter how divine it is, just as the other attunements in our musical sounds and all the works of our craftsmen, but the remnants of each body stay around for a long time until they are burned up or rot away.

PLATO, PHAEDRUS

8) Pl., *Phdr.* 248c-e

θεσμός τε Ἀδραστείας ὅδε, ἥτις ἂν ψυχὴ θεῷ ξυνοπαδὸς γενομένη κατίδῃ τι τῶν ἀληθῶν, μέχρι τε τῆς ἑτέρας περιόδου εἶναι ἀπήμονα, κἂν ἀεὶ τοῦτο δύνηται ποιεῖν, ἀεὶ ἀβλαβῆ εἶναι. ὅταν δὲ ἀδυνατήσασα ἐπισπέσθαι μὴ ἴδῃ, καί τινι συντυχίᾳ χρησαμένη λήθης τε καὶ κακίας πλησθεῖσα βαρυνθῇ, βαρυνθεῖσα δὲ πτεροῤῥυήσῃ τε καὶ ἐπὶ τὴν γῆν πέσῃ, τότε νόμος ταύτην μὴ Dφυτεῦσαι εἰς μηδεμίαν θήρειον φύσιν ἐν τῇ πρώτῃ γενέσει, ἀλλὰ τὴν μὲν πλεῖστα ἰδοῦσαν εἰς γονὴν ἀνδρὸς γενησομένου φιλοσόφου ἢ φιλοκάλου ἢ μουσικοῦ τινὸς καὶ ἐρωτικοῦ, τὴν δὲ δευτέραν εἰς βασιλέως ἐννόμου ἢ πολεμικοῦ καὶ ἀρχικοῦ, τρίτην εἰς πολιτικοῦ ἤ τινος οἰκονομικοῦ ἢ χρηματιστικοῦ, τετάρτην εἰς φιλοπόνου γυμναστικοῦ ἢ περὶ σώματος ἴασίν τινος ἐσομένου, πέμπτην Εμαντικὸν βίον ἤ τινα τελεστικὸν ἔξουσαν· ἕκτῃ ποιητικὸς ἢ τῶν περὶ μίμησίν τις ἄλλος ἁρμόσει, ἑβδόμῃ δημιουργικὸς ἢ γεωργικός, ὀγδόῃ σοφιστικὸς ἢ δημοτικός, ἐννάτῃ τυραννικός.

And this is a law of Destiny, that the soul which follows after God and obtains a view of any of the truths is free from harm until the next period, and if it can always attain this, is always unharmed; but when, through inability to follow, it fails to see, and through some mischance is filled with forgetfulness and evil and grows heavy, and when it has grown heavy, loses its wings and falls to the earth, then it is the law that this soul shall never pass into any beast at its first birth, but the soul that has seen the most shall enter into the birth of a man who is to be a philosopher or a lover of beauty, or one of a musical or loving nature, and the second soul into that of a lawful king or a warlike ruler, and the third into that of a politician or a man of business or a financier, the fourth into that of a hard-working gymnast or one who will be concerned with the cure of the body, and the fifth will lead the life of a prophet or someone who conducts mystic rites; to the sixth, a poet or some other

imitative artist will be united, to the seventh, a craftsman or a husbandman, to the eighth, a sophist or a demagogue, to the ninth, a tyrant.

9) Pl., *Phdr.* 274e-275b

ὁ δ' εἶπεν· ὦ τεχνικώτατε Θεύθ, ἄλλος μὲν τεκεῖν δυνατὸς τὰ τῆς τέχνης, ἄλλος δὲ κρῖναι, τίν' ἔχει μοῖραν βλάβης τε καὶ ὠφελίας τοῖς μέλλουσι χρῆσθαι· καὶ νῦν σύ, πατὴρ ὢν γραμμάτων, δι' εὔνοιαν τοὐναντίον εἶπες ἢ δύναται. τοῦτο γὰρ τῶν μαθόντων λήθην μὲν ἐν ψυχαῖς παρέξει μνήμης ἀμελετησίᾳ, ἅτε διὰ πίστιν γραφῆς ἔξωθεν ὑπ' ἀλλοτρίων τύπων, οὐκ ἔνδοθεν αὐτοὺς ὑφ' αὑτῶν ἀναμιμνῃσκομένους· οὔκουν μνήμης ἀλλ' ὑπομνήσεως φάρμακον ηὗρες. σοφίας δὲ τοῖς μαθηταῖς δόξαν, οὐκ ἀλήθειαν πορίζεις· πολυήκοοι γάρ σοι γενόμενοι ἄνευ διδαχῆς πολυγνώμονες Βεῖναι δόξουσιν, ἀγνώμονες ὡς ἐπὶ τὸ πλῆθος καὶ χαλεποὶ ξυνεῖναι, δοξόσοφοι γεγονότες ἀντὶ σοφῶν.

But Thamus replied, "Most ingenious Theuth, one man has the ability to beget arts, but the ability to judge of their usefulness or harmfulness to their users belongs to another; and now you, who are the father of letters, have been led by your affection to ascribe to them a power the opposite of that which they really possess. For this invention will produce forgetfulness in the minds of those who learn to use it, because they will not practise their memory. Their trust in writing, produced by external characters which are no part of themselves, will discourage the use of their own memory within them. You have invented an elixir not of memory, but of reminding; and you offer your pupils the appearance of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with, since they are not wise, but only appear wise."

PLATO, REPUBLIC

10) Pl., *Resp.* 398d

Πάντως δήπου, ἦν δ' ἐγώ, πρῶτον μὲν τόδε ἱκανῶς d ἔχεις λέγειν, ὅτι τὸ μέλος ἐκ τριῶν ἐστιν συγκείμενον, λόγου τε καὶ ἁρμονίας καὶ ῥυθμοῦ.

Ναί, ἔφη, τοῦτό γε.

Οὐκοῦν ὅσον γε αὐτοῦ λόγος ἐστίν, οὐδὲν δήπου διαφέρει τοῦ μὴ ᾄδομένου λόγου πρὸς τὸ ἐν τοῖς αὐτοῖς δεῖν τύποις λέγεσθαι οἷς ἄρτι προείπομεν καὶ ὡσαύτως;

Ἀληθῆ, ἔφη.

Καὶ μὴν τήν γε ἁρμονίαν καὶ ῥυθμὸν ἀκολουθεῖν δεῖ τῷ λόγῳ.

"At all events," I said, "presumably to start with you have enough of an understanding to say that lyric verse consists of three elements: words, melody and rhythm?"
"Oh yes, at least that much," he said.
"So as far as the words are concerned, I imagine it is no different from words that are not sung in that they must be spoken within the actual patterns which we described a while ago, and in the same manner. Isn't that so?"
"True," he said.
"Added to which, melody and rhythms must follow the words."

11) Pl., *Resp.* 401c-e

ἀλλ' ἐκείνους ζητητέον τοὺς δημιουργοὺς τοὺς εὐφυῶς δυναμένους ἰχνεύειν τὴν τοῦ καλοῦ τε καὶ εὐσχήμονος φύσιν, ἵνα ὥσπερ ἐν ὑγιεινῷ τόπῳ οἰκοῦντες οἱ νέοι ἀπὸ παντὸς ὠφελῶνται, ὁπόθεν ἂν αὐτοῖς ἀπὸ τῶν καλῶν ἔργων ἢ πρὸς ὄψιν ἢ πρὸς ἀκοήν τι προσβάλῃ, ὥσπερ αὔρα φέρουσα ἀπὸ χρηστῶν τόπων ὑγίειαν, καὶ εὐθὺς ἐκ παίδων λανθάνῃ εἰς ὁμοιότητά τε καὶ φιλίαν καὶ συμφωνίαν τῷ καλῷ λόγῳ ἄγουσα; [...] Ἆρ' οὖν, ἦν δ' ἐγώ, ὦ Γλαύκων, τούτων ἕνεκα κυριωτάτη ἐν μουσικῇ τροφή, ὅτι μάλιστα καταδύεται εἰς τὸ ἐντὸς τῆς ψυχῆς ὅ τε ῥυθμὸς καὶ ἁρμονία, καὶ ἐρρωμενέστατα ἅπτεται αὐτῆς φέροντα τὴν εὐσχημοσύνην, καὶ ποιεῖ εὐσχήμονα, ἐάν τις ὀρθῶς τραφῇ, εἰ δὲ μή, τοὐναντίον; καὶ ὅτι αὖ τῶν παραλειπομένων καὶ μὴ καλῶς δημιουργηθέντων ἢ μὴ καλῶς φύντων ὀξύτατ' ἂν αἰσθάνοιτο ὁ ἐκεῖ τραφεὶς ὡς ἔδει, καὶ ὀρθῶς δὴ δυσχεραίνων τὰ μὲν καλὰ ἐπαινοῖ καὶ χαίροι καὶ καταδεχόμενος εἰς τὴν ψυχὴν τρέφοιτ' ἂν ἀπ' αὐτῶν καὶ γίγνοιτο καλός τε κἀγαθός, τὰ δ' αἰσχρὰ ψέγοι τ' ἂν ὀρθῶς καὶ μισοῖ ἔτι νέος ὤν, πρὶν λόγον δυνατὸς εἶναι λαβεῖν, ἐλθόντος δὲ τοῦ λόγου ἀσπάζοιτ' ἂν αὐτὸν γνωρίζων δι' οἰκειότητα μάλιστα ὁ οὕτω τραφείς;

But must we search out those craftsmen who have the innate ability to track down a natural goodness and beauty in order that our youngsters, living in a healthy place as it were, may benefit from everything, wherever it may come from, which brings to their eyes or ears something resulting from fine works of art, like a breeze bringing health from wholesome places and leading them unawares from their earliest childhood into resembling, being friendly toward and in harmony with the beauty of reason?" […] "In that case, Glaucon," I said, "isn't an education in the arts most essential for these reasons, in that rhythm and melody above all penetrate to the innermost part of the soul and most powerfully affect it, bringing gracefulness, and, if one is brought up correctly, make one graceful; if not, isn't the result the opposite? And furthermore he who has been brought up in the arts as he should have been, will be most acutely aware of what has been omitted and not well made, or not well nurtured, and he would rightly disparage it and approve and rejoice in what is beautiful, allow it into his soul, feed on it and become a good, fine man. On the other hand would he rightly reject and hate what is shameful even while still young, and before he is able to reason these things out, and, because he has been brought up in this way, when reason does come would he welcome it because he recognizes its utter fitness for him?"

12) Pl., *Resp.* 411d

Τί δὲ ἐπειδὰν ἄλλο μηδὲν πράττῃ μηδὲ κοινωνῇ dΜούσης μηδαμῇ; οὐκ εἴ τι καὶ ἐνῆν αὐτοῦ φιλομαθὲς ἐν τῇ ψυχῇ, ἄτε οὔτε μαθήματος γευόμενον οὐδενὸς οὔτε ζητήματος, οὔτε λόγου μετίσχον οὔτε τῆς ἄλλης μουσικῆς, ἀσθενές τε καὶ κωφὸν καὶ τυφλὸν γίγνεται, ἄτε οὐκ ἐγειρόμενον οὐδὲ τρεφόμενον οὐδὲ διακαθαιρομένων τῶν αἰσθήσεων αὐτοῦ;

"But what happens when he does nothing else and has nothing to do with the Muse? Even if he has some enthusiasm for learning in his soul, inasmuch as he does not get a taste of any learning or spirit of inquiry, takes no part in debate or the rest of the arts, does he not become weak, dull and blind in so far as he is not stimulated or nurtured, nor are his senses ever thoroughly cleansed?"

13) Pl., *Resp.* 424b-c

ἀοιδὴν μᾶλλον ἐπιφρονέουσ᾽ ἄνθρωποι,ἥτις ἀειδόντεσσι νεωτάτη ἀμφιπέληται, μὴ πολλάκις τὸν ποιητήν τις οἴηται λέγειν οὐκ ᾄσματα νέα ἀλλὰ τρόπον ᾠδῆς νέον, καὶ τοῦτο ἐπαινῇ. δεῖ δ᾽ οὔτ᾽ ἐπαινεῖν τὸ τοιοῦτον οὔτε ὑπολαμβάνειν. εἶδος γὰρ καινὸν μουσικῆς μεταβάλλειν εὐλαβητέον ὡς ἐν ὅλῳ κινδυνεύοντα· οὐδαμοῦ γὰρ κινοῦνται μουσικῆς τρόποι ἄνευ πολιτικῶν νόμων τῶν μεγίστων, ὥς φησί τε Δάμων καὶ ἐγὼ πείθομαι.

Men have a higher regard for the song which is the latest the singers bring with them in case there is the common idea that the poet means not new songs, but a new form of song and is praising this. We must not praise that sort of thing, nor understand that this is what the poet means. For one should beware of any change to a new fangled kind of music as being extremely risky. For the forms of music are nowhere altered without affecting the greatest political laws, as Damon in fact says, and I believe him."

14) Pl., *Resp.* 432a-b

Ὅτι οὐχ ὥσπερ ἡ ἀνδρεία καὶ ἡ σοφία ἐν μέρει τινὶ ἑκατέρα ἐνοῦσα ἡ μὲν σοφήν, ἡ δὲ ἀνδρείαν τὴν πόλιν παρείχετο, οὐχ οὕτω ποιεῖ αὕτη, ἀλλὰ δι᾽ ὅλης ἀτεχνῶς τέταται διὰ πασῶν παρεχομένη συνᾴδοντας τούς τε ἀσθενεστάτους ταὐτὸν καὶ τοὺς ἰσχυροτάτους καὶ τοὺς μέσους, εἰ μὲν βούλει, φρονήσει, εἰ δὲ βούλει, ἰσχύϊ, εἰ δέ, καὶ πλήθει ἢ χρήμασιν ἢ ἄλλῳ ὁτῳοῦν τῶν τοιούτων· ὥστε ὀρθότατ᾽ ἂν φαῖμεν ταύτην τὴν ὁμόνοιαν σωφροσύνην εἶναι, χείρονός τε καὶ ἀμείνονος κατὰ φύσιν συμφωνίαν ὁπότερον δεῖ ἄρχειν καὶ ἐν πόλει καὶ ἐν ἑνὶ ἑκάστῳ.

