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# **Aristotle on Music and Emotions**

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# Abstract

This research aims to offer an original reconstruction of Aristotle’s psychology of music that explains his views on the relation between instrumental music and emotions. I argue that, contrary to the relevant scholarship, for Aristotle instrumental music cannot convey emotions to the listener. What instrumental music does, I claim, is to cause an objectless mood or disposition (διάθεσις) that “prepares the way” (προοδοποιεῖν) for the emotions.

Most interpreters of *Politics* VIII (1340a12-29) argue that for Aristotle a piece of instrumental music would be able to represent emotions and the listener would be moved to the same emotion by a sort of sympathetic contagion. However, this interpretation is inconsistent with Aristotle’s account of emotions. For Aristotle a necessary condition for the emotions is that those experiencing them “judge” (κρίνειν) a situation based on their beliefs. If it is accepted that there is such a thing as an emotional contagion through music, then the cognitive theory of emotion presented by Aristotle is at risk since no such a judgment would be required.

The thesis is presented in three chapters. In chapter one the cognitive elements that give rise to emotions are analysed. The nature of the term παθή is explored as well as the difference between its use as a ‘general affection’ and its use as the mental process that we now call ‘emotion.’ In this latter sense the emotions are mental states directed to an object on which a judgment is made and that are accompanied by pain or pleasure. The nature of the emotional judgment is investigated and the possibility of its existence in non-rational animals is explored. It is concluded that, even if we accept emotions in animals, intentionality and predication of an object are necessary conditions for the existence of emotions.

In the second chapter, I discuss two instances where it seems Aristotle makes an exception to the judgment as necessary condition for the emotions. First, emotions

aroused by the perception of signs of emotions, like the mere voice of the orator (*Rhet.* 1408a16-26) and the spectacle in the theatre (*Poet.* 1453b1-10) and second, emotions aroused by bodily changes (*De an.* 403a25). I argue that in Aristotle's view in both cases the factors at work (voice, sight, bodily condition) only facilitate the arousal of emotions, but the actual arousal requires an additional narrative context that supplies grounds for the judgment that in turn gives rise to the emotion in question. In the first case the orator's voice and the theatre's spectacle work just as a condiment (ἡδυσμα) that helps to intensify (συναπεργάζεσθαι) the object of judgment (*Pol.* 1340b17; *Poet.* 1449b25; 1450b16; *Rhet.* 1386a31). Our emotional response has as its object their story, not the elements that decorate it. In the second case, the bodily changes are the material constituents of emotions; facilitate the generation of emotions: hotness around the heart, for example, makes the subject prone to anger; but the emotion of anger appears only after a particular situation is evaluated by the mind.

In the third chapter, I turn to the specific case of music. From an exegesis of *Pol.* 1340a12-29, I argue that the emotions ostensibly transmitted by music (μουσική) to the listener are due to the lyrics of the *songs* (μέλη), not to the instrumental music itself. Therefore the question about the nature of the emotional effect of pure instrumental music remains open. My answer to this question is based on the analysis of the causal mechanism by means of which instrumental music affects the listener. Aristotle's physiology reveals the physical impact of sound on the sense of hearing, and from there to the heart, the first sensorium. Bodily changes in the organ create an objectless disposition (διάθεσις) in the listener by relaxing or agitating his body, without providing any content for the mind besides the perception of the sound. Exciting or relaxing the heart by means of music would leave the listener in the disposition of readiness to react emotionally, but the emotion would appear only once an intentional object, i.e., the content of the emotion, is presented and evaluated by the mind.

Finally, I show the relevance of my interpretation of these dispositions to understanding the role of emotions in the education of character in the *Politics*. Aristotle proposes to use only a certain type of music in his educational curriculum,

not one too relaxed or too tense, but a middle between them that puts the students in a stable and noble disposition that would, in turn, lead them to be guided by reason instead of their emotions.

# Declaration

I declare that the present thesis is all my own work, except where I indicate otherwise by proper use of quotes and references. This work has not been submitted for any other degree or professional qualification.

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Juan Pablo Mira

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First, I would like to thank my parents because without them I would not be where I am today, also to my sisters for all their love and support. Especially, I would like to thank my wife, Francisca, for always being there when I needed her and helping me to improve myself everyday and, also to my son, Teo, who makes my days brighter and happier. I would also like to thank my friends during my PhD. studies, all of them, especially Kostas, for his continuous support and encouragement throughout these years. Last but not least, to Dr. Inna Kupreeva, for her kind supervision, insightful comments and patience.

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# Introduction

Music is a beautiful and fascinating phenomenon. There is no known human group without it: all cultures, civilizations, countries and tribes have it; music is everywhere. It is a fact that humans *pursue* music in different ways but also they are *moved* by it. From religious frenzy to dancing clubs, from myths about music moving not only humans but also animals, plants and even stones<sup>1</sup> to the music in the supermarkets that induces customers to buy particular products.<sup>2</sup> Consciously or not, music moves us not only through dance, but also at a physiological level: for example, it has been shown in experiments that our pulse and heartbeat are affected when we listen music.<sup>3</sup> Even the rhythm and speed of our walking seems to be altered depending on the music to which we are listening.<sup>4</sup> However, there is one particular aspect of music that has especially mesmerized philosophers (and non philosophers too): music as *the language of emotions*. This sentence coined by Deryck Cooke in 1957<sup>5</sup> encapsulates the idea that music is *about* emotions; that melody and rhythm are representations of emotions and thus music is capable of having a contagious effect on listeners' emotions.

At first glance it seems that most people would agree with the idea that music arouses emotions. And in fact, this was also my own belief four years ago when I started this investigation. Even without words, it seems, music moves us to feel the emotions contained within it. *Words are not necessary*, someone may think, *because music is not about reasons, beliefs or arguments. Music* – the same person would continue – *does not talk to reason but to our emotions, to our heart...* This characterisation, I

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<sup>1</sup> Hor. *Ars. Poet.* 394-6; Eurip. *Med.* 543. See Marchenkov 2009 for the particular relevance of the myth of Orpheus in ancient context. For the general connections between music and myths in Ancient Greece see Landel 1999, pp. 148-162.

<sup>2</sup> North *et al.*, 1999.

<sup>3</sup> Etzel *et al.*, 2006 and Haas *et al.*, 1986. Marshall 1937, 27, as quoted by Meyer 1956, 11: “[Music] has marked effect on pulse, respiration and external blood pressure... [it] delays the onset of muscular fatigue... [and] has a marked effect upon psychogalvanic reflex”.

<sup>4</sup> Franěk *et al.*, 2014.

<sup>5</sup> Cooke, 1959.

think, is not an uncommon one; it is a widespread popular opinion shared by composers, performers and audiences. Things are not so clear, however, under the light of philosophical scrutiny. There are good reasons to doubt, first, that instrumental music can represent emotions and, second, that the supposedly represented emotions are transmitted to the listener by means of some sort of contagious power.

*Unpopular, unromantic or cold* as this position may be, it is the task of philosophy and science to debunk myths. Music, *now* we know, is not able to lift stones as one old myth tells us,<sup>6</sup> nor is a flautist able to hypnotize or lead hundreds of children to drown them in the ocean.<sup>7</sup> Is music the *language of the emotions* or should we also consider *this* a myth? Is music able to arouse emotions in us beyond our control, like an instantaneous spell in the very act of listening? I do not think so. Here I would like to enter into this debate and make use of the legacy of a thinker who addressed the topic of music and emotions at a very early stage: Aristotle, who in his *Politics* wondered whether music had “some influence over the character and the soul” (πρὸς τὸ ἦθος συντείνει καὶ πρὸς τὴν ψυχὴν).<sup>8</sup>

To trace the problem back to Aristotle is also what Peter Kivy did. He has pointed to Aristotle’s ideas, or at least their translations, as the source of modern misunderstandings concerning the problem of *music representation*. Kivy opened his book “Sound and Semblance” (1984) with the remark that translations of the term *mimêsis* in Aristotle’s *Poetics* rendered in the eighteenth and nineteenth centuries as *imitation* had “consequences [...] for the theory of musical representation” and added that, although he is neither capable and nor willing to revise the correctness of such translations, he is “concerned to repair the mischief that has been done to what should have been a theory of musical representation.”<sup>9</sup> According to Kivy, it is not possible to “imitate” emotions through sound and so he claims that: “all that Aristotle could possibly have meant by music imitating the emotions and mental states of men, unless,

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<sup>6</sup> Note 1 above.

<sup>7</sup> I refer to the legend of the “Pied Piper of Hamelin”. This folk story is known at least from the 14<sup>th</sup> century and authors such as Goethe and the Brothers Grimm later narrated it.

<sup>8</sup> *Pol.* 1340a6.

<sup>9</sup> Kivy 1984, 3.

of course, he was saying something absurdly false, was that music arouses such emotions and states in the listeners.”<sup>10</sup> In his view, there was a historical misconception of the problem that has its origin in the interpretation of Aristotle: “The problem for music which it raises is the result of the baleful influences of the notion of imitation that the translators of Aristotle cast like a pall over the musical speculations of the time having to do with what would more happily be called musical representation.”<sup>11</sup> Not unlike Kivy, I am concerned with music and with what it is able to represent, but in contrast to him, I am willing to revise the correctness of the translations and the interpretations of Aristotle’s thoughts about music and representation, specifically the representation of emotions through music.

In general terms, the present investigation aims to explore and clarify Aristotle’s position with respect to music and its effects on listeners. It is an attempt to answer the question: *How and in which sense are we moved by music?* In particular, it focuses on the place that ‘musical emotions’ – if such emotions exist – occupy in a more general theory of emotions presented in the Aristotelian corpus.

The main problem is that if emotions are cognitive processes that require judgments and previous beliefs directed at a particular object, then it is difficult to understand how instrumental music could convey information about any object to the listener’s own mental processes. If anger, for example, is an emotion *about* something being unjust, how could pure rhythms and melodies say something about it or represent any similar object at all? Moreover, what are the judgments or beliefs in the listener that would supposedly be contagiously affected by the angry music? Here I am not referring to our emotions aroused by the aesthetic beauty of the piece, or our anger caused by our judgment that a particular rendition of the piece does not do justice to the original. Nor would anyone dispute that a particular musical work can make us remember some past love or have a special meaning by association. The object of my analysis is on the emotional contagion that music is supposedly able to produce by itself. I am referring to the idea that, somehow, music would be able to convey an

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<sup>10</sup> Ibid., 4.

<sup>11</sup> Ibid., 5.

emotion, such as anger, and we, the listeners, would be moved to that emotional state just by hearing it: a sort of musical mysterious spell.

In what follows I will try to prove that, according to Aristotle, absolute music, i.e. music without words, is not the cause of an emotional contagion in the listeners but of general moods or dispositions devoid of particular objects. In contrast to the arousal of emotions proper, which are characterised by the presence of an intentional object and an appraisal of it, music provides objectless moods by means of physiological changes in its listeners.

What Aristotle offers, I claim in my reconstruction, is an explanation of how listeners are moved by music without the need to ascribe to music the power to arouse emotions by means of a sort of acoustic contagion. What instrumental music does, Aristotle says at 1340a41 in *Politics* VIII, is to change our disposition (διάθεσις), a different state from emotions as are understood in *Rhetoric* II, the main source for our study of emotions in Aristotle. The dispositions that music causes are “bodily movements”. For Aristotle, the sonic nature of music allows it to impact the sense of hearing, altering with it the heart, the centre of sense perception in his view. In turn, those changes in the heart had an impact on our behaviour and thus were connected with moral characters, i.e. good and bad movements with good or bad characters in moral sense: some motions produced by music are vulgar and others noble. Those moral characters are related to physical motions that are signs of excitement and rest. Too much movement is related to a passionate or frenzied state, while too much calm was associated, obviously, with rest. Then, as in ethical contexts virtue is in the middle of the extremes, the same is the case in music. The Dorian mode, we will see, is the most virtuous of the musical modes and is found between the two extremes in terms of pitch. Aristotle thought that there was a relationship between the acoustic properties of music, especially pitch, and the dispositions that music was able to arouse in its listeners. He believed that in the first place instrumental music moved our sense of hearing, and from there, through vessels inside the body, the heart, the organ that he thought was responsible for sense perception and physiological changes, connected with the emotions. Aristotle thought, then, I propose, that music was able to excite or

calm the heart and so put the listener in a frame of mind that disposed him to react emotionally in front of an object presented to the subject. The bodily process involved in the response to music presented by Aristotle is naïve and outdated but its relevance is in the consideration of the role of the body in producing the emotional response to music; a consideration that is unfortunately absent in the works of many modern philosophers of music studying emotions.