"Because it does not operate like courage and wisdom, which each exist in one part of the state, the one making the state courageous the other making it wise. No, it doesn't work like that; it is distributed literally across the whole population and makes the weakest and the strongest and those in between sing together in unison, in their prudence, if you like, or in their strength, if you like, or again in their numbers, or in their resources, or anything else like these. The result is that that we would say most rightly that this unanimity is temperance, is the natural harmony of the worse and the better man as to who should rule both in the state and in the individual."

15) Pl., *Resp.* 443d-444a

Τὸ δέ γε ἀληθές, τοιοῦτον μέν τι ἦν, ὡς ἔοικεν, ἡ δικαιοσύνη ἀλλ᾽ οὔ τι περὶ τὴν ἔξω πρᾶξιν τῶν αὑτοῦ, ἀλλὰ περὶ τὴν ἐντός, ὡς ἀληθῶς περὶ ἑαυτὸν καὶ τὰ ἑαυτοῦ, μὴ ἐάσαντα τἀλλότρια πράττειν ἕκαστον ἐν αὑτῷ μηδὲ πολυπραγμονεῖν πρὸς ἄλληλα τὰ ἐν τῇ ψυχῇ γένη, ἀλλὰ τῷ ὄντι τὰ οἰκεῖα εὖ θέμενον καὶ ἄρξαντα αὐτὸν αὑτοῦ καὶ κοσμήσαντα καὶ φίλον γενόμενον ἑαυτῷ καὶ συναρμόσαντα τρία ὄντα, ὥσπερ ὅρους τρεῖς ἁρμονίας ἀτεχνῶς, νεάτης τε καὶ ὑπάτης καὶ μέσης, καὶ εἰ ἄλλα ἄττα μεταξὺ τυγχάνει ὄντα, πάντα ταῦτα συνδήσαντα καὶ παντάπασιν ἕνα γενόμενον ἐκ πολλῶν, σώφρονα καὶ ἡρμοσμένον, οὕτω δὴ πράττειν ἤδη, ἐάν τι πράττῃ ἢ περὶ χρημάτων κτῆσιν ἢ περὶ σώματος θεραπείαν ἢ καὶ πολιτικόν τι ἢ περὶ τὰ ἴδια συμβόλαια, ἐν πᾶσι τούτοις ἡγούμενον καὶ ὀνομάζοντα δικαίαν μὲν καὶ καλὴν πρᾶξιν ἣ ἂν ταύτην τὴν ἕξιν σῴζῃ τε καὶ συναπεργάζηται, σοφίαν δὲ τὴν ἐπιστατοῦσαν ταύτῃ τῇ πράξει ἐπιστήμην, ἄδικον δὲ πρᾶξιν ἣ ἂν ἀεὶ ταύτην λύῃ, ἀμαθίαν δὲ τὴν ταύτῃ αὖ ἐπιστατοῦσαν δόξαν.

And it's true that justice, it seems, was something of this kind, but not something to do with a person's external activities, but the internal ones, that are really to do with one's self and one's own functions. A man does not allow the individual faculties within him to get involved in the functions of others, nor the parts of the soul to meddle with each other, but he puts what are really his own interests in good order, directs and disciplines himself, becomes a friend to himself and arranges those three elements together like, simply, the three defining notes of the scale, lower, upper and middle, and any others that happen to lie in between. He binds these all together and from many elements becomes in every respect a unity, temperate and harmonious; then and only then should he act, if he is having anything to do with the earning of money, or looking after his physical needs, or any business of the state, or his own private business arrangements: in every one of these he evaluates them and calls his activity as just and fair which preserves and helps to complete this state of affairs. The understanding which oversees this activity he calls wisdom, while the unjust action is that which would continually ruin all this, and the belief which oversees it, ignorance.

16) Pl., *Resp.* 529d

ταῦτα μὲν τὰ ἐν τῷ οὐρανῷ ποικίλματα, ἐπείπερ ἐν ὁρατῷ πεποίκιλται, κάλλιστα μὲν δήγεῖσθαι καὶ ἀκριβέστατα τῶν τοιούτων ἔχειν, τῶν δὲ ἀληθινῶν πολὺ ἐνδεῖν, ἃς τὸ ὂν τάχος καὶ ἡ οὖσα βραδυτὴς ἐν τῷ ἀληθινῷ ἀριθμῷ καὶ πᾶσι τοῖς ἀληθέσι σχήμασι φοράς τε πρὸς ἄλληλα φέρεται καὶ τὰ ἐνόντα φέρει, ἃ δὴ λόγῳ μὲν καὶ διανοίᾳ ληπτά, ὄψει δ' οὔ·

[...] these stars that adorn the heavens, since they ornament the visible sky, we think they're the most beautiful and perfect examples of their kind. And yet they fall far short of the real ones—those courses, represented by real speed and real slowness in real number and in all the real geometrical shapes, which are conveyed in relation to each other and convey what is in them, all of which can be apprehended by reason and intellect, but not by sight. […]

17) Pl., *Resp.* 530d

[...] ὡς πρὸς ἀστρονομίαν ὄμματα πέπηγεν, ὡς πρὸς ἐναρμόνιον φορὰν ὦτα παγῆναι, καὶ αὖται ἀλλήλων ἀδελφαί τινες αἱ ἐπιστῆμαι εἶναι, ὡς οἵ τε Πυθαγόρειοί φασι καὶ ἡμεῖς, ὦ Γλαύκων, συγχωροῦμεν.

that just as our eyes have fixed on astronomy, so our ears have fixed on harmonic motion and these sciences are related to each other, as the Pythagoreans claim, and we too agree, Glaucon. […]

18) Pl. *Resp.* 531a-c

τὰς γὰρ ἀκουομένας αὖ συμφωνίας καὶ φθόγγους ἀλλήλοις ἀναμετροῦντες ἀνήνυτα, ὥσπερ οἱ ἀστρονόμοι, πονοῦσιν.

Νὴ τοὺς θεούς, ἔφη, καὶ γελοίως γε, πυκνώματ' ἄττα ὀνομάζοντες καὶ παραβάλλοντες τὰ ὦτα, οἷον ἐκ γειτόνων φωνὴν θηρευόμενοι, οἱ μέν φασιν ἔτι κατακούειν ἐν μέσῳ τινὰ ἠχὴν καὶ σμικρότατον εἶναι τοῦτο διάστημα, ᾧ μετρητέον, οἱ δὲ ἀμφισβητοῦντες ὡς ὅμοιον ἤδη φθεγγομένων, ἀμφότεροι ὦτα τοῦ νοῦ προστησάμενοι.

Σὺ μέν, ἦν δ' ἐγώ, τοὺς χρηστοὺς λέγεις τοὺς ταῖς χορδαῖς πράγματα παρέχοντας καὶ βασανίζοντας, ἐπὶ τῶν κολλόπων στρεβλοῦντας· ἵνα δὲ μὴ μακροτέρα ἡ εἰκὼν γίγνηται πλήκτρῳ τε πληγῶν γιγνομένων καὶ κατηγορίας πέρι καὶ ἐξαρνήσεως καὶ ἀλαζονείας χορδῶν, παύομαι τῆς εἰκόνος καὶ οὔ

φημι τούτους λέγειν, ἀλλ' ἐκείνους οὓς ἔφαμεν νυνδὴ περὶ ἁρμονίας ἐρήσεσθαι. ταὐτὸν γὰρ ποιοῦσι τοῖς ἐν τῇ ἀστρονομίᾳ· τοὺς γὰρ ἐν ταύταις ταῖς συμφωνίαις ταῖς ἀκουομέναις ἀριθμοὺς ζητοῦσιν, ἀλλ' οὐκ εἰς προβλήματα ἀνίασιν, ἐπισκοπεῖν τίνες σύμφωνοι ἀριθμοὶ καὶ τίνες οὔ, καὶ διὰ τί ἑκάτεροι.

Δαιμόνιον γάρ, ἔφη, πρᾶγμα λέγεις.

Χρήσιμον μὲν οὖν, ἦν δ' ἐγώ, πρὸς τὴν τοῦ καλοῦ τε καὶ ἀγαθοῦ ζήτησιν, ἄλλως δὲ μεταδιωκόμενον ἄχρηστον.

Like astronomers they slave away to no effect remeasuring again and again audible concords and sounds against each other."

"Heavens, yes, and quite absurd the way they talk about 'condensed intervals' and press their ears close like someone trying to catch what their neighbors are saying, some claiming they can still hear a sound in between and that this is the smallest interval with which they must measure, others dispute this and say they are now the same note: both groups preferring their ears to their minds."

"Now," I said, "you're talking about those worthy fellows who give their strings what for, rack them up and screw them on their pegs. But just in case my image goes too far, with the blows being applied by the plectrum, and as a sort of accusation citing the reluctance or overreadiness of the strings to sound, I'm dropping the image and say that I'm not talking about these people, but those who we were saying just now we would ask about harmony, since they do the same as they do in astronomy; for they are searching for number in the concord of sounds, but they do not rise to the challenge and inquire which numbers are concordant and which aren't, and why the differences."

"That's a fiendish task you're talking about," he said.

"Yes, but a useful one in the search for beauty and goodness," I said, "though useless if investigated in any other way."

19) Pl., *Resp.* 587e

Οὐκοῦν ἐάν τις μεταστρέψας ἀληθείᾳ ἡδονῆς τὸν εβασιλέα τοῦ τυράννου ἀφεστηκότα λέγῃ ὅσον ἀφέστηκεν, ἐννεακαιεικοσικαιεπτακοσιοπλασιάκις ἥδιον αὐτὸν ζῶντα εὑρήσει τελειωθείσῃ τῇ πολλαπλασιώσει, τὸν δὲ τύραννον ἀνιαρότερον τῇ αὐτῇ ταύτῃ ἀποστάσει.

This means that if one turns it round and says how far the king is from the tyrant in the true kind of pleasure, he'll find when he's done the multiplication that he lives seven hundred and twenty-nine times more pleasantly, and the tyrant less pleasantly by the same amount.

20) Pl., *Resp.* 617b-c

Ἐπὶ δὲ τῶν κύκλων αὐτοῦ ἄνωθεν ἐφ' ἑκάστου βεβηκέναι Σειρῆνα συμπεριφερομένην, φωνὴν μίαν ἱεῖσαν, ἕνα τόνον· ἐκ πασῶν δὲ ὀκτὼ οὐσῶν μίαν ἁρμονίαν συμφωνεῖν. ἄλλας δὲ καθημένας πέριξ δι' ἴσου τρεῖς, ἐν θρόνῳ ἑκάστην, θυγατέρας τῆς Ἀνάγκης, Μοίρας, λευχειμονούσας, στέμματα ἐπὶ τῶν κεφαλῶν ἐχούσας, Λάχεσίν τε καὶ Κλωθὼ καὶ Ἄτροπον, ὑμνεῖν πρὸς τὴν τῶν Σειρήνων ἁρμονίαν, Λάχεσιν μὲν τὰ γεγονότα, Κλωθὼ δὲ τὰ ὄντα, Ἄτροπον δὲ τὰ μέλλοντα.

The spindle itself revolved on the knees of Necessity. "On top of each of the its circles stood a Siren revolving around with it producing a single sound on one note, and from all eight of them the sounds blended into a single harmony. Three others, each sitting on a throne spaced equally around, the daughters of Necessity, the

Fates Lachesis, Clotho, and Atropos dressed in white with garlands on their heads, sang in response to the harmony of the Sirens: Lachesis the past, Clotho the present, Atropos the future.

PLATO, SYMPOSIUM

21) Pl., *Symp.* 187a-c

ὥσπερ ἴσως καὶ Ἡράκλειτος βούλεται λέγειν, ἐπεὶ τοῖς γε ῥήμασιν οὐ καλῶς λέγει. τὸ ἓν γάρ φησι "διαφερόμενον αὐτὸ αὑτῷ συμφέρεσθαι, ὥσπερ ἁρμονίαν τόξου τε καὶ λύρας." ἔστι δὲ πολλὴ ἀλογία ἁρμονίαν φάναι διαφέρεσθαι ἢ ἐκ διαφερομένων ἔτι εἶναι. ἀλλ' ἴσως τόδε ἐβούλετο λέγειν, ὅτι ἐκ διαφερομένων πρότερον τοῦ ὀξέος καὶ βαρέος, ἔπειτα ὕστερον ὁμολογησάντων γέγονεν ὑπὸ τῆς μουσικῆς τέχνης. οὐ γὰρ δήπου ἐκ διαφερομένων γε ἔτι τοῦ ὀξέος καὶ βαρέος ἁρμονία ἂν εἴη. ἡ γὰρ ἁρμονία συμφωνία ἐστί, συμφωνία δὲ ὁμολογία τις· ὁμολογίαν δὲ ἐκ διαφερομένων, ἕως ἂν διαφέρωνται, ἀδύνατον εἶναι· διαφερόμενον δὲ αὖ καὶ μὴ ὁμολογεῖν ἀδυνατοῦν <δυνατὸν>[1] ἁρμόσαι, ὥσπερ γε καὶ ὁ ῥυθμὸς ἐκ τοῦ ταχέος καὶ βραδέος διενηνεγμένων πρότερον, ὕστερον δὲ ὁμολογησάντων γέγονε. τὴν δὲ ὁμολογίαν πᾶσι τούτοις, ὥσπερ ἐκεῖ ἡ ἰατρική, ἐνταῦθα ἡ μουσικὴ ἐντίθησιν, ἔρωτα καὶ ὁμόνοιαν ἀλλήλων ἐμποιήσασα· καὶ ἔστιν αὖ μουσικὴ περὶ ἁρμονίαν καὶ ῥυθμὸν ἐρωτικῶν ἐπιστήμη.