Thus, according to Aristotle, I claim, music alters not only the mind but the mind through the body. What music is able to produce in the listener, however, is not an emotion but the abstract and objectless movements that dispose the listener to react emotionally when a proper object is in front of them. In other words, Aristotle did not claim that if we hear, for example, ‘angry’ music – such as the soundtrack of a movie episode which shows an outburst of anger – we would experience anger immediately. Emotions are much more complicated than a mere contagion. If we recognize music as expressive of anger we will not experience the same emotion as a consequence. If that music accompanies the words of a poet, however, or the actions of a character in a play, those words and actions would appear more vividly as words and actions of someone who is angry. Also, following my interpretation of Aristotle, the experience of such music would physically affect the body of the listener leaving it in a state similar to that of the real emotion. Then, after such influence, the listener would be in a state of readiness to react emotionally when an object is presented to him.

This is not metaphysical exploration of music in itself, about its nature or, for example, its relation with mathematics or physics. Neither is it an examination of music in technical terms, about scales or notes. The focus is on the role that music plays in the human experience; is about what happens when we listen to music and the way we are affected by it. It is in this human context that music mostly appears in Aristotle. His concern was about the function that music plays in the human life and its role in the achievement of happiness. This ethical element of music is grounded by the fact that music seems to be able to affect the moral character of the listener as well as to carry him to an emotional state. This latter power of music is the central point of this discussion: *Musical emotions* as the

epitome of what music is supposedly able to do to human beings. Being *moved* or *touched* by a musical piece is the starting point of a chain that may lead to our happiness or to its opposite. Aristotle – and with him an overwhelming majority of Greeks – thought that arts and music particularly had a unique power to move the soul of the perceiver. Music was considered to be the most powerful tool of the educational system and thus the most important. Accordingly, for Aristotle, happiness was the final goal of everyone<sup>12</sup> and it was only possible in the political community. In order to secure the achievement of happiness to all citizens, education was presented as the highest occupation that any politician should consider.<sup>13</sup> It is not thus an exaggeration to say that music had a crucial role in the political project of Aristotle. To control music was to control education; to control education was to control the city. This was the thought of Plato before Aristotle when he said – and Gramsci would later agree – that “musical modes are never changed without change in the most important of a city’s laws.”<sup>14</sup> For Aristotle, the goal of political science was to determine how the legislator ought to rule; he “has to see that they [the citizens] become good men, and by what means this may be accomplished, and what is the *end* (τέλος) of the best life” (*Pol.* 1333a14-16).<sup>15</sup>

Now, prior to this political and ethical aspect of music, there is a biological one that is the center of this investigation. The explanation of how music *moves* us requires an answer that takes into account the human soul understood as the origin of all motions in us. It is in his *De anima* that Aristotle provides us with the basic elements for understanding the mental and bodily processes involved in what we now call *emotions*. It is a work devoted to living beings and the functions they are able to perform *qua* animated beings. His psychology or philosophy of mind is thus rooted in a biological

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<sup>12</sup> Of course, “everyone” here refers to a very small social group. Neither women nor slaves could aim to true happiness.

<sup>13</sup> *Pol.* 1337a10-11: “No one will doubt that the legislator should direct his attention above all to the education of youth; for the neglected of education does harm to the constitution” (All translations from *Politics* are from Jowett unless otherwise indicated).

<sup>14</sup> *Rep.* 424c, trans. Gube, *rev.* Reeve.

<sup>15</sup> *NE.* 1103b2-6: “Legislators make the citizens good by forming habits in them, and this is in the wish of every legislator; and those who do not effect it miss their mark, and it is in this that a good constitution differs from a bad one”.

framework that considers the relations between body and mental activity. In this context, hearing music is a process that implicates sense perception and so the soul is affected always *with* the body. In the same way, being affected by an emotion is also a mental and bodily process. This is one of the major strengths of Aristotle's psychology: the human being is a composite substance made of form and matter. Perhaps there is room for intellectual operations separated from the body<sup>16</sup> but there are no doubts that Aristotle considered sense perception and emotions as mental processes *always* accompanied with bodily changes.<sup>17</sup> For that reason, a comprehensive account of emotions must include the formal reasons or cognitive processes *and* the bodily conditions involved.

According to Aristotle, emotions are triggered by judgments about a particular object accompanied always by bodily changes and pain or pleasure.<sup>18</sup> Their duration is short in comparison with other similar phenomena, such as states (ἔξις) or dispositions (διάθεσις).<sup>19</sup> They involve movements of the inner organs, such as the heart and the blood around it, and visible changes of color, temperature, movements of the body and the voice. Emotions, contrary to what may be a popular opinion, are not instantaneous impulses or reflexes deprived of content or evaluation. On the contrary, they are cognitive processes that require the participation of our mind making judgments. To experience an emotion is an act of predication; it is to affirm or deny something. If we judge that an animal *is* dangerous and our safety *is* at risk we may experience fear, our heartbeat and pulse may be faster and our face turn pale. The emotion would be accompanied with pain and we would be moved to avoid the animal that is the object of our fear. On the contrary, if we see that the same animal is in a cage then we may evaluate that the situation *is not* dangerous and that we are totally safe. This *cognitivist* or *judgmentalist* position has been attributed to Aristotle and it has even said that in his work we find “the prototypical cognitive theory of emotion.”<sup>20</sup> William

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<sup>16</sup> *De anima* 403a11-12.

<sup>17</sup> *Ibid.* 403a16-19. δῆλον ὅτι τὰ πάθη λόγοι ἔνυλοι εἰσιν *De anima* 403a25

<sup>18</sup> *Rhet.* 1378a19-21.

<sup>19</sup> *Cat.* 8b25-10a16.