[…] perhaps Heracleitus intends as much by those perplexing words, 'The One at variance with itself is drawn together, like harmony of bow or lyre.' Now it is perfectly absurd to speak of a harmony at variance, or as formed from things still varying. Perhaps he meant, however, that from the grave and acute which were varying before, but which afterwards came to agreement, the harmony was by musical art created. For surely there can be no harmony of acute and grave while still at variance: harmony is consonance, and consonance is a kind of agreement; and agreement of things varying, so long as they are at variance, is impossible. On the other hand, when a thing varies with no disability of agreement, then it may be harmonized; just as rhythm is produced by fast and slow, which in the beginning were at variance but later came to agree. In all these cases the agreement is brought about by music which, like medicine in the former instance, introduces a mutual love and unanimity. Hence in its turn music is found to be a knowledge of love-matters relating to harmony and rhythm.

22) Pl., *Symp* 187c-e

ὥσπερ γε καὶ ὁ ῥυθμὸς ἐκ τοῦ ταχέος καὶ βραδέος διενηνεγμένων πρότερον, ὕστερον δὲ ὁμολογησάντων γέγονε. τὴν δὲ ὁμολογίαν πᾶσι τούτοις, ὥσπερ ἐκεῖ ἡ ἰατρική, ἐνταῦθα ἡ μουσικὴ ἐντίθησιν, ἔρωτα καὶ ὁμόνοιαν ἀλλήλων ἐμποιήσασα· καὶ ἔστιν αὖ μουσικὴ περὶ ἁρμονίαν καὶ ῥυθμὸν ἐρωτικῶν ἐπιστήμη. καὶ ἐν μέν γε αὐτῇ τῇ συστάσει ἁρμονίας τε καὶ ῥυθμοῦ οὐδὲν χαλεπὸν τὰ ἐρωτικὰ διαγιγνώσκειν, οὐδὲ ὁ διπλοῦς ἔρως ἐνταῦθά πω ἔστιν· ἀλλ' ἐπειδὰν δέῃ πρὸς τοὺς ἀνθρώπους καταχρῆσθαι ῥυθμῷ τε καὶ ἁρμονίᾳ ἢ ποιοῦντα, ὃ δὴ μελοποιίαν καλοῦσιν, ἢ χρώμενον ὀρθῶς τοῖς πεποιημένοις μέλεσί τε καὶ μέτροις, ὃ δὴ παιδεία ἐκλήθη, ἐνταῦθα δὴ καὶ χαλεπὸν καὶ ἀγαθοῦ δημιουργοῦ δεῖ. πάλιν γὰρ ἥκει ὁ αὐτὸς λόγος, ὅτι τοῖς μὲν κοσμίοις τῶν ἀνθρώπων, καὶ ὡς ἂν κοσμιώτεροι γίγνοιντο οἱ μήπω ὄντες, δεῖ χαρίζεσθαι καὶ φυλάττειν τὸν τούτων ἔρωτα, καὶ οὗτός ἐστιν ὁ καλός, ὁ οὐράνιος, ὁ τῆς Οὐρανίας μούσης Ἔρως· ὁ δὲ Πολυμνίας ὁ πάνδημος, ὃν δεῖ εὐλαβούμενον

προσφέρειν οἷς ἂν προσφέρῃ, ὅπως ἂν τὴν μὲν ἡδονὴν αὐτοῦ καρπώσηται, ἀκολασίαν δὲ μηδεμίαν ἐμποιήσῃ, ὥσπερ ἐν τῇ ἡμετέρᾳ τέχνῃ μέγα ἔργον ταῖς περὶ τὴν ὀψοποιικὴν τέχνην ἐπιθυμίαις καλῶς χρῆσθαι, ὥστ᾽ ἄνευ νόσου τὴν ἡδονὴν καρπώσασθαι. καὶ ἐν μουσικῇ δὴ καὶ ἐν ἰατρικῇ καὶ ἐν τοῖς ἄλλοις πᾶσι καὶ τοῖς ἀνθρωπείοις καὶ τοῖς θείοις, καθ᾽ ὅσον παρείκει, φυλακτέον ἑκάτερον τὸν Ἔρωτα· ἔνεστον γάρ.

just as rhythm is produced by fast and slow, which in the beginning were at variance but later came to agree. In all these cases the agreement is brought about by music which, like medicine in the former instance, introduces a mutual love and unanimity. Hence in its turn music is found to be a knowledge of love-matters relating to harmony and rhythm. In the actual system of harmony or rhythm we can easily distinguish these love-matters; as yet the double Love is absent: but when we come to the application of rhythm and harmony to social life, whether we construct what are called ‘melodies’ or render correctly, by what is known as ‘training’ tunes and measures already constructed, we find here a certain difficulty and require a good craftsman. Round comes the same conclusion: well-ordered men, and the less regular only so as to bring them to better order, should be indulged in this Love, and this is the sort we should preserve; this is the noble, the Heavenly Love, sprung from the Heavenly Muse. But the Popular Love comes from the Queen of Various Song; in applying him we must proceed with all caution, that no debauchery be implanted with the reaping of his pleasure, just as in our craft we set high importance on a right use of the appetite for dainties of the table, that we may cull the pleasure without disease. Thus in music and medicine and every other affair whether human or divine, we must be on the watch as far as may be for either sort of Love; for both are there.

PLATO, TIMAEUS

23) Pl., *Ti.* 32c-33a

καὶ διὰ ταῦτα ἔκ τε δὴ τούτων τοιούτων καὶ τὸν ἀριθμὸν τεττάρων τὸ τοῦ κόσμου σῶμα ἐγεννήθη δι᾽ ἀναλογίας ὁμολογῆσαν, φιλίαν τε ἔσχεν ἐκ τούτων, ὥστ᾽ εἰς ταὐτὸν αὑτῷ ξυνελθὸν ἄλυτον ὑπό του ἄλλου πλὴν ὑπό τοῦ ξυνδήσαντος γενέσθαι.

Τῶν δὲ δὴ τεττάρων ἓν ὅλον ἕκαστον εἴληφεν ἡ τοῦ κόσμου ξύστασις· ἐκ γὰρ πυρὸς παντὸς ὕδατός τε καὶ ἀέρος καὶ γῆς ξυνέστησεν αὐτὸν ὁ ξυνιστάς, μέρος οὐδὲν οὐδενὸς οὐδὲ δύναμιν ἔξωθεν ὑπολιπών, τάδε διανοηθείς, πρῶτον μὲν ἵνα ὅλον ὅ τι μάλιστα ζῶον τέλεον ἐκ τελέων τῶν μερῶν εἴη, πρὸς δὲ τούτοις ἕν, ἄτε οὐχ ὑπολελειμμένων ἐξ ὧν ἄλλο τοιοῦτον γένοιτ᾽ ἄν, ἔτι δὲ ἵνα ἀγήρων καὶ ἄνοσον ᾖ, κατανοῶν ὡς συστάτῳ σώματι1 θερμὰ καὶ ψυχρὰ καὶ πάνθ᾽ ὅσα δυνάμεις ἰσχυρὰς ἔχει περιιστάμενα ἔξωθεν καὶ προσπίπτοντα ἀκαίρως λύει καὶ νόσους γῆράς τε ἐπάγοντα φθίνειν ποιεῖ.

For these reasons and out of these materials, such in kind and four in number, the body of the Cosmos was harmonized by proportion and brought into existence. These conditions secured for it Amity, so that being united in identity with itself it became indissoluble by any agent other than Him who had bound it together.

Now of the four elements the construction of the Cosmos had taken up the whole of every one. For its Constructor had constructed it of all the fire and water and air and earth that existed, leaving over, outside it, no single particle or potency of any one of these elements. And these were his intentions: first, that it might be, so far as possible, a Living Creature, perfect and whole, with all its parts perfect; and next, that it might be One, inasmuch as there was nothing left over out of which another like Creature might come into existence; and further, that it might be secure from age and ailment, since He perceived that when heat and cold, and all

things which have violent potencies, surround a composite body from without and collide with it they dissolve it unduly and make it to waste away by bringing upon it ailments and age. Wherefore, because of this reasoning, He fashioned it to be One single Whole, compounded of all wholes, perfect and ageless and unailing.

24) Pl., *Ti.* 35a-b

Τῆς ἀμερίστου καὶ ἀεὶ κατὰ ταὐτὰ ἐχούσης οὐσίας καὶ τῆς αὖ περὶ τὰ σώματα γιγνομένης μεριστῆς, τρίτον ἐξ ἀμφοῖν ἐν μέσῳ συνεκεράσατο οὐσίας εἶδος, τῆς τε ταὐτοῦ φύσεως [αὖ πέρι] καὶ τῆς θατέρου, καὶ κατὰ ταὐτὰ ξυνέστησεν ἐν μέσῳ τοῦ τε ἀμεροῦς αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ. καὶ τρία λαβὼν αὐτὰ ὄντα συνεκεράσατο εἰς μίαν πάντα ἰδέαν, τὴν θατέρου φύσιν δύσμικτον οὖσαν εἰς ταὐτὸν ξυναρμόττων ββίᾳ. μιγνὺς δὲ μετὰ τῆς οὐσίας καὶ ἐκ τριῶν ποιησάμενος ἓν πάλιν ὅλον τοῦτο μοίρας ὅσας προσῆκε διένειμεν, ἑκάστην δὲ ἔκ τε ταὐτοῦ καὶ θατέρου καὶ τῆς οὐσίας μεμιγμένην.

Midway between the Being which is indivisible and remains always the same and the Being which is transient and divisible in bodies, He blended a third form of Being compounded out of the twain, that is to say, out of the Same and the Other; and in like manner He compounded it midway between that one of them which is indivisible and that one which is divisible in bodies. And He took the three of them, and blent them all together into one form, by forcing the Other into union with the Same, in spite of its being naturally difficult to mix. And when with the aid of Being He had mixed them, and had made of them one out of three, straightway He began to distribute the whole thereof into so many portions as was meet; and each portion was a mixture of the Same, of the Other, and of Being.

25) Pl. *Ti.* 46d-e

τῶν γὰρ ὄντων ᾧ νοῦν μόνῳ κτᾶσθαι προσήκει, λεκτέον ψυχήν· τοῦτο δὲ ἀόρατον, πῦρ δὲ καὶ ὕδωρ καὶ γῆ καὶ ἀὴρ σώματα πάντα ὁρατὰ γέγονε. τὸν δὲ νοῦ καὶ ἐπιστήμης ἐραστὴν ἀνάγκη τὰς τῆς ἔμφρονος φύσεως αἰτίας πρώτας μεταδιώκειν, ὅσαι δὲ ὑπ᾽ ἄλλων μὲν κινουμένων, ἕτερα δ᾽ ἐξ ἀνάγκης κινούντων γίγνονται, δευτέρας.

For, as we must affirm, the one and only existing thing which has the property of acquiring thought is Soul; and Soul is invisible, whereas fire and water and earth and air are all visible bodies; and the lover of thought and knowledge must needs pursue first the causes which belong to the Intelligent Nature, and put second all such as are of the class of things which are moved by others, and themselves, in turn, move others because they cannot help it.

26) Pl., *Ti.* 47 b-e

ἀλλὰ τούτου λεγέσθω παρ᾽ ἡμῶν αὕτη ἐπὶ ταῦτα αἰτία, θεὸν ἡμῖν ἀνευρεῖν δωρήσασθαί τε ὄψιν, ἵνα τὰς ἐν οὐρανῷ κατιδόντες τοῦ νοῦ περιόδους χρησαίμεθα ἐπὶ τὰς περιφορὰς τὰς τῆς παρ᾽ ἡμῖν διανοήσεως, ξυγγενεῖς ἐκείναις οὔσας, ἀταράκτοις τεταραγμένας, ἐκμαθόντες δὲ καὶ λογισμῶν κατὰ φύσιν ὀρθότητος μετασχόντες, μιμούμενοι τὰς τοῦ θεοῦ πάντως ἀπλανεῖς οὔσας τὰς ἐν ἡμῖν πεπλανημένας καταστησαίμεθα.

Φωνῆς τε δὴ καὶ ἀκοῆς πέρι πάλιν ὁ αὐτὸς λόγος, ἐπὶ ταὐτὰ τῶν αὐτῶν ἕνεκα παρὰ θεῶν δεδωρῆσθαι. λόγος τε γὰρ ἐπ᾽ αὐτὰ ταῦτα τέτακται, μεγίστην ξυμβαλλόμενος εἰς αὐτὰ μοῖραν, ὅσον τ᾽ αὖ μουσικῆς φωνῇ χρηστικὸν πρὸς ἀκοὴν ἕνεκα ἁρμονίας ἐστὶ δοθέν· ἡ δὲ ἁρμονία, ξυγγενεῖς ἔχουσα φορὰς ταῖς ἐν ἡμῖν τῆς ψυχῆς περιόδοις, τῷ μετὰ νοῦ προσχρωμένῳ Μούσαις οὐκ ἐφ᾽ ἡδονὴν ἄλογον, καθάπερ νῦν, εἶναι δοκεῖ χρήσιμος, ἀλλ᾽ ἐπὶ τὴν γεγονυῖαν ἐν ἡμῖν ἀνάρμοστον ψυχῆς περίοδον εἰς κατακόσμησιν καὶ συμφωνίαν ἑαυτῇ ξύμμαχος ὑπὸ Μουσῶν δέδοται· καὶ ῥυθμὸς αὖ διὰ τὴν ἄμετρον ἐν ἡμῖν καὶ χαρίτων ἐπιδεᾶ γιγνομένην ἐν τοῖς πλείστοις ἕξιν ἐπίκουρος ἐπὶ ταῦτα ὑπὸ τῶν αὐτῶν ἐδόθη.

But the cause and purpose of that best good, as we must maintain, is this,—that God devised and bestowed upon us vision to the end that we might behold the revolutions of Reason in the Heaven and use them for the revolvings of the reasoning that is within us, these being akin to those, the perturbable to the imperturbable; and that, through learning and sharing in calculations which are correct by their nature, by imitation of the absolutely unvarying revolutions of the God we might stabilize the variable revolutions within ourselves.