<sup>20</sup> Power and Dalglish 1997, 41; Lazarus 2001, 40: “[T]hose who favor a cognitive-mediational approach must recognize that Aristotle’s *Rhetoric* more than two thousand years ago applied this kind of approach to a number of emotions in terms that seem remarkably modern”; and Hinton 1999, 6: “The

Fortenbaugh first defended this interpretation in 1975 and since then others have refined it: Leighton (1996); Nussbaum (2000); Konstan (2007); and Dow (2015). This view is not exempt from controversies. If emotions require judgments and previous beliefs, as the cognitivist position suggests, then one must question the role played by reason. The scholars mentioned above can be grouped among those that Jessica Moss calls “doxatists”, because a common view in their interpretation of Aristotle is that *doxa* – and with it rationality – is a necessary condition for the arousal of emotions. On the other hand, there are those which open the spectrum of the cognitive functions to sense perception and especially to *phantasia*, a faculty of the soul that includes the powers of imagination, memory and dreams.

This latter move is helpful because allows emotions to be present in non-rational beings. Animals are completely devoid of reason and in small children reason is not fully developed; therefore, *phantasia* is the faculty that does the job of evaluation when emotions are present in them.<sup>21</sup> Among these scholars are Nehamas (1994); Sorabji (1995); Striker (1996); Cooper (1996); Nieuwenburgh (2002); Achtenberg (2002); and Moss (2012). The more we move emotions away from reason, the greater the possibility that non-verbal stimuli, such as instrumental music, would be able to arouse emotions. As I will try to prove, however, even if *phantasia* were a sufficient condition for the arousal of emotions, there is a need for an evaluation and an object.

In the light of this characterization of emotions, the case of music is problematic, mainly because it is obscure what evaluation is at play when we – supposedly – experience the emotion that is represented by a piece of instrumental music. Thus, as we will see, the hypothesis of ‘musical emotions’ puts at risk the idea that emotions

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origins of the cognitive tradition can be traced back to Aristotle’s writings in the Rhetoric. While he acknowledged the existence of a physical component to the emotions, Aristotle placed primary importance upon cognitive beliefs and judgments.

<sup>21</sup> Of course, Fortenbaugh (1975, 144) rejected the idea that animals could experience emotions: “The behavior of a hungry or thirsty animal is not grounded upon an assessment of the particular situation. It is caused by a particular bodily condition and cannot be classified as an emotional response. Similarly the wiggles of a severed earth worm are not expressions of emotion. The several sections of such worm can be said to have sensation and so necessarily *epithymia* (*De An.* 413b20-24), but they cannot be said to respond emotionally, for they lack the capacity to judge and assess.”



are judgments/discriminations and evaluative processes, either aroused by reason or *phantasia*.

Based on *Politics VIII* it has been argued that Aristotle believed that instrumental music is able to represent emotions and arouse them in listeners by a sort of emotional contagion. Andrew Ford claims that “music can directly put our souls in a certain painful and pleasurable emotional state.”<sup>22</sup> Andrew Barker states in his *Greek Musical Writings* that “the music or drama that is witnessed stimulates in us certain intense emotions, which are rapidly exhausted,”<sup>23</sup> and in another work he states that for Aristotle the music listener suffers an “immediate emotional reaction.”<sup>24</sup> Similarly, Stephen Halliwell believes that according to Aristotle “the hearer of music simultaneously recognizes the emotion in the music” and he “feels with the music”<sup>25</sup>, i.e. experiences the same emotions as expressed by the music. Philipp Brüllman, in his paper “Music Builds Character, Aristotle *Politics VIII* 5, 1340a14-b5,” holds the same position. According to him, Aristotle believed that “music is able to arouse emotions”<sup>26</sup> by an “immediate effect”.<sup>27</sup> This interpretation is not new at all. In 1812 Thomas Twining wrote in an essay called *On the Word Imitative, as applied to Music* that accompanied his English translation of Aristotle’s *Poetics*: “Music produces in us, immediately, feelings resembling those of real passion.”<sup>28</sup> Others argue that music transmits something to the listener but focusses on the moral character and not on emotions. Frédérique Woerther says that according to Aristotle “musical mimesis can imitate characters *directly*.”<sup>29</sup> According to Roger Scruton, Aristotle thought that “the thing imitated in the music was [...] automatically imitated by the person who ‘moved with’ it. If the music was imitating wrong things, therefore, those who moved with it would be imitating wrong things.”<sup>30</sup> Finally, Göram Sörbom wrote in his paper called *Aristotle on Music as Representation*:

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<sup>22</sup> Ford 2004, 319.

<sup>23</sup> Barker 1984, 177, n. 22.

<sup>24</sup> Barker 2002, 105.

<sup>25</sup> Halliwell 2002, 161.

<sup>26</sup> Brüllman 2013, 350.

<sup>27</sup> Ibid. 358.

<sup>28</sup> Twining 1812, 79-80.

<sup>29</sup> Woerther 2008, 100.

<sup>30</sup> Scruton 1999, 118.

Music [...] can represent character itself, Aristotle writes. Music shows us directly, through its images and imitations, paradigmatic examples of character. These examples are received immediately and directly through a change of mind of the receiver to the character imitated in the sense that the character or disposition is not attached to the of an individual person as it is in what we may call physiognomic imitation of character; it is a direct imitation of characters and dispositions.<sup>31</sup>

The above scholars, either referring to emotions or moral characters, defend the idea that according to Aristotle music is capable of a contagious action on the listener in a way that is *direct, immediate, simultaneous, automatic* and *instantaneous*. None of these qualifications is present in Aristotle's text and so it seems that something has been misunderstood. The idea that instrumental music moves the listener's emotions appears uncontroversial among the interpreters of *Politics*. They have good reasons for this. One of these reasons is that Aristotle says that some music produces frenzy (ἐνθουσιασμός) which he seems to classify as an emotion (ὁ δ' ἐνθουσιασμός τοῦ περὶ τὴν ψυχὴν ἦθος πάθος ἐστίν).<sup>32</sup> However, this particular affection (πάθος), as we will see in detail, does not qualify as 'emotion', properly speaking, according to Aristotle. Moreover, another reason to attribute an emotional contagion through music is the passage at 1340a19-21 where apparently music can convey emotions like anger, gentleness, courage, temperance and "of all the contraries to these, and of the other qualities of characters" (καὶ πάντων τῶν ἐναντίων τούτοις καὶ τῶν ἄλλων ἠθῶν). These effects, however, occur because of the words accompanying music, as the analysis of the text will reveal. Those claiming that for Aristotle music is able to arouse an emotional contagion have not considered what Aristotle understood by emotions and have taken the term *pathos* in a sense too broadly, confusing any psychological affection, such as frenzy or being excited or relaxed, with emotions.