Concerning sound also and hearing, once more we make the same declaration, that they were bestowed by the Gods with the same object and for the same reasons; for it was for these same purposes that speech was ordained, and it makes the greatest contribution thereto; music too, in so far as it uses audible sound, was bestowed for the sake of harmony. And harmony, which has motions akin to the revolutions of the Soul within us, was given by the Muses to him who makes intelligent use of the Muses, not as an aid to irrational pleasure, as is now supposed, but as an auxiliary to the inner revolution of the Soul, when it has lost its harmony, to assist in restoring it to order and concord with itself. And because of the unmodulated condition, deficient in grace, which exists in most of us, Rhythm also was bestowed upon us to be our helper by the same deities and for the same ends.

27) Pl., *Ti.* 87c-88c

πᾶν δὴ τὸ ἀγαθὸν καλόν, τὸ δὲ καλὸν οὐκ ἄμετρον· [...] τὸν δὴ μαθηματικὸν ἤ τινα ἄλλην σφόδρα μελέτην διανοίᾳ κατεργαζόμενον καὶ τὴν τοῦ σώματος ἀποδοτέον κίνησιν, γυμναστικῇ προσομιλοῦντα, τόν τε αὖ σῶμα ἐπιμελῶς πλάττοντα τὰς τῆς ψυχῆς ἀνταποδοτέον κινήσεις, μουσικῇ καὶ πάσῃ φιλοσοφίᾳ προσχρώμενον, εἰ μέλλει δικαίως τις ἅμα μὲν καλός, ἅμα δὲ ἀγαθὸς ὀρθῶς κεκλήσεσθαι.

All that is good is fair, and the fair is not void of due measure; […] Thus the student of mathematics, or of any other subject, who works very hard with his intellect must also provide his body with exercise by practising gymnastics; while he who is diligent in moulding his body must, in turn, provide his soul with motion by cultivating music and philosophy in general, if either is to deserve to be called truly both fair and good.

ARISTOTLE, METAPHYSICS

28) Arist., *Metaph.* 980a

Πάντες ἄνθρωποι τοῦ εἰδέναι ὀρέγονται φύσει. σημεῖον δ᾽ ἡ τῶν αἰσθήσεων ἀγάπησις· καὶ γὰρ χωρὶς τῆς χρείας ἀγαπῶνται δι᾽ αὐτάς, καὶ μάλιστα τῶν ἄλλων ἡ διὰ τῶν ὀμμάτων. οὐ γὰρ μόνον ἵνα πράττωμεν ἀλλὰ καὶ μηθὲν μέλλοντες πράττειν τὸ ὁρᾶν αἱρούμεθα ἀντὶ πάντων ὡς εἰπεῖν τῶν ἄλλων. αἴτιον δ᾽ ὅτι μάλιστα ποιεῖ γνωρίζειν τι ἡμᾶς αὕτη τῶν αἰσθήσεων, καὶ πολλὰς δηλοῖ διαφοράς.

All men naturally desire knowledge. An indication of this is our esteem for the senses; for apart from their use we esteem them for their own sake, and most of all the sense of sight. Not only with a view to action, but even when no action is contemplated, we prefer sight, generally speaking, to all the other senses. The reason of this is that of all the senses sight best helps us to know things, and reveals many distinctions.

29) Arist., *Metaph.* 985b.

ἔτι δὲ τῶν ἁρμονικῶν ἐν ἀριθμοῖς ὁρῶντες τὰ πάθη καὶ τοὺς λόγους, ἐπεὶ δὴ τὰ μὲν ἄλλα τοῖς ἀριθμοῖς ἀεφαίνοντο τὴν φύσιν ἀφωμοιῶσθαι πᾶσαν, οἱ δ' ἀριθμοὶ πάσης τῆς φύσεως πρῶτοι, τὰ τῶν ἀριθμῶν στοιχεῖα τῶν ὄντων στοιχεῖα πάντων ὑπ- έλαβον εἶναι, καὶ τὸν ὅλον οὐρανὸν ἁρμονίαν εἶναι καὶ ἀριθμόν· καὶ ὅσα εἶχον ὁμολογούμενα δεικνύναι ἔν τε τοῖς ἀριθμοῖς καὶ ταῖς ἁρμονίαις πρὸς τὰ τοῦ οὐρανοῦ πάθη καὶ μέρη καὶ πρὸς τὴν ὅλην δια- κόσμησιν, ταῦτα συνάγοντες ἐφήρμοττον.

[…] and since they saw further that the properties and ratios of the musical scales are based on numbers, and since it seemed clear that all other things have their whole nature modelled upon numbers, and that numbers are the ultimate things in the whole physical universe, they assumed the elements of numbers to be the elements of everything, and the whole universe to be a proportion or number.

ARISTOTLE, POETICS

30) Arist., *Poet.* 1447a.

οἷον ἁρμονίᾳ μὲν καὶ ῥυθμῷ χρώμεναι μόνον ἥ τε αὐλητικὴ καὶ ἡ κιθαριστικὴ κἂν εἴ τινες ἕτεραι τυγχάνωσιν οὖσαι τοιαῦται τὴν δύναμιν, οἷον ἡ τῶν συρίγγων, αὐτῷ δὲ τῷ ῥυθμῷ χωρὶς ἁρμονίας ἡ τῶν ὀρχηστῶν (καὶ γὰρ οὗτοι διὰ τῶν σχηματιζομένων ῥυθμῶν μιμοῦνται καὶ ἤθη καὶ πάθη καὶ πράξεις)·

That is, melody and rhythm alone are used by music for aulos and lyre, and by any other types with this capacity, for example music for panpipes; rhythm on its own, without melody, is used by the art of dancers (since they too, through rhythms translated into movements, create mimesis of character, emotions, and actions) […]

31) Arist., *Poet.* 1450b-1451a

ἔτι δ' ἐπεὶ τὸ καλὸν καὶ ζῷον καὶ ἅπαν πρᾶγμα ὃ συνέστηκεν ἐκ τινῶν οὐ μόνον ταῦτα τεταγμένα δεῖ ἔχειν ἀλλὰ καὶ μέγεθος ὑπάρχειν μὴ τὸ τυχόν· τὸ γὰρ καλὸν ἐν μεγέθει καὶ τάξει ἐστίν, διὸ οὔτε πάμμικρον ἄν τι γένοιτο καλὸν ζῷον (συγχεῖται γὰρ ἡ θεωρία ἐγγὺς τοῦ ἀναισθήτου χρόνου γινομένη) οὔτε παμμέγεθες (οὐ γὰρ ἅμα ἡ θεωρία γίνεται ἀλλ' οἴχεται τοῖς θεωροῦσι τὸ ἓν καὶ τὸ ὅλον ἐκ τῆς θεωρίας), οἷον εἰ μυρίων σταδίων εἴη ζῷον·

Besides, a beautiful object, whether an animal or anything else with a structure of parts, should have not only its parts ordered but also an appropriate magnitude: beauty consists in magnitude and order, which is why there could not be a beautiful animal which was either minuscule (as contemplation of it, occurring in an almost imperceptible moment, has no distinctness) or gigantic (as contemplation of it has no cohesion, but those who contemplate it lose a sense of unity and wholeness), say an animal a thousand miles long.

32) Arist., *Pol.* 1339a

οὔτε γὰρ τίνα ἔχει δύναμιν ῥᾴδιον περὶ αὐτῆς διελεῖν, οὔτε τίνος δεῖ χάριν μετέχειν αὐτῆς, πότερον παιδιᾶς ἕνεκα καὶ ἀναπαύσεως, καθάπερ ὕπνου καὶ μέθης (ταῦτα γὰρ καθ' αὑτὰ μὲν οὔτε τῶν σπουδαίων, ἀλλ' ἡδέα, καὶ ἀναπαύει μέριμναν, ὡς φησὶν Εὐριπίδης, διὸ καὶ τάττουσιν αὐτὴν καὶ χρῶνται πᾶσι τούτοις ὁμοίως, ὕπνῳ καὶ μέθῃ καὶ μουσικῇ, τιθέασι δὲ καὶ τὴν ὄρχησιν ἐν τούτοις)· ἢ μᾶλλον οἰητέον πρὸς ἀρετήν τι τείνειν τὴν μουσικήν (ὡς δυναμένην, καθάπερ ἡ γυμναστικὴ τὸ σῶμα ποιόν τι παρασκευάζει, καὶ τὴν μουσικὴν τὸ ἦθος ποιόν τι ποιεῖν, ἐθίζουσαν δύνασθαι χαίρειν ὀρθῶς)· ἢ πρὸς διαγωγήν τι συμβάλλεται καὶ πρὸς φρόνησιν (καὶ γὰρ τοῦτο τρίτον θετέον τῶν εἰρημένων). ὅτι μὲν οὖν δεῖ τοὺς νέους μὴ παιδιᾶς ἕνεκα παιδεύειν, οὐκ ἄδηλον· οὐ γὰρ παίζουσι μανθάνοντες, μετὰ λύπης γὰρ ἡ μάθησις.

For it is not easy to say precisely what potency it possesses, nor yet for the sake of what object one should participate in it—whether for amusement and relaxation, as one indulges in sleep and deep drinking (for these in themselves are not serious pursuits but merely pleasant, and ‘ relax our care,’ as Euripides says; owing to which people actually class music with them and employ all of these things, sleep, deep drinking and music, in the same way, and they also place dancing in the same class); or whether we ought rather to think that music tends in some degree to virtue (music being capable of producing a certain quality of character just as gymnastics are capable of producing a certain quality of body, music accustoming men to be able to rejoice rightly); or that it contributes something to intellectual entertainment and culture (for this must be set down as a third alternative among those mentioned).

33) Arist., *Pol.* 1339b

σκοπεῖν δ' ἔξεστι τὴν ὑπόληψιν ἣν ἔχομεν περὶ τῶν θεῶν· οὐ γὰρ ὁ Ζεὺς αὐτὸς ᾄδει καὶ κιθαρίζει τοῖς ποιηταῖς. ἀλλὰ καὶ βαναύσους καλοῦμεν τοὺς τοιούτους καὶ τὸ πράττειν οὐκ ἀνδρὸς μὴ μεθύοντος ἢ παίζοντος.

And we may consider the conception that we have about the gods: Zeus does not sing and harp to the poets himself. But professional musicians we speak of as vulgar people, and indeed we think it not manly to perform music, except when drunk or for fun.

34) Arist., *Pol.* 1340b

καὶ τοῦτ' ἔστι φανερόν, εὐθὺς γὰρ ἡ τῶν ἁρμονιῶν διέστηκε φύσις ὥστε ἀκούοντας ἄλλως διατίθεσθαι καὶ μὴ τὸν αὐτὸν ἔχειν τρόπον πρὸς ἑκάστην αὐτῶν, ἀλλὰ πρὸς μὲν ἐνίας ὀδυρτικωτέρως καὶ συνεστηκότως μᾶλλον, οἷον πρὸς τὴν μιξολυδιστὶ καλουμένην, πρὸς δὲ τὰς μαλακωτέρως τὴν διάνοιαν, οἷον πρὸς τὰς ἀνειμένας, μέσως δὲ καὶ καθεστηκότως μάλιστα πρὸς ἑτέραν, οἷον δοκεῖ ποιεῖν ἡ δωριστὶ μόνη τῶν ἁρμονιῶν, ἐνθουσιαστικοὺς δ' ἡ φρυγιστί· ταῦτα γὰρ καλῶς λέγουσιν οἱ περὶ τὴν παιδείαν ταύτην πεφιλοσοφηκότες, λαμβάνουσι γὰρ τὰ μαρτύρια τῶν λόγων ἐξ αὐτῶν τῶν ἔργων. τὸν αὐτὸν δὲ

τρόπον ἔχει καὶ τὰ περὶ τοὺς ῥυθμούς· οἱ μὲν γὰρ ἦθος ἔχουσι στασιμώτερον οἱ δὲ κινητικόν, καὶ τούτων οἱ μὲν φορτικωτέρας ἔχουσι τὰς κινήσεις οἱ δὲ ἐλευθεριωτέρας. ἐκ μὲν οὖν τούτων φανερὸν ὅτι δύναται ποιόν τι τὸ τῆς ψυχῆς ἦθος ἡ μουσικὴ παρασκευάζειν, εἰ δὲ τοῦτο δύναται ποιεῖν, δῆλον ὅτι προσακτέον καὶ παιδευτέον ἐν αὐτῇ τοὺς νέους. ἔστι δὲ ἁρμόττουσα πρὸς τὴν φύσιν τὴν τηλικαύτην ἡ διδασκαλία τῆς μουσικῆς·

for even in the nature of the mere melodies there are differences, so that people when hearing them are affected differently and have not the same feelings in regard to each of them, but listen to some in a more mournful and restrained state, for instance the mode called Mixolydian, and to others in a softer state of mind, but in a midway state and with the greatest composure to another, as the Dorian mode alone of tunes seems to act, while the Phrygian makes men enthusiastic; for these things are well stated by those who have studied this form of education, as they derive the evidence for their theories from the actual facts of experience. And the same holds good about the rhythms also, for some have a more stable and others a more emotional character, and of the latter some are more vulgar in their emotional effects and others more liberal. From these considerations therefore it is plain that music has the power of producing a certain effect on the moral character of the soul, and if it has the power to do this, it is clear that the young must be directed to music and must be educated in it.