As Gilbert Rouget states in his *Music and Trance*, there are good reasons to doubt that Aristotle would agree with the idea that someone hearing, for example the Phrygian mode, would be *directly, immediately, simultaneously* or *instantaneously* in a state of trance. Rouget wrote that this would be a "mysterious musical spell" and it would be

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<sup>31</sup> Sörbom 2008, 43.

<sup>32</sup> *Pol.* 1340a11-12.

similar to affirming that “half of Greece was permanently thrown into this state”.

Rouget continues:

For, as all the facts show, aulos players of both sexes, and consequently Phrygian music, did not limit their activities to Corybantic rituals. Their services were constantly sought particularly for banquets at which there is no record whatsoever of possession ever taking place. Both Aristotle and Plato, then, wisely refrained from asserting any such absurdity. Others, however, have not hesitated to do so for them, and in their name. By recognizing, not without good cause, that music possesses great imitative powers, and by attributing ethos endowed with powerful effects to the modes, Aristotle opened the path to all sorts of exaggerated theories.<sup>33</sup>

One example of what is said in the name of Aristotelian theory of psychology of music can be found in a paper by Schoen-Nazzaro:

From what Aristotle says about the power of music to move the listener in harmony with itself, it follows that the skilful musician will be able to reproduce almost any emotion so that it can be felt and recognized by the listener. He will be able to make him melt with tenderness or bristle with rage. Even the most hardened heart will reverberate if the right string is plucked. This is what imitating emotion entails.<sup>34</sup>

So, if we agree with Schoen-Nazzaro, the Greek army could march against the Trojans armed with musical instruments instead of weapons and play music that would make them feel so sad that it would be impossible to them to resist any attack.

Or consider John Marshall’s *Aesthetics of Aristotle*:

The glory of music lies in its ability to reproduce the rhythm of actual human desire and purpose. Purpose is desire passing through emotion into action. There is a certain form of the expanding desire, and this expanded desire is what Aristotle thinks of as emotion or passion. Thus, hate, love, fear, ambition, friendliness and curiosity are desires which, as they expand, are also emotions. Each desiderative emotion has a certain rhythmic form of its own, and a certain tonality of its own. It is the rhythm which is the most characteristic of the diverse emotions.<sup>35</sup>

I would like to emphasise that these accounts attribute to Aristotle the idea that instrumental music produces emotions by a sort of contagion. These accounts add to Aristotle’s text analysis that was not there and that have led to the above-mentioned absurdities.

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<sup>33</sup> Rouget 1985, 226.

<sup>34</sup> Schoen-Nazzaro, 1978, 8.

<sup>35</sup> Marshall, 1953:230.

I hold that these additions to the interpretation of Aristotle are based, in part, on a generalized and simplified view of the powers of music as well of what Aristotle considered to be an emotion. In order to clarify these generalizations and simplifications we need first to address some difficulties: Aristotle's direct treatment of musical matters does not help us too much in clarifying these powers of music. The final chapter of *Politics* VIII, the main source that we have on the topic, is brief and the text is unfinished. In addition, in Aristotle, scholars say, we found that music has a "peculiar but unexplained power to penetrate the soul,"<sup>36</sup> that "he does not give enough information for u to knows how he saw this working"<sup>37</sup> and that, for example, his theory of musical ethos "remains determinedly empirical, with almost no admixture of musical psychology or another kind of theory."<sup>38</sup> I agree: on the surface Aristotle seems to say a lot about music without providing an explicit analysis of his own statements. Moreover, he seems to rely a lot on what music theorists (*musikoi*) and philosophers "experienced in musical education" know (*Pol.* 1341b27-32).<sup>39</sup> This obscurity, I think, requires the reader's interpretation and an effort to fill in the gaps where Aristotle is silent. This must be done not only from conjectures but also by using the material where he *does* talk about his psychology in general, and emotions in particular. If *Politics* says nothing about the underlying psychology of the effects of music this is because it is not the place to provide such background, but that does not mean, as I will try to prove, that Aristotle has no resources to support the claims he makes in the *Politics*. On the contrary, his account of sound and hearing provides not only the psychology of music necessary to explain what he says in *Politics* but even the physiology involved. This is the main contribution and novelty of the present study. It is an attempt to offer a reconstruction of Aristotle's psychology of music.

Translation, of course, is also an interpretation, and so the solution of textual problems and the words we use to translate the Greek into English are crucial. I will try to prove that there has been an historical misunderstanding of Aristotle's treatment of music

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<sup>36</sup> Lippman 1964, 118.

<sup>37</sup> Ford 2004, 324.

<sup>38</sup> Anderson 1968, 127.

<sup>39</sup> See Brüllman 2013, 347.

which, in part, is due to inaccurate translations of key passages of *Politics*. Aristotle certainly took part in the discussion about music and emotions but, as I want to prove, what he said is different from what we have been told. Aristotle did not claim that music conveys emotions to its listeners by a sort of contagion, otherwise all his theory of emotions would crumble.

The reason for this is made clear in the main argument of this investigation. On the one hand we have the cognitivist or judgmentalist interpretation of Aristotle's account of emotions and, on the other hand, we have the supposedly musical expression of emotions and the arousal of those emotions in listeners that seems to be present in *Politics*. These two elements are in conflict because, as Geoffrey Madell has put it: "An understanding of music's power to express emotion should totally undermine the 'judgmentalist' view of emotions."<sup>40</sup> This claim, prominent in the modern debate of philosophy of music, at least since the appearance of *The Beautiful in Music* by Eduard Hanslick<sup>41</sup> in the 19<sup>th</sup> century, is also a problem to resolve in Aristotle and we need to see if he passes the test of modern discussions. If music is able to express and arouse emotions in listeners by means of a *direct, immediate, simultaneous, automatic* and *instantaneous* contagion, as some of the above scholars claim, then the whole cognitivist/judgmentalist account of emotions by Aristotle needs to be revised and with it a fundamental chapter of the history of the study of emotions. David Konstan is aware of this problem and in his defence of a judgmentalist view on Aristotle's account

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<sup>40</sup> Madell 1996, 73.