ARISTOXENUS, ELEMENTS OF HARMONICS

35) Aristox. *Harm.* 30-31

Καθάπερ Ἀριστοτέλης ἀεὶ διηγεῖτο τοὺς πλείστους τῶν ἀκουσάντων παρὰ Πλάτωνος τὴν περὶ τἀγαθοῦ ἀκρόασιν παθεῖν. προσιέναι μὲν γὰρ ἕκαστον ὑπολαμβάνοντα λήψεσθαί τι τῶν νομιζομένων τούτων ἀνθρωπίνων ἀγαθῶν οἷον το πλοῦτον ὑγίειαν ἰσχὺν τὸ ὅλον εὐδαιμονίαν τινὰ θαυμαστήν· ὅτε δὲ φανείησαν οἱ λόγοι περὶ μαθημάτων καὶ ἀριθμῶν καὶ γεωμετρίας καὶ ἀστρολογίας καὶ τὸ πέρας ὅτι ἀγαθόν ἐστιν ἕν, παντελῶς οἶμαι παράδοξόν τι ἐφαίνετο αὐτοῖς· εἶθ' οἱ μὲν ὑποκατεφρόνουν τοῦ πράγματος οἱ δὲ κατεμέμφοντο. Τί οὖν τὸ αἴτιον; οὐ προῄδεσαν, ἀλλ' ὥσπερ οἱ ἐριστικοὶ πρὸς τοὔνομα αὐτὸ ὑποκεχηνότες προσῄεσαν· εἰ δέ γέ τις οἶμαι προεξετίθει τὸ ὅλον, ἀπεγίνωσκεν ἂν ὁ μέλλων ἀκούειν ἢ εἴπερ ἤρεσκεν αὐτῷ διέμενεν ἂν ἐν τῇ το εἰρημένῃ ὑπολήψει.

Such was the condition, as Aristotle used often to relate,of most of the audience that attended Plato's Lectures on the Good. They came, he used to say, every one of them, in the conviction that they would get from the lectures some one or other of the things that the world calls good; riches or health, or strength, in fine, some extraordinary gift of fortune. But when they found that Plato's reasonings were of sciences and numbers, and geometry, and astronomy, and of good and unity as predicate of the finite, methinks their disenchantment was complete. The result was that some of them sneered at the thing, while others vilified it. Now to what was all this trouble due? To the fact that they had not waited to inform themselves of the nature of the subject, but after the manner of the sect of word-catchers had flocked round open-mouthed, attracted by the mere title 'good' in itself.

36) Phld., *De mus.* col. 51

[...] δ[εῖ]σθαι μάλιστ[α
πασῶν] εἰκόνων *· ἁμαρ[τόν-
τα τε γ]ὰρ τὰ μέγιστα βλά-
πτεσθ]αι τὰ ἤθη, ἐργ⌜ῶδ⌝ές τε
τούτω]ν αἰσθέσθαι διὰ τὸ
τοὺς ποη]τὰς φαυλοτέρους ※
εἶναι τῶ]ν Μουσῶν [*· τ]αὐτα[ς
γὰρ οὐκ] ἂν ποιῆσαι τὰ μει-
μήματα] ἐλευθέρων, μέ[λη
τε καὶ ῥ]υθμοὺς προσα[ρμοσά-
σας δούλων κ]αὶ ἀνελε[υθέ-
ρων, καὶ ἀνά]παλιν, οὐ[δὲ θη-
ρίων συνθεῖν]αι καὶ ἀν̣[θρώ-
πων καὶ ὀργά]νων πάντ[ων
φωνὰς ..... .]†ονελωνα† [..
..... · ποητὰς] μέν[τ]ο̣ι, κά[ν-
θρωπίνους], σφόδρα τὰ τοιαῦ-
τα ἐμπλέκον]τας καὶ συν⌜κ⌝υ-
κῶντας ἀλόγ]ως, καταγ⌜ελ⌝α-
σθῆναι ἂν δι]α⌜σπ⌝ῶντας ῥυ-
θμὸν μὲ]ν καὶ σχήματα ⌜μ⌝έ-
λους χωρί]ς, λόγους ψειλοὺς
εἰς μέτρα τ]ιθέντας, μέλος [δὲ
αὖ καὶ ῥυθμὸ]ν ἄνευ ῥημάτω̣[ν,
ψειλῇ κιθαρ]ίσει καὶ αὐλήσ[ει
χρωμένο]υς· ἐν οἷς δὴ πα⌜γ⌝[χά-
λεπον ἄ]νε[υ] λόγου [γινόμε-
νον ῥυθ]μόν τε κα[ὶ ἁρμονί-
αν γινώ]σκειν ὅ τ̣[ι τε βούλε-
ται καὶ ὅτ]ωι ἔοικεν τῶν [ἀ-
ξιολόγων] μιμημάτων· [ὑπο-
ληπτέον δ᾽ ὅτ]ι τό γε τοιο[ῦτο
πολλῆς ἀγρ]οικίας μ̣ε̣[στὸν
πᾶν ὀπό]σον τάχο[υς τε καὶ ll
[ἁπταισίας καὶ φωνῆς θηρι-
ώδους φίλον ὥστ᾽ αὐλήσει γε
χρῆσθαι καὶ κιθαρίσει κ.τ.λ.]

Because of all the [arts of] imitation, it [music] is the one with which one should take the utmost caution. For, in the case of error, moral harm can be most great, and it is troublesome to recognize, because our poets are inferior in quality to the Muses. They indeed [the Muses] would never create their imitations by adapting melodies and rhythms for free men, [into those] for slaves and men who were not born free and vice versa, and they would not mix together the cries of wild beasts, men's voices, and all sorts of instruments ... [The poets], however, precisely because they are humans, by their senselessness in

entangling such things and jumbling them up together, become objects of ridicule, because they separate rhythm and gesture from the tune, putting bare discourse into metre, whereas they isolate melody and rhythm from words, using the bare sounds of harp and flute, wherein it is almost impossible to understand what is intended by this wordless rhythm and harmony, or what noteworthy original it represents. One ought to realize that such methods are clownish in the extreme insofar as [they like] [much speed, mechanical accuracy, and animals' cries, and consequently employ the pipe. ...]

37) Phld., *De mus.* col. 116

[...] ὥστε καὶ τῆς ἐναρ-
μονίου καὶ τῆς χρωματικῆς ※
διαφέρονται [ο]ὐ κατὰ τὴν
ἄλογον ἐπα[ί]σθησιν ἀλλὰ
κατὰ τὰς δόξ[ας]· οἱ μέν, ὥσ-
περ οἱ τούτω[ι π]αραπλήσι[ο]ι,
τὴν μὲν φάσ̣[κο]ντες εἶναι
σεμνὴν κα[ὶ γε]νναίαν καὶ
ἁπλῆν καὶ κ̣[αθ]αράν, τὴν
δ᾽] ἄνανδρον [καὶ] φ[ο]ρτικὴν
καὶ ἀνελεύθερον,* οἱ δὲ τὴν
μ[ὲν] αὐστηρὰν καὶ δ[ε]σποτι-
κήν, τὴν δὲ ἥμερον καὶ πιθα-
νὴν [π]ροσονομάζοντες — ἀμ-
φότε[ρ]οι δὲ ἃ μηδετέρα ι πρόσ-
εστ[ι]ν̣ ἐπιφέροντες —, οἱ δὲ φυσι-
κώτερ[ο]ι τὸ πρὸς ἀκοὴν ἐξ ἑ-
κατέρας δρέπεσθαι κελεύον-
τες, οὐδὲν ἄρα τῶν συναπτο-
μένων οὐδετέρᾳ προσεῖ-
ναι κατά ⟦τ⟧ γ᾽ αὖ τὴν φύσιν αὐ-
τῆς νομίζοντες *.

[…] both in the case of the Enharmonic and the Chromatic scale people differ, not in respect of the irrational perception, but in respect of their opinions (δόξας), some, like Diogenes, saying that the Enharmonic is solemn and noble and straightforward and pure, and the Chromatic unmanly and vulgar and mean, while others call the Enharmonic severe and despotic, and the Chromatic mild and persuasive; both sides importing ideas which do not belong to either scale by nature.

38) Phld., *De mus.* col. 117

[...] Οὐ-
δὲ γὰρ μιμητικὸν ἡ μου-
σική, καθάπερ τι[ν]ὲς ὀνει-
ρώ̣τ̣τουσιν, οὐδ᾽, [ὡς οὗτος, ὁ-
μοιότη[τα]ς ἠθῶν, οὐ μιμη-
τικὰς δέ, [ἔχ]ει, πάντως δὲ πά-
σα[ς τὰς ἡ[θῶν ποιότητας ἐ-

πι̣φ[α]ίνε[ι] τ̣οιαύτας ἐν αἷς ἐ-
σ̣τ[ι] μεγαλοπρεπὲς καὶ ταπει-
νὸν καὶ ἀνδρῶδες καὶ ἄ- ※
νανδρον καὶ κόσμιον καὶ
θρασύ, μ[ᾶ]λλον ἥπερ ἡ μα-
γειρική *. [...]

For music is not an imitatory art (μιμητικὸν), as some people fondly imagine, nor does it, as this man says, have similarities to moral feelings which, though not imitative, yet express all ethical qualities such as magnificence, humbleness, courage, cowardice, orderliness and violence–any more than cookery.

39) Phld., *De mus.* col. 142

II εἰ μὴ [τοῖς π]αρὰ Κλεάνθει λέ-
γειν [ἴσ]α̣ θελήσουσιν, ὅς φησιν
«μέ{ι}νογ[τά] τε εἶναι τὰ ποητικὰ
καὶ μο̣υ̣[σ]ικὰ παραδείγματα»,
καὶ «τοῦ λ̣[ό]γου τοῦ τῆς φιλοσο-
φίας ἱκανῶς μὲν ἐξαγγέλ- ※
λειν δυναμένου τὰ θεῖα καὶ
ἀνθ[ρ]ώ[πι]ν̣[α], μὴ ἔχοντ̣ος δὲ
ψειλοῦ τῶν θείων μεγεθῶν
λέξεις οἰκείας, τὰ μέτρα καὶ
τὰ μέλη καὶ τοὺς ῥυθμοὺς
ὡς μάλιστα προσικνεῖσθαι
πρὸς τὴν ἀλήθειαν τῆς τῶν
θείων θεωρίας»· οὗ καταγελα-
στότερον οὐ ῥάιδιον εὑρεῖν·
οὔτε γὰρ αἱ διάνοιαι μὲν οὐ-
κ ὠφελο[ῦ]σιν *, ὅταν δὲ μελω-
δηθῶσιν, ἐξ ἀμφοτέρ̣ων ἡ
παρόρμ̣[η]σις [γί]ν̣εται — καὶ γὰρ
ὑπὸ διανοη[μ]άτων αὐτῶν
γίνετ᾽ οὐ μετρ ί α —, μετ⟦ω⟧ ὰ δὲ
τῶν μελῶν μ[ε]ίζων·

if they do not wish to make statements similar to that of Cleanthes, who says that poetic and musical examples are better, and that even though philosophical discourse is able to express divine and human matters adequately, it does not as prose have expressions proper to sublime divine objects, while meters and melodies and rhythms come closest to the truth of the contemplation of the divine – a more ridiculous statement than which is not easy to find. [Cleanthes says]: "It is not that ideas [alone] are not helpful, but when they are set to music, the stimulus comes from both sides; for while there comes a more than just moderate stimulus from the thoughts themselves, accompanied by melodies it is even greater."

40) Phld., *De mus* IV, cols. 148–149

εἰ δ᾽ εὗ̣ρ̣ο̣ν̣ θεο[ὶ τ]ὴν μουσι[κή]ν,
κ̣α̣ὶ τὰ[ς ἄ]λ̣λ̣[ας] τέχνα[ς ἀπέ- ||
||δοσαν οἵδ᾽, ὥστ᾽ αὐ[τὴ]ν μό-
νη̲ν ἀποφ[ήσο]μ̣ε̣ν̣ ὐ[πονο]ε̣ῖν̣·

If the gods invented music, they gave the other crafts as well: but (these men) extol (them) as (having given) this one alone.

CICERO, ON THE NATURE OF THE GODS

41) Cic., *Nat. D.* 2.21-22

‘Quod ratione utitur id melius est quam id quod ratione non utitur; nihil autem mundo melius; ratione igitur mundus utitur.’ Similiter effici potest sapientem esse mundum, similiter beatum, similiter aeternum; omnia enim haec meliora sunt quam ea quae sunt his carentia, nec mundo quicquam melius. Ex quo efficietur esse mundum deum. Idemque hoc modo: ‘Nullius sensu carentis pars aliqua potest esse sentiens; mundi autem partes sentientes sunt; non igitur caret sensu mundus.’ Pergit idem et urget angustius: ‘Nihil’ inquit ‘quod animi quodque rationis est expers, id generare ex se potest animantem conpotemque rationis; mundus autem generat animantis compotesque rationis; animans est igitur mundus composque rationis.’ Idemque similitudine ut saepe solet rationem conclusit[1] hoc modo: ‘Si ex oliva modulate canentes tibiae nascerentur, num dubitares quin inesset in oliva tibicinii quaedam scientia? Quid si platani fidiculas ferrent numerose sonantes? idem scilicet censeres in platanis inesse musicam. Cur igitur mundus non animans sapiensque iudicetur, cum ex se procreet animantis atque sapientis?’

‘That which has the faculty of reason is superior to that which has not the faculty of reason; but nothing is superior to the world; therefore the world has the faculty of reason.’ A similar argument can be used to prove that the world is wise, and happy, and eternal; for things possessed of each of these attributes are superior to things devoid of them, and nothing is superior to the world. From this it will follow that the world is god. Zeno also argued thus: ‘Nothing devoid of sensation can have a part of itself that is sentient; but the world has parts that are sentient; therefore the world is not devoid of sensation.’ He also proceeds to press the argument more closely: ‘Nothing,’ he says, ‘that is inanimate and irrational can give birth to an animate and rational being; but the world gives birth to animate and rational beings; therefore the world is animate and rational.’ Furthermore he proved his argument by means of one of his favourite comparisons, as follows: ‘If flutes playing musical tunes grew on an olive-tree, surely you would not question that the olive-tree possessed some knowledge of the art of flute-playing; or if plane-trees bore well-tuned lutes, doubtless you would likewise infer that the plane-trees possessed the art of music; why then should we not judge the world to be animate and endowed with wisdom, when it produces animate and wise offspring?’