<sup>41</sup>Hanslick acknowledges that "there has been considerable agreement that the whole gamut of human feelings is the content of music", however, he denies this saying that "the representation of a specific feeling or emotional state is not at all among the characteristic powers of music". His Arguments goes like this: "Only on the basis of a number of ideas and judgments (perhaps unconsciously at moments of strong feeling) can our state of mind congeal with a specific feeling. The feeling of hope cannot be separated from the representation of a future happy state which we compare with the present; melancholy compares past happiness with present. These are entirely specific representations or concepts. Without them, without this cognitive apparatus, we cannot call the actual feeling 'hope' or 'melancholy'; it produces them for this purpose. If we take this away, all that remains is an unspecific stirring, perhaps the awareness of a general state of well-being or distress. Love cannot be thought without the representation of a beloved person, without desire and striving after felicity, glorification and possession of a particular object. Not some kind of mere mental agitation, but its conceptual core, its real historical content, specifies this feeling of love. Accordingly, its dynamic can appear as readily joyful as sorrowful, and yet be love. This consideration by itself suffices to show that music can only express the various adjectives accompanying and never the substantives, e.g., love itself." Hanslick 1985, 8-9.

of emotions he is forced to deny that Aristotle thought that music was able to arouse emotions: “Generalized mood as melancholy, the feelings inspired by music, wonder or awe at nature’s grandeur; [those] do not count as *pathê* for Aristotle, although they often qualify as emotions in modern inventories.”<sup>42</sup> I agree with Konstan, but unfortunately he does not deal with what Aristotle says in *Politics* about music and emotions. My task will be to discuss those passages and make sense of them without jeopardizing the cognitive interpretation of emotions. My position is that music produces *affections* in the soul, but these *affections* differ from the *emotions* (properly speaking) that are discussed in *Rhetoric*. If we have a correct interpretation of what Aristotle says about music and its power over listeners, his account of emotions would be safe.

Looking at this more closely, what are the reasons behind an incompatibility between “musical emotions” and a “cognitivist theory of emotions”? Recently, Stephen Davies has highlighted three main philosophical topics that are controversial when we talk about music and emotions<sup>43</sup>, which I think should also be applied to Aristotle: 1) Expression of emotions in music; 2) Mirroring responses and contagion to music’s expressiveness; and 3) Negative responses.

The expression of emotions in music is problematic because only sentient creatures experience emotions and so it would be logical that only they would be able to express them. However we have the experience of recognizing music as *sad*, *angry* or *happy* and so it seems that somehow there is something *in* the music that resembles emotions and allows us to recognize them.

‘Mirroring responses’ refers to the supposedly emotional contagion that music would be able to produce. Having accepted that music can represent emotions, for example anger, the mirroring response presupposes that the listener of such music would experience the same emotion. This is also problematic because it involves us somehow being affected by a contagious emotion without actually having an object. If we

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<sup>42</sup> Konstan 2007, 39.

<sup>43</sup> Davies 2013. And for a good summary of the modern discussion about music and emotions see Davis 2012.

experience the anger that is supposedly expressed in the music, what is the object of our anger? It would be strange to say that we are angry *with* the music or the composer. Or, should we say that it would be a general feeling without a specific object? Would it be some sort of emotional feeling, devoid of any content?

Finally, the response to negative emotions refers to the painful feeling associated with negative emotions. In the case of music this is problematic because it seems unreasonable to want to experience painful emotions. If music were able to make us sad, it is worth asking why we would desire to deliberately experience sadness.

Aristotle does not explicitly address these problems but fortunately a reconstruction of his view on these matters is possible. This is a difficult task because, as mentioned above, there are textual problems with the Greek translation that I believe cause the misunderstandings. One of the most significant problems is whether or not Aristotle includes the lyrics of the songs when he speaks of music acting on the listener. If Aristotle means the powers of music to move the listener including words then we are faced with a different problem. Words convey ideas and can tell stories, narrations about characters, their deeds, personalities and misfortunes. The whole plot and the information in it is the subject of judgments that may lead to emotional responses. This was in fact what Aristotle affirmed about the Greek drama; the recognition of what happens to the characters in a play is pitiful and fearful because something similar could happen to us. If the analysis of music made by Aristotle in *Politics* VIII includes the lyrics then the effect on the listeners cannot be ascribed to the pure effect of music only. I think that Aristotle was well aware of this and so his treatment of the matter reflects this distinction. Music broadly understood as music *and* words is a different phenomenon to pure instrumental music and so are the respective psychological effects these two kinds of music have on their listeners.

Two positions are confronted here. On the one hand, there are those advocating an interpretation that considers Aristotle as referring to pure instrumental music. Among them we should consider first of all Franz Susemihl who, in a key passage of *Politics* VIII, where some manuscripts present a lacuna, added an emendation that changes its

meaning. As it is, the passage at 1340a13 suggests that music, even apart from rhythms and melodies, is a *mimesis* of actions, moral characters and emotions. In addition, those who listen to such representations would be moved to feeling the same emotions represented. Susemihl adds in the lacuna “τῶν λόγων διὰ” with the resulting translation: “*Even without words* rhythms and melodies move men’s feeling in sympathy” [emphasis added]. Stephen Halliwell thinks that we are “obliged to accept” Susemihl’s emendation at 1340a13 arguing that “without this textual alteration, it remains opaque why Aristotle, when trying to show that music can change its hearer psychologically, would here wish to cite the power of words to elicit emotional sympathy independently of rhythms and melodies.”<sup>44</sup> I will argue that the emendation is not only wrong but misleads the whole interpretation of Aristotle’s position with respect to music and emotions.

Scholars devoted to technical aspects of Ancient Greek music should at least consider the conflict between the alleged emotional contagion produced by instrumental music and emotions understood as cognitive processes rather than instantaneous reactions. Those working with the Aristotelian account of emotions should, in their turn, test whether the cognitivist view of emotions that is reconstructed mostly from *Rhetoric* is compatible with Aristotle’s remarks about music and its effects over the listeners.

Last but not least, Aristotle’s position on the topic, I believe, should be considered not only as part of the history of ideas but also on its own philosophical merits. I think that what Aristotle offers is a position worthy of analysis even confronted to modern theories.

The order of the discussion of these matters in the thesis will be as follows. In the first chapter, *The nature of emotions*, I focus on what ‘emotions’ are for Aristotle. Only after doing this will it be possible to understand the relationship between music and emotions. In the first section entitled *Pathê as general affections* I focus on the term *pathos* and how it can be understood as a general affection as well as an equivalent to the modern term ‘emotions’. This distinction is necessary in order to focus on the more

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<sup>44</sup> Halliwell 2002, 244.



restricted usage of the word. We are not looking for any affection stimulated by music, but a particular type of affection that refers to psychological processes that we call emotion. This *sui generis* type of affection is precisely the focus of the second section of this chapter: *Pathê understood as emotions*. In this section I analyse the account of emotions in *Rhetoric* to show the essential characteristics that Aristotle attributed to them. By ‘essential characteristics’ I mean the cognitive elements: the judgments and the intentionality of the emotions. Here I argue that a necessary condition for the existence of the emotions is the presence of a judgment, i.e. a predication about reality that is accompanied by feelings of pain and pleasure; certain desires and also tendency actions, like the tendency to flee away of the object of fear or fight against the source of anger.

The second chapter entitled *Emotions without judgments?* deals with two possible objections to the cognitivist approach presented in chapter one. The two objections are based on the two respective cases of *emotions aroused by signs* and emotions aroused by *bodily changes*. I mean in the first case the emotions aroused just by the perception of a sign of an emotion, for example experiencing pity in the very act of seeing someone suffering or by the mere listening to his sad crying. In the second case I deal with the emotions caused by bodily alteration. Since emotions are always accompanied by bodily changes, it may be argued that due to a change, for example, of the body temperature, the subject may be moved to anger. I will reject both cases showing how the essential elements presented in chapter one should also be present if there is an emotion: there must be a judgment, feeling of pain and pleasure and intentionality towards an object. Otherwise, there would be an objectless mood that, while having some similarities with emotional states, is not the same as such states.

Having secured this cognitivist view of Aristotle’s account of emotions, I will look at music in chapter three: *Aristotle on music*. The first section considers the general context in which music was seen as related to psychological changes before Aristotle; how the ancient Greeks thought about the powers of music to move the soul. Understanding this will make it easier to see why Aristotle's position has been

confused with the previous tradition that perceived music – and emotions – as irrational forces able to cast mysterious spells over its listeners.

The second section will consider Aristotle as a philosopher of music and the place the discussion of music takes in the general context of *Politics*, the main source for the topic in the whole corpus.

The third section is devoted to the textual problems that make it hard to believe that Aristotle believed in a musical contagion of emotions. I try to illustrate what Aristotle does *not* say about music and in particular highlight the contradiction that emerges between the alleged musical contagion of emotions and his more general cognitivist view of emotions presented earlier.

Having raised the main problem for those who advocate that Aristotle proposes a contagion of emotion through music, I address in the fourth section the particular case of “angry music”, in order to show that either Aristotle does not say that music representing the voice of someone angry instantly makes the listener experience the same emotion, or that all the interpretations that describe Aristotle’s account of emotions as cognitivist need to be rejected as inconsistent. The alleged musical contagion of emotions does not satisfy the essential elements for the arousal of emotions: appraisal, feeling of pain or pleasure, and intentionality.

After establishing that music is not responsible for a contagion of emotions, in the fifth section I offer an alternative explanation to the apparent inconsistency between *Rhetoric* and *Politics* VIII. From the analysis of the text I discuss the *dispositions* that music arouses in listeners. These dispositions, I argue, are prior to an emotional response, are activated through mere sense perception and from there through the body creating an objectless mood that promotes the appearance of later emotions. In the sixth section I describe these dispositions as Aristotle does in a three-fold way: in a polarity that goes from rest to excitement and finds its mean in the Dorian mode. I show also the signs of awareness of the altered dispositions produced by music in the works of the authors who followed Aristotle. I suggest that Aristotle helped to introduce a shift from mere musical contagion of emotions to a more sophisticated

model that did not undermine the cognitive account of emotions. The tripartition of the psychological effects of instrumental music is manifested in the different dispositions adopted by listeners.

In section seventh I discuss the nature of these *dispositions* (διαθέσεις) that instrumental music produces and why these dispositions, contrary to emotions, are not directed at any particular object.

Finally, in the eighth, and last, section of chapter three, I focus on the ethical aspect of musical effects: how music, according to Aristotle, contributes to a happy life habituating the soul to be disposed in a virtuous way, i.e. how music habituates young listeners to enjoying and behaving with noble emotions worthy of free educated men.

# 1. First Chapter: The nature of the Emotions.

## 1.1 *Pathê* as general affections

The modern term *emotion* finds its equivalent in the Greek *pathos* (πάθος). While *emotion* refers to some sort of psychological affection, the Greek *pathos* is an ambiguous term. For this reason it is necessary to distinguish when Aristotle uses the term *pathos* to refer to a phenomenon that is equivalent to our modern *emotions* from the usage of the term to refer to something different. This is crucial in order to understand what Aristotle believed the connections were between music and emotions. Music produces certain *pathê* in listeners, however, as we will see, those *pathê* do not qualify as the ‘emotions’ that are the object of our enquiry.

In a broad sense, *pathos* can refer to anything that is received by a subject which is passive about that affection. In other words it is what happened to something in a passive way, contrary to what something does as an active agent. A ball being kicked is receiving a πάθος; an object being divided is experiencing a πάθος. Juha Sihvola puts it very clearly:

Affections [πάθη] are all those temporary, accidental and contingent changes or movements that happen to an agent because of exogenous causes, changes that the agent passively experiences or undergoes in contrast to what he or she does in accordance to one’s function or nature as the result of internal principle motion.<sup>45</sup>

As Sihvola notes, the usage of πάθος even in this broad sense, is not free from ambiguities. For example, in *Categories* 9a28-29 πάθη are described first as *qualities* (ποιότητες) while a little further at 9b32 and 10a9-10 they are not. In *Categories* 8 Aristotle describes four kinds of qualities. First, there are qualities “according to a natural capacity or incapacity” (κατὰ δύναμιν φυσικὴν ἢ ἀδυναμίαν).<sup>46</sup> They refer to natural attributes or capacities. Examples given by Aristotle are to be a runner or a boxer and to be healthy or sick. Those are qualities according to natural capacity or

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<sup>45</sup> Sihvola 1996, 108.