42) Cic., *Nat. D.* 2.146.

Auriumque item est admirabile quoddam artificiosumque iudicium, quo iudicatur et in vocis et in tibiarum nervorumque cantibus varietas sonorum intervalla distinctio, et vocis genera permulta, canorum fuscum, leve asperum, grave acutum, flexibile durum, quae hominum solum auribus iudicantur.

The ears are likewise marvellously skilful organs of discrimination; they judge differences of tone, of pitch and of key in the music of the voice and of wind and stringed instruments, and many different qualities of voice, sonorous and dull, smooth and rough, bass and treble, flexible and hard, distinctions discriminated by the human ear alone.

PLUTARCH, ON THE GENERATION OF THE SOUL IN THE TIMAEUS

43) Plut. *De anim. proc.* 33

Σκοπεῖτε δὲ μὴ τὸν μὲν οὐρανὸν ἄγει καὶ τὰ οὐράνια ταῖς περὶ αὑτὴν ἐμμελείαις καὶ κινήσεσιν ἡ ψυχὴ φρονιμωτάτη καὶ δικαιοτάτη γεγονυῖα, γέγονε δὲ τοιαύτη τοῖς καθ' ἁρμονίαν λόγοις, ὧν εἰκόνες μὲν ὑπάρχουσιν εἰς τὰ σώματα ἐν τοῖς ὁρατοῖς καὶ ὁρωμένοις μέρεσι τοῦ κόσμου καὶ σώμασιν ἡ δὲ πρώτη καὶ κυριωτάτη δύναμις ἀοράτως ἐγκέκραται τῇ ψυχῇ καὶ παρέχει σύμφωνον αὐτὴν καὶ πειθήνιον, ἀεὶ τῷ κρατίστῳ καὶ θειοτάτῳ μέρει τῶν ἄλλων ἁπάντων ὁμονοούντων. παραλαβὼν γὰρ ὁ δημιουργὸς ἀταξίαν καὶ πλημμέλειαν ἐν ταῖς κινήσεσι τῆς ἀναρμόστου καὶ ἀνοήτου ψυχῆς διαφερομένης πρὸς ἑαυτὴν τὰ μὲν διώρισε καὶ διέστησε τὰ δὲ συνήγαγε πρὸς ἄλληλα καὶ συνέταξεν ἁρμονίαις καὶ ἀριθμοῖς χρησάμενος, οἷς καὶ τὰ κωφότατα σώματα, λίθοι καὶ ξύλα καὶ φλοιοὶ φυτῶν καὶ θηρίων ὀστᾶ καὶ πυτίαι, συγκεραννύμενα καὶ συναρμοττόμενα θαυμαστὰς μὲν ἀγαλμάτων ὄψεις θαυμαστὰς δὲ παρέχει φαρμάκων καὶ ὀργάνων δυνάμεις. ᾗ καὶ Ζήνων ὁ Κιτιεὺς ἐπὶ θέαν αὐλητῶν παρεκάλει τὰ μειράκια καταμανθάνειν οἵαν κέρατα καὶ ξύλα καὶ κάλαμοι καὶ ὀστᾶ, λόγου μετέχοντα καὶ συμφωνίας, φωνὴν ἀφίησι. τὸ μὲν γὰρ ἀριθμῷ πάντα ἐπεοικέναι κατὰ τὴν Πυθαγορικὴν ἀπόφανσιν λόγου δεῖται· τὸ δὲ πᾶσιν, οἷς ἐκ διαφορᾶς καὶ ἀνομοιότητος ἐγγέγονε κοινωνία τις πρὸς ἄλληλα καὶ συμφωνία, ταύτης αἰτίαν εἶναι μετριότητα καὶ τάξιν, ἀριθμοῦ καὶ ἁρμονίας μετασχοῦσιν, οὐδὲ τοὺς ποιητὰς λέληθεν ἄρθμια μὲν τὰ φίλα καὶ προσηνῆ καλοῦντας ἀναρσίους δὲ τοὺς ἐχθροὺς καὶ τοὺς πολεμίους, ὡς ἀναρμοστίαν τὴν διαφορὰν οὖσαν.

Consider, however, whether the heavens and the heavenly bodies are not guided by the soul with her own harmonious motions when she has become most provident and most just and whether she has not become such by reason of the concordant ratios, semblances of which are incorporated in the parts of the universe that are visible and seen, that is in bodies, but the primary and fundamental property of which has been invisibly blended in the soul and renders her concordant and docile, all her other parts always agreeing with the part that is best and most divine. For the artificer, having taken over a jangling disorder in the motions of the discordant and stupid soul which was at odds with herself, distinguished and separated some parts and brought others together with one another and organized them, using concords and numbers by which when blended and fitted together even the most senseless bodies, stones and logs and the bark of plants and bones and beestings of animals, provide statuary of wonderful appearance and medicines and instruments of wonderful potency. Wherefore it was that Zeno of Citium summoned the lads to a performance of pipers to observe what a sound is produced by bits of horn and wood and reed and bone when they partake of ratio and consonance. For, while it requires reasoned argument to maintain with the Pythagorean assertion that all things are like unto number, the fact that for all things in which out of difference and dissimilitude there has come to be some union and consonance with one another the cause is regularity and order consequent upon their participation in number and concord, this has not gone unnoticed even by the poets who call friendly and agreeable things befitting and enemies and foes unbefitting on the assumption that dissension is unfittingness.

PLUTARCH ON MORAL VIRTUE

44) Plut., *De virt. mor.* 443.

Δέδοικα δὲ μὴ δόξαιμι παντάπασιν ἐπαγωγὰ καὶ νεαρὰ τῷ λόγῳ περαίνειν, ψαλτήρια διεξιὼν καὶ λύρας καὶ πηκτίδας καὶ αὐλούς, καὶ ὅσα μουσικῆς προσῳδὰ καὶ προσήγορα μηχανησαμένης ἀνθρωπίνοις πάθεσιν ἄψυχα συνήδεται καὶ συνεπιθρηνεῖ καὶ συνᾴδει καὶ συνακολασταίνει, τὰς κρίσεις ἀναφέροντα καὶ τὰ πάθη καὶ τὰ ἤθη τῶν χρωμένων. καίτοι καὶ Ζήνωνά φασιν εἰς θέατρον ἀνιόντα κιθαρῳδοῦντος Ἀμοιβέως πρὸς τοὺς μαθητάς, "ἴωμεν," εἰπεῖν, "ὅπως καταμάθωμεν οἵαν ἔντερα καὶ νεῦρα καὶ ξύλα καὶ ὀστᾶ λόγου καὶ ῥυθμοῦ[2] μετασχόντα καὶ τάξεως ἐμμέλειαν καὶ φωνὴν ἀφίησιν."

But I fear that I shall be thought to be rounding out my discourse with instances which are altogether seductive and exotic, if I recount in full how harps and lyres, pipes and flutes, and all the other harmonious and consonant instruments which musical art has devised, void of soul though they be, accord in songs of both joy and grief, in stately measures and dissolute tunes, with human experiences, reproducing the judgements, the experiences, and the morals of those who use them. And yet they say that even Zeno on his way to the theatre when Amoebeus was singing to the lyre, remarked to his pupils, "Come, let us observe what harmony and music gut and sinew, wood and bone, send forth when they partake of reason, proportion, and order."

PLUTARCH, AGAINST EPICUREAN HAPPINESS

45) Plut., *Non Posse* 1095a-c

Καίτοι τἆλλα μὲν ὡς ἡμῖν ἐπῆλθεν εἴρηται· μουσικὴν δὲ ὅσας ἡδονὰς καὶ χάριτας οἵας φέρουσαν ἀποστρέφονται καὶ φεύγουσιν καὶ βουλόμενος οὐκ ἄν τις ἐκλάθοιτο, δι' ἀτοπίαν ὧν Ἐπίκουρος λέγει, φιλοθέωρον μὲν ἀποφαίνων τὸν σοφὸν ἐν ταῖς Διαπορίαις καὶ χαίροντα παρ' ὀντινοῦν ἕτερον ἀκροάμασι καὶ θεάμασι Διονυσιακοῖς, προβλήμασι δὲ μουσικοῖς καὶ κριτικῶν φιλολόγοις ζητήμασιν οὐδὲ παρὰ πότον διδοὺς χώραν, ἀλλὰ καὶ τοῖς φιλομούσοις τῶν βασιλέων παραινῶν στρατηγικὰ διηγήματα καὶ φορτικὰς βωμολοχίας ὑπομένειν μᾶλλον ἐν τοῖς συμποσίοις ἢ λόγους περὶ μουσικῶν καὶ ποιητικῶν προβλημάτων περαινομένους.

So far I have mentioned their views just as they happened to occur to me, but no one could forget even if he wished their rejection and avoidance of music with the great pleasures and exquisite delight it brings; the absurd discrepancy of Epicurus' statements sees to that. On the one hand he says in the *Disputed Questions* that the sage is a lover of spectacles and yields to none in the enjoyment of theatrical recitals and shows; but on the other he allows no place, even over the wine, for questions about music and the enquiries of critics and scholars and actually advises a cultivated monarch to put up with recitals of stratagems and with vulgar buffooneries at his drinking parties sooner than with the discussion of problems in music and poetry.

Ps. PLUTARCH, ON MUSIC

46) Ps. Plut., *[De mus]* 1144f-1145a

Πυθαγόρας δ' ὁ σεμνὸς ἀπεδοκίμαζεν τὴν κρίσιν τῆς μουσικῆς τὴν διὰ τῆς αἰσθήσεως· νῷ γὰρ ληπτὴν τὴν ταύτης ἀρετὴν ἔφασκεν εἶναι. τοιγάρτοι τῇ μὲν ἀκοῇ οὐκ ἔκρινεν αὐτήν, τῇ δὲ ἀναλογικῇ ἁρμονίᾳ· αὔταρκές τ' ἐνόμιζεν μέχρι τοῦ διὰ πασῶν στῆσαι τὴν τῆς μουσικῆς ἐπίγνωσιν. [...]

The grave Pythagoras rejected the judging of music by the sense of hearing, asserting that its excellence must be apprehended by the mind. This is why he did not judge it by the ear, but by the scale based on the proportions, and considered it sufficient to pursue the study no further than the octave. […]

47) Ps. Plut., *[De mus]* 1147

Ἀλλὰ δὴ καὶ τὸ μέγιστον ὑμῖν, ὦ ἑταῖροι, καὶ μάλιστα σεμνοτάτην ἀποφαῖνον μουσικὴν παραλέλειπται. τὴν γὰρ τῶν ὄντων φορὰν καὶ τὴν τῶν ἀστέρων κίνησιν οἱ περὶ Πυθαγόραν καὶ Ἀρχύταν καὶ Πλάτωνα καὶ οἱ λοιποὶ τῶν ἀρχαίων φιλοσόφων οὐκ ἄνευ μουσικῆς γίγνεσθαι καὶ συνεστάναι ἔφασκον· πάντα γὰρ καθ' ἁρμονίαν ὑπὸ τοῦ θεοῦ κατεσκευάσθαι φασίν. ἄκαιρον δ' ἂν εἴη νῦν ἐπεκτείνειν τοὺς περὶ τούτου λόγους, ἀνώτατον δὲ καὶ μουσικώτατον τὸ[2] παντὶ τὸ[3] προσῆκον μέτρον ἐπιτιθέναι.

But in fact, my friends, the greatest consideration, one that particularly reveals music as most worthy of all reverence, has been omitted. It is that the revolution of the universe and the courses of the stars are said by Pythagoras, Archytas, Plato, and the rest of the ancient philosophers not to come into being or to be maintained without the influence of music; for they assert that God has shaped all things in a framework based on harmony. It is no time now, however, to expatiate further on this subject. Nothing is more important or more in the spirit of music than to assign to all things their proper measure.

PHILO, ON MATING WITH THE PRELIMINARY STUDIES

48) Philo, *Congr.* 521.16

μουσικὴ δὲ τὸ μὲν ἄρρυθμον [ἐν] ῥυθμοῖς, τὸ δ' ἀνάρμοστον ἁρμονίᾳ, τὸ δ' ἀπῳδὸν καὶ ἐκμελὲς μέλει κατεπᾴδουσα τὸ ἀσύμφωνον εἰς συμφωνίαν ἄξει. γεωμετρία δ' ἰσότητος καὶ ἀναλογίας ἐμβαλλομένη τὰ σπέρματα εἰς ψυχὴν φιλομαθῆ γλαφυρότητι συνεχοῦς θεωρίας δικαιοσύνης ζῆλον ἐμποιήσει.

Music will charm away the unrhythmic by its rhythm, the inharmonious by its harmony, the unmelodious and tuneless by its melody, and thus reduce it discord to concord. Geometry will sow in the soul that loves to learn the seeds of equality and proportion, and by the charm of its logical continuity will raise from those seeds a zeal for justice. (Philo, *Congr.* 521.16, transl. by Colson and Whitaker)

PORPHYRY, LIFE OF PYTHAGORAS

49) Porph., *VP* 30

Καὶ τοῖς μὲν ἑταίροις ἡρμόζετο ταῦτα, αὐτὸς δὲ τῆς τοῦ παντὸς ἁρμονίας ἠκροᾶτο συνιεὶς τῆς καθολικῆς τῶν σφαιρῶν καὶ τῶν κατ' αὐτὰς κινουμένων ἀστέρων ἁρμονίας, ἧς ἡμᾶς μὴ ἀκούειν διὰ σμικρότητα τῆς φύσεως.

He himself could hear the Harmony of the Universe, and understood the universal music of the spheres, and of the stars which move in concert with them, and which we cannot hear because of the limitations of our weak nature.