<sup>46</sup> *Cat.* 9a14-26.

incapacity: a runner or a boxer is called thus because they do what they do easily or being “unaffected”. Properties like being hard or soft are also qualities in this sense; they refer to the natural capacity or incapacity of something to be, for example, easily or not easily divided. There is also a type of quality understood as a “shape and the external form of each thing” (ποιότητος σχῆμά τε καὶ ἡ περὶ ἕκαστον ὑπάρχουσα μορφή).<sup>47</sup> It literally refers to the contour and shape of an object, as well as to the *straightness, curvedness and anything like that*.

United in one group are qualities in the sense of a state (ἔξις) and a disposition (διάθεσις).<sup>48</sup> States are qualities that are difficult to change and permanent. Given examples are knowledge and virtues such as justice and temperance. Dispositions, on the contrary, are easily changeable. Examples of dispositions given by Aristotle are being hot and being chilly and sickness and health “and the like,” and then Aristotle adds that “a man is in certain disposition in virtue of these but he changes quickly from hot to cold and from being healthy to being sick.”<sup>49</sup> We may be tempted to suppose that Aristotle is referring here only to human dispositions, but these are just examples; disposition here should be understood in a broad sense and can also be present in inanimate beings.

Now, a key characteristic of a disposition is that if it lasts long enough it may turn into a state. This would be the case of knowledge, as someone in the process of learning is not in a state of knowledge properly speaking but in a disposition that may be easily changed.

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<sup>47</sup> *Cat.* 10a11-16.

<sup>48</sup> *Cat.* 8b25-9a13. “We call disposition the arrangement of that which has parts, in respect of place or of capacity or of kind; there must be a certain position, as the words ‘disposition’ shows (Διάθεσις λέγεται τοῦ ἔχοντος μέρη τάξις ἢ κατὰ τόπον ἢ κατὰ δύναμιν ἢ κατ’ εἶδος· θέσιν γὰρ δεῖ τινὰ εἶναι, ὥσπερ καὶ τοῦνομα δηλοῖ ἡ διάθεσις) *Met.* 1022b1-3. The concept of *disposition* will occupy our attention later since dispositions, particularly moral and bodily dispositions, are precisely what instrumental music is able to change in the listener. For the moment we need to continue with the focus on πάθη.

<sup>49</sup> *Cat.* 8b37-9a4: διάκειται μὲν γὰρ πως κατὰ ταύτας ὁ ἄνθρωπος, ταχὺ δὲ μεταβάλλει ἐκ θερμοῦ ψυχρὸς γιγνώμενος καὶ ἐκ τοῦ ὑγιαίνειν εἰς τὸ νοσεῖν· ὡσαύτως δὲ καὶ ἐπὶ τῶν ἄλλων, εἰ μὴ τις καὶ αὐτῶν τούτων τυγχάνοι διὰ χρόνου πλήθος ἤδη πεφουσιωμένη καὶ ἀνίατος ἢ πάνυ δυσκίνητος οὔσα, ἣν ἂν τις ἴσως ἔξιν ἤδη προσαγορεύοι.

The last type of qualities in *Categories* are “affective qualities and affections” (ποιότητος παθητικαὶ ποιότητες καὶ πάθη).<sup>50</sup> Examples of affective qualities are sweetness, bitterness and sourness, and all of their kind, also hotness and coldness and paleness and darkness. Things possessing these qualities are thus *qualified*; e.g. sweetness is a quality of honey. They are called affective qualities because they produce an *affection of the senses*. One problem here is that hotness and coldness were already mentioned as dispositions (διάθεσις), so it seems that they can be understood as such or as affective qualities and affections. The distinction seems to depend on how permanent the coldness or hotness is in the object. The case of paleness, darkness and others colorings is different; they can be permanent qualities of objects but also they can be called *affective qualities* “because they themselves have been brought about by an emotion: [for example] when ashamed one goes red and when frightened one goes pale” (*Cat.* 9b11-12). When these properties are easily dispersed, like in the case of the emotions, they are just momentary affections and not qualities. Thus “a man who reddens through shame is not called ruddy, nor one who pales in fright pallid” (*Cat.* 9b30-34). The same is the case with someone experiencing anger (ὀργή); he is not *qualified* as an angry person but rather as someone *affected* by anger in a particular moment.<sup>51</sup> Therefore an affection (πάθος) could be not only an emotion properly speaking but also the particular affection suffered with each emotion, i.e., turning red or pale. Aristotle adds that if an affection (or disposition) is repeated over time it may turn into a quality. This will be the case of moral habits: acting justly just one time constitutes a disposition, and then, if that disposition is repeated over time, it may turn into a permanent state of virtue. The same happens in Aristotle’s theory of education: by habituation of repeated affections and dispositions, towards the right objects obviously, we are led to acquire virtue as a permanent state.<sup>52</sup>

Now, as mentioned above, at 9a29 Aristotle says that an affection (πάθος) is a quality of some kind. The problem arises later at 9b31 and 10a9-10 when he explicitly says that an affection (πάθος) is not a quality. My interpretation is that emotions (e.g. anger)

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<sup>50</sup> *Cat.* 9a29-10a9.

<sup>51</sup> Cf. EE 1220b15.

<sup>52</sup> “Character [ethos], as the word itself indicates. Is that which is developed from habit [ethos]; and anything is habituated which, as result of guidance that is not innate, through being changed a certain way repeatedly, is eventually capable of acting in that way” (EE 1220a39b3).

and the affections that accompany them (e.g. turning red) are not permanent and so only count as *temporary* qualities. Now, if they are permanent in an object, or – in the case of humans – permanent either from birth, illness or habit, then they will be stable qualities. If at 9a29 Aristotle puts the emotions as qualities it is only in this sense of temporary qualities and not permanent ones. The same, I think, is the case with *dispositions*. Those count as *qualities* even though they are “easily moved” (εὐκίνητα) and as the affections (πάθη) are “easily disperse[d] (ῥαδίως διαλυομένων)”. So I interpret that if the dispositions are called *qualities* it is only in relative terms, i.e. they are only “temporary qualities” that may become permanent ones if there is a constant repetition. This is not, however, evident in the text and so the explanation has to be supplied. For my purposes