50) Porph., *VP* 49

καὶ οἱ γεωμέτραι μὴ ἰσχύοντες τὰ σωματοειδῆ λόγῳ παραστῆσαι παραγίνονται ⏐ ἐπὶ τὰς διαγραφὰς τῶν σχημάτων, λέγοντες εἶναι τρίγωνον τόδε, οὐ τοῦτο βουλόμενοι τρίγωνον εἶναι τὸ ὑπὸ τὴν ὄψιν ὑποπῖπτον, ἀλλὰ τὸ τοιοῦτο, καὶ διὰ τούτου τὴν ἔννοιαν τοῦ τριγώνου παριστᾶσι. Καὶ ἐπὶ τῶν πρώτων οὖν λόγων καὶ εἰδῶν τὸ αὐτὸ ἐποίησαν οἱ Πυθαγόρειοι, μὴ ἰσχύοντες λόγῳ παραδιδόναι τὰ ἀσώματα εἴδη καὶ τὰς πρώτας ἀρχάς, παραγένοντο ἐπὶ τὴν διὰ τῶν ἀριθμῶν δήλωσιν. Καὶ οὕτως τὸν μὲν τῆς ἑνότητος λόγον καὶ τὸν τῆς ταὐτότητος καὶ ἰσότητος καὶ τὸ αἴτιον τῆς συμπνοίας καὶ τῆς συμπαθείας τῶν ὅλων καὶ τῆς σωτηρίας τοῦ κατὰ ταὐτὰ καὶ ὡσαύτως ἔχοντος ἕν προσηγόρευσαν· καὶ γὰρ τὸ ἐν τοῖς κατὰ μέρος ἕν τοιοῦτον ὑπάρχει ἡνωμένον τοῖς μέρεσιν καὶ σύμπνουν κατὰ μετουσίαν τοῦ πρώτου αἰτίου.

As the geometricians cannot express incorporeal forms in words, and have recourse to the drawings of figures, saying "This is a triangle," and yet do no mean that the actually seen lines are the triangle, but only what they represent, the knowledge in the mind, so the Pythagoreans used the same objective method in respect to first reasons and forms. As these incorporeal forms and first principles could not be expressed in words, they had recourse to demonstration by numbers. Number One denoted to them the reason of Unity, Identity, Equality, the purpose of friendship, sympathy, and conservation of the Universe, which results from persistence in Sameness. For unity in the details harmonizes all the parts of a whole, as by the participation of the First Cause.

51) Porph., *VP* 46

Νοῦς γὰρ καθ' αὐτὸν 'πάνθ' ὁρᾷ καὶ πάντ' ἀκούει, τἄλλα δὲ κωφὰ καὶ τυφλά'.

Pythagoras thought that mind alone sees and hears, while all the rest are blind and deaf.

OVID METAMORPHOSES

52) Ov., *Met.* XV, 60–64

Vir fuit hic ortu Samius, sed fugerat una
et Samon et dominos odioque tyrannidis exul
sponte erat isque licet caeli regione remotos
mente deos adiit et, quae natura negabat
visibus humanis, oculis ea pectoris hausit,

There was a man here, a Samian by birth, but he had fled forth from Samos and its rulers, and through hatred of tyranny was living in voluntary exile. He, though the gods were far away in the heavenly regions, still approached them with his thought, and what Nature denied to his mortal vision he feasted on with his mind's eye.

QUINTILIAN, THE ORATOR'S EDUCATION

53) Quint., *Inst.*, 1.10.32-34

Nam et Pythagoran accepimus concitatos ad vim pudicae domui adferendam iuvenes iussa mutare in spondium modos tibicina composuisse, et Chrysippus etiam nutricum illi quae adhibetur infantibus adlectationi suum quoddam carmen adsignat. Est etiam non inerudite ad declamandum ficta materia, in qua

ponitur tibicen qui sacrificanti Phrygium cecinerat, acto illo in insaniam et per praecipitia delato, accusari quod causa mortis extiterit: quae si dici debet ab oratore nec dici citra scientiam musices potest, quomodo non hanc quoque artem necessariam esse operi nostro vel iniqui consentient?

We are told that Pythagoras, when some young men were roused to commit an outrage on a respectable family, calmed them by ordering the piper to change her tune to a spondaic one. Chrysippus also suggests a special tune for nurses' attempts to coax babies. And there is a fictitious declamation theme which shows considerable learning, in which a piper who had played a Phrygian air to a man making a sacrifice is accused of causing his death, because the man was driven mad and threw himself over a precipice. If this speech has to be made by an orator, and it cannot be made without knowledge of music, how can the most prejudiced critics fail to agree that music is necessary for our enterprise?

THEON OF SMYRNA, MATHEMATICS USEFUL FOR UNDERSTANDING PLATO

54) 46.20-47.17

ἐπεὶ δὲ καὶ συμφώνους τινάς φασιν ἀριθμούς, καὶ ὁ περὶ συμφωνίας λόγος οὐκ ἂν εὑρεθείη ἄνευ ἀριθμητικῆς· ἥτις συμφωνία τὴν μεγίστην ἔχει ἰσχύν, ἐν λόγῳ μὲν οὖσα ἀλήθεια, ἐν βίῳ δὲ εὐδαιμονία, ἐν δὲ τῇ φύσει ἁρμονία. καὶ αὐτὴ δὲ ἡ ἁρμονία ἥτις ἐστὶν ἐν κόσμῳ οὐκ ἂν εὑρεθείη μὴ ἐν ἀριθμοῖς πρότερον ἐξευρεθεῖσα· ἥτις ἐστὶ καὶ νοητή ἡ δὲ νοητὴ ῥᾷον ἀπὸ τῆς αἰσθητῆς κατανοεῖται. νῦν μὲν οὖν περὶ τῶν δυεῖν ἁρμονιῶν λεκτέον, τῆς τ' αἰσθητῆς ἐν ὀργάνοις καὶ τῆς νοητῆς ἐν ἀριθμοῖς. μετὰ δὲ τὸν περὶ πάντων τῶν μαθηματικῶν λόγον τελευταῖον ἐπάξομεν καὶ τὸν περὶ τῆς ἐν κόσμῳ ἁρμονίας λόγον, οὐκ ὀκνοῦντες τὰ ὑπὸ τῶν πρὸ ἡμῶν ἐξευρημένα καὶ αὐτοὶ ἀναγράφειν, ὥσπερ καὶ τὰ πρόσθεν ὑπὸ τῶν Πυθαγορικῶν παραδοθέντα ἐπὶ τὸ γνωριμώτερον ἐξενεγκόντες παραδεδώκαμεν, οὐδὲν αὐτοὶ τούτων ἐξευρηκέναι φάσκοντες. παραδεικνύντες δέ τινα τῶν ὑπὸ τῶν πρὸ ἡμῶν παραδοθέντων τῷ μέλλοντι συνήσειν τὰ Πλάτωνος ἀναγκαίαν καὶ τούτων συναγωγὴν ἐποιησάμεθα.

Since people also call some numbers 'concordant', and without the science of number *[arithmetike]* the proper account of concordance could not be discovered, and since this concordance possesses the greatest power, in speech being truth, in life happiness, and in nature *harmonia,* one could also not discover what this *harmonia* is in the cosmos if one had not first discovered fully what it is in numbers. This *harmonia* is intelligible, but the intelligible kind is more easily grasped from a beginning in the perceptible kind. We must now speak, therefore, about the two *harmoniai,* that which is perceptible in instruments and that which is intelligible in numbers. After giving an account of all the mathematical *harmoniai* we shall add, finally, that of the *harmonia* in the cosmos. We shall not hesitate to take the discoveries of our predecessors and write them down again ourselves, just as we have passed on what was previously handed down by the Pythagoreans, setting it out again to make it better known, without claiming to have discovered any of these things ourselves. In offering examples of the things handed down by our predecessors, we made a collection of these things too, containing what is necessary for anyone who is to understand what Plato says.

GALEN, ON THE DOCTRINES OF HIPPOCRATES AND PLATO

55) Gal., *PHP* 5.6

ἐπεὶ διὰ τί πρὸς θεῶν – ἐρωτήσω γὰρ ἔτι τοῦτο τοὺς ἀπὸ τοῦ Χρυσίππου –, Δάμων ὁ μουσικὸς αὐλητρίδι παραγενόμενος αὐλούσῃ τὸ Φρύγιον νεανίσκοις τισὶν οἰνωμένοις καὶ μανικὰ ἄττα διαπραττομένοις

ἐκέλευσεν αὐλῆσαι τὸ Δώριον, οἱ δ’εὐθὺς ἐπαύσαντο τῆς ἐμπλήκτου φορᾶς; οὐ γὰρ δήπου τὰς δόξας τοῦ λογιστικοῦ μεταδιδάσκονται πρὸς τῶν αὐλημάτων, ἀλλὰ τὸ παθητικὸν τῆς ψυχῆς ἄλογον ὑπάρχον ἐπεγείρονταί τε καὶ πραΰνονται διὰ κινήσεων ἀλόγων. τῷ μὲν γὰρ ἀλόγῳ διὰ τῶν ἀλόγων ἥ τε ὠφέλεια καὶ ἡ βλάβη, τῷ λογικῷ δὲ δι’ ἐπιστήμης τε καὶ ἀμαθίας.

Why was it, in heaven’s name—I shall address this question also to Chrysippus’ followers—that when Damon the musician came upon a flute-girl playing in the Phrygian mode to some young men who were overcome with wine and acting madly, he told her to play in the Dorian mode and the youths immediately dropped their wild behaviour? Obviously, they are not taught anything by the music of the flute that changes the opinions of their rational faculties; but since the affective part of the soul is irrational, they are aroused or calmed by means of irrational motions. For the irrational is helped and harmed by irrational things, the rational by knowledge and ignorance. (Gal., *PHP* 5.6, transl. by De Lacy)

SEXTUS EMPIRICUS, AGAINST THE LOGICIANS

56) Sext. Emp., *Against the Logicians*, 95-96.

τὸν μὲν παραδόντα λέγοντες Πυθαγόραν (τοῦτον γὰρ ἐθεοποίουν), τετρακτὺν δὲ ἀριθμόν τινα, ὃς ἐκ τεσσάρων τῶν πρώτων ἀριθμῶν συγκείμενος τὸν τελειότατον ἀπήρτιζεν, ὥσπερ τὸν δέκα· ἓν γὰρ καὶ δύο καὶ τρία καὶ τέσσαρα δέκα γίνεται. ἔστι τε οὗτος ὁ ἀριθμὸς πρώτη τετρακτύς, πηγὴ δὲ ἀενάου φύσεως λέλεκται παρόσον κατ᾽ αὐτοὺς ὁ σύμπας κόσμος κατὰ ἁρμονίαν διοικεῖται, ἡ δὲ ἁρμονία σύστημά ἐστι τριῶν συμφωνιῶν, τῆς τε διὰ τεσσάρων καὶ τῆς διὰ πέντε καὶ τῆς διὰ πασῶν, τούτων δὲ τῶν τριῶν συμφωνιῶν αἱ ἀναλογίαι ἐν τοῖς προειρημένοις τέτταρσιν ἀριθμοῖς εὑρίσκονται, ἔν τε τῷ ἑνὶ κἀν τῷ δύο κἀν τῷ τρία κἀν τῷ τέσσαρα.

By “the man who bequeathed” they mean Pythagoras (for him they deified); and by “the Tetraktys” a certain number which, being composed of the four primary numbers, makes up the most perfect number, namely the Ten; for one plus two plus three plus four amount to ten. And this number is the first Tetraktys, and it is termed the “fount of Nature ever-enduring” in so far as the whole Universe, according to them, is arranged according to harmony, and harmony is a system composed of three symphonies—that of the “By-Fours,” and that of the “By-Fives,” and that of the “By-Alls”; and the proportions of these three symphonies are found in the four numbers just mentioned—in the one and in the two and in the three and in the four.

CLEMENT OF ALEXANDRIA, STROMATEIS

57) Clem. Alex. *Strom*. 2.20, (=SVF 1.370)

ὅθεν, ὡς ἔλεγεν Ἀρίστων, πρὸς ὅλον τὸ τετράχορδον, ἡδονὴν λύπην φόβον ἐπιθυμίαν, πολλῆς δεῖ τῆς ἀσκήσεως καὶ μάχης.

against the whole tetrachord of pleasure, pain, fear, and lust, there is need of much exercise and struggle. For it is these, it is these that go through our bowels, And throw into disorder men’s hearts.

58) Clem. Alex. *Strom.* 8, 100-101

Τὸ δὲ αὐτὸ τῶν ἐναντίων αἴτιον γίνεται, ποτὲ μὲν παρὰ τὸ μέγεθος τοῦ αἰτίου καὶ τὴν δύναμιν, ποτὲ δὲ παρὰ τὴν ἐπιτηδειότητα τοῦ πάσχοντος. παρὰ μὲν τὴν ποιὰν δύναμιν· ἡ αὐτὴ χορδὴ παρὰ τὴν ἐπίτασιν ἢ τὴν ἄνεσιν ὀξὺν ἢ βαρὺν ἀποδίδωσι τὸν φθόγγον. παρὰ δὲ τὴν ἐπιτηδειότητα τῶν πασχόντων· τὸ μέλι γλυκάζει μὲν τοὺς ὑγιαίνοντας, πικράζει δὲ τοὺς πυρέσσοντας, καὶ εἷς καὶ ὁ αὐτὸς οἶνος τοὺς μὲν εἰς ὀργήν, τοὺς δὲ εἰς διάχυσιν ἄγει, καὶ ὁ αὐτὸς ἥλιος τήκει μὲν τὸν κηρόν, ξηραίνει δὲ τὸν πηλόν.

The same item becomes the cause of opposite effects, sometimes due to the magnitude and power of the cause, sometimes due to the suitability of that which is acted upon. Due to the power's being such-and-such: the same string makes a high-pitched or a low-pitched sound, depending on the degree of tension. Due to the suitability of things acted upon: Honey is sweet for the healthy, but bitter for the feverish; one and the same wine makes some people angry, others merry; the same sun melts the wax and dries the mud.

DIOGENES LAERTIUS, LIVES OF EMINENT PHILOSOPHERS

59) Diog. Laert 7.1

Καλὸν δὲ λέγουσι τὸ τέλειον ἀγαθὸν παρὰ τὸ πάντας ἀπέχειν τοὺς ἐπιζητουμένους ἀριθμοὺς ὑπὸ τῆς φύσεως ἢ τὸ τελέως σύμμετρον. εἴδη δ' εἶναι τοῦ καλοῦ τέτταρα, δίκαιον, ἀνδρεῖον, κόσμιον, ἐπιστημονικόν· ἐν γὰρ τοῖσδε τὰς καλὰς πράξεις συντελεῖσθαι.

The reason why they characterize the perfect good as beautiful is that it has in full all the "factors" required by nature or has perfect proportion. Of the beautiful there are (say they) four species, namely, what is just, courageous, orderly and wise; for it is under these forms that fair deeds are accomplished.

60) Diog. Laert., 7.86

Ὃ δὲ λέγουσί τινες, πρὸς ἡδονὴν γίγνεσθαι τὴν πρώτην ὁρμὴν τοῖς ζῴοις, ψεῦδος ἀποφαίνουσιν. ἐπιγέννημα γάρ φασιν, εἰ ἄρα ἔστιν, ἡδονὴν εἶναι ὅταν αὐτὴ καθ' αὑτὴν ἡ φύσις ἐπιζητήσασα τὰ ἐναρμόζοντα τῇ συστάσει ἀπολάβῃ· ὃν τρόπον ἀφιλαρύνεται τὰ ζῷα καὶ θάλλει τὰ φυτά. οὐδέν τε, φασί, διήλλαξεν ἡ φύσις ἐπὶ τῶν φυτῶν καὶ ἐπὶ τῶν ζῴων, ὅτι χωρὶς ὁρμῆς καὶ αἰσθήσεως κἀκεῖνα οἰκονομεῖ καὶ ἐφ' ἡμῶν τινα φυτοειδῶς γίνεται. ἐκ περιττοῦ δὲ τῆς ὁρμῆς τοῖς ζῴοις ἐπιγενομένης, ᾗ συγχρώμενα πορεύεται πρὸς τὰ οἰκεῖα, τούτοις μὲν τὸ κατὰ φύσιν τῷ κατὰ[1] τὴν ὁρμὴν διοικεῖσθαι· τοῦ δὲ λόγου τοῖς λογικοῖς κατὰ τελειοτέραν προστασίαν δεδομένου, τὸ κατὰ λόγον ζῆν ὀρθῶς γίνεσθαι <τού>τοις κατὰ φύσιν· τεχνίτης γὰρ οὗτος ἐπιγίνεται τῆς ὁρμῆς.

As for the assertion made by some people that pleasure is the object to which the first impulse of animals is directed, it is shown by the Stoics to be false. For pleasure, if it is really felt, they declare to be a by-product, which never comes until nature by itself has sought and found the means suitable to the animal's existence or constitution; it is an aftermath comparable to the condition of animals thriving and plants in full bloom. And nature, they say, made no difference originally between plants and animals, for she regulates the life of plants too, in their case without impulse and sensation, just as also certain processes go

on of a vegetative kind in us. But when in the case of animals impulse has been superadded, whereby they are enabled to go in quest of their proper aliment, for them, say the Stoics, Nature's rule is to follow the direction of impulse. But when reason by way of a more perfect leadership has been bestowed on the beings we call rational, for them life according to reason rightly becomes the natural life. For reason supervenes to shape impulse scientifically.

61) Diog. Laert., 7.110

Φασὶ δὲ τὴν ψυχὴν εἶναι ὀκταμερῆ· μέρη γὰρ αὐτῆς τά τε πέντε αἰσθητήρια καὶ τὸ φωνητικὸν μόριον καὶ τὸ διανοητικόν, ὅπερ ἐστὶν αὐτὴ ἡ διάνοια, καὶ τὸ γεννητικόν. ἐκ δὲ τῶν ψευδῶν ἐπιγίνεσθαι τὴν διαστροφὴν ἐπὶ τὴν διάνοιαν, ἀφ' ἧς πολλὰ πάθη βλαστάνειν καὶ ἀκαταστασίας αἴτια. ἔστι δὲ αὐτὸ τὸ πάθος κατὰ Ζήνωνα ἡ ἄλογος καὶ παρὰ φύσιν ψυχῆς κίνησις ἢ ὁρμὴ πλεονάζουσα.

According to the Stoics there is an eight-fold division of the soul: the five senses, the faculty of speech, the intellectual faculty, which is the mind itself, and the generative faculty. Now from falsehood there results perversion, which extends to the mind; and from this perversion arise many passions or emotions, which are causes of instability. Passion, or emotion, is defined by Zeno as an irrational and unnatural movement of the soul, or again as impulse in excess.

STOBAEUS, ANTHOLOGY

62) Stob. 2.67, SVF 3.294

φιλομουσίαν δὲ καὶ φιλογραμματίαν καὶ φιλιππίαν καὶ φιλοκυνηγίαν καὶ καθόλου <τὰς> ἐγκυκλίους λεγομένας τέχνας ἐπιτηδεύματα μὲν καλοῦσιν, ἐπιστήμας δ' οὔ· ἐν <δὲ> ταῖς σπουδαίαις ἕξεσι ταῦτα καταλείπουσι, καὶ ἀκολούθως μόνον τὸν σοφὸν φιλόμουσον εἶναι λέγουσι καὶ φιλογράμματον, καὶ ἐπὶ τῶν ἄλλων κατὰ τὸ ἀνάλογον. τό τε ἐπιτήδευμα τοῦτον ὑπογράφουσι τὸν τρόπον· ὁδὸν διὰ τέχνης ἢ μέρους ἄγουσαν ἐπὶ <τὰ> κατ' ἀρετήν.

'Pursuits', rather than 'sciences', is the name they [the Stoics] give to love of music, love of literature, love of horseriding, and love of hunting, both in general and with reference to 'curricular' expertises as they are called. The Stoics include these in virtuous tenors, and accordingly say that only the wise man is a lover of music and literature etc. This is their outline account of a pursuit: a method which by means of expertise or a part of expertise is conducive to the domain of virtue.

AËTIUS, OPINIONS OF THE PHILOSOPHERS

63) Aët., *Plac.* 4.11, (=SVF 2.83)

οἱ Στωικοί φασιν· ὅταν γεννηθῇ ὁ ἄνθρωπος, ἔχει τὸ ἡγεμονικὸν μέρος τῆς ψυχῆς ὥσπερ χαρτίον εὐεργὸν εἰς ἀπογραφήν· εἰς τοῦτο μίαν ἑκάστην τῶν ἐννοιῶν ἐναπογράφεται. πρῶτος δὲ ὁ τῆς ἀναγραφῆς τρόπος ὁ διὰ τῶν αἰσθήσεων· αἰσθανόμενοι γάρ τινος οἷον λευκοῦ ἀπελθόντος αὐτοῦ μνήμην ἔχουσιν· ὅταν δ' ὁμοειδεῖς πολλαὶ μνῆμαι γένωνται, τότε φαμὲν ἔχειν ἐμπειρίαν· ἐμπειρία γάρ ἐστι τὸ τῶν ὁμοειδῶν φαντασιῶν πλῆθος.

The Stoics say: when a man is born he has the regent part of his soul like a sheet of papyrus well-prepared for making a transcript. On this he transcribes for himself each single one of his conceptions. The first [or: primary] manner of registration is through the senses. Suppose it is of a white something; when it has gone away, they have a memory of it. But when many memories of the same sort have occurred, then we say that they have an experience. For an experience is nothing but the multitude of impressions of the same sort.

64) Aët., *Plac.* 4.20.1

Πυθαγόρας Πλάτων Ἀριστοτέλης ἀσώματον· οὐ γὰρ τὸν ἀέρα, ἀλλὰ τὸ σχῆμα τὸ περὶ τὸν ἀέρα καὶ τὴν ἐπιφάνειαν κατὰ ποιὰν πλῆξιν γίνεσθαι φωνήν· πᾶσα δ᾽ ἐπιφάνεια ἀσώματος. συγκινεῖται μὲν γὰρ τοῖς σώμασιν, αὐτὴ δ᾽ ἀσώματος πάντως καθέστηκεν, ὥσπερ ἐπὶ τῆς καμπτομένης ῥάβδου ἡ μὲν ἐπιφάνεια οὐδὲν πάσχει ἡ δ᾽ ὕλη ἐστὶν ἡ καμπτομένη.

Pythagoras Plato Aristotle (say voice/sound is) incorporeal. For not the air but the shape around the air and its surface becomes voice/sound through a certain sort of striking. Every surface is incorporeal, for it moves together with the bodies, though it itself remains wholly incorporeal, just as when a cane is bent the surface is not affected, but it is the matter that is bent.

65) Aët., *Plac.* 4.20.2.

οἱ δὲ Στωικοὶ σῶμα τὴν φωνήν· πᾶν γὰρ τὸ δρῶν ἢ καὶ ποιοῦν σῶμα, ἡ δὲ φωνὴ ποιεῖ καὶ δρᾷ· ἀκούομεν γὰρ αὐτῆς καὶ αἰσθανόμεθα προσπιπτούσης τῇ ἀκοῇ καὶ ἐκτυπούσης καθάπερ δακτυλίου εἰς κηρόν. ἔτι πᾶν τὸ κινοῦν καὶ ἐνοχλοῦν σῶμά ἐστι, κινεῖ δ᾽ ἡμᾶς ἡ εὐμουσία ἐνοχλεῖ δ᾽ ἡ ἀμουσία. ἔτι πᾶν τὸ κινούμενον σῶμά ἐστι· κινεῖται δ᾽ ἡ φωνὴ καὶ προσπίπτει εἰς τοὺς λείους τόπους καὶ ἀντανακλᾶται, καθάπερ ἐπὶ τῆς σφαίρας τῆς βαλλομένης εἰς τοῖχον·

The Stoics say voice/sound is body. For everything that acts and causes is corporeal and the voice/sound causes and acts. For we hear it and perceive it hitting our hearing and moulding it like a ring (pressed) into wax. Moreover, everything that moves [sc. something else] and distresses is body, and good music moves us while bad music distresses us. Again, everything that is moved is body; the voice is moved and when encountering smooth places reverberates, like a ball thrown against a wall.

66) Aët., *Plac.* 4.12.1 (=SVF 2.54)

Χρύσιππος διαφέρειν ἀλλήλων φησὶ τέτταρα ταῦτα. φαντασία μὲν οὖν ἐστι πάθος ἐν τῇ ψυχῇ γινόμενον, ἐνδεικνύμενον ἐν αὑτῷ καὶ τὸ πεποιηκός· οἷον ἐπειδὰν δι᾽ ὄψεως θεωρῶμέν τι λευκόν, ἔστι πάθος τὸ ἐγγεγενημένον διὰ τῆς ὁράσεως ἐν τῇ ψυχῇ· καὶ ⟨κατὰ⟩ τοῦτο τὸ πάθος εἰπεῖν ἔχομεν, ὅτι ὑπόκειται λευκὸν κινοῦν ἡμᾶς· ὁμοίως καὶ διὰ τῆς ἁφῆς καὶ τῆς ὀσφρήσεως. εἴρηται δ᾽ ἡ φαντασία ἀπὸ τοῦ φωτός· καθάπερ γὰρ τὸ φῶς αὐτὸ δείκνυσι καὶ τὰ ἄλλα τὰ ἐν αὐτῷ περιεχόμενα, καὶ ἡ φαντασία δείκνυσιν ἑαυτὴν καὶ τὸ πεποιηκὸς αὐτήν. φανταστὸν δὲ τὸ ποιοῦν τὴν φαντασίαν· οἷον τὸ λευκὸν καὶ τὸ ψυχρὸν καὶ πᾶν ὅ τι ἂν δύνηται κινεῖν τὴν ψυχήν, τοῦτ᾽ ἔστι φανταστόν. φανταστικὸν δ᾽ ἐστὶ διάκενος ἑλκυσμός, πάθος ἐν τῇ ψυχῇ ἀπ᾽ οὐδενὸς φανταστοῦ γινόμενον, καθάπερ ἐπὶ τοῦ

σκιαμαχοῦντος καὶ κενοῖς ἐπιφέροντος τὰς χεῖρας· τῇ γὰρ φαντασίᾳ ὑπόκειταί τι φανταστόν, τῷ δὲ φανταστικῷ οὐδέν.

An impression is an affection coming about in the soul, which within itself reveals also what produced it (i.e. its cause). Like when through sight we observe something white, the affection is what has come about in the soul through seeing; and it is ⟨on account of⟩ this affection that we are able to say that there is a white object that affects us. And similarly (when we are affected) through touch and smell. The word impression (pha-ntasia) derives from 'light' (pha-os/phôs); just as light reveals itself and all the other things that are embraced in it, so too the impression reveals itself and what produced it [i.e. its cause]. An impressor is what causes [or: produces] the impression, like the white or the cold or whatever is capable of affecting the soul, this is an impressor. Imagination is an empty reflex, an affection in the soul that does not arise from any impressor, as when someone shadow-boxes or strikes his hand against thin air; for an impression has some impressor as its object, but the imagination has none.

67) Aët., *Plac.* 1.1.2 (=SVF 2.35)

οἱ μὲν οὖν Στωικοὶ ἔφασαν τὴν μὲν σοφίαν εἶναι θείων τε καὶ ἀνθρωπίνων ἐπιστήμην, τὴν δὲ φιλοσοφίαν ἄσκησιν ἐπιτηδείου τέχνης, ἐπιτήδειον δ' εἶναι μίαν καὶ ἀνωτάτω τὴν ἀρετήν [...]

Now the Stoics said that wisdom is the knowledge of divine and human matters, while philosophy is the practice of an appropriate technique. There is (they say) just one virtue that is appropriate and supreme […]

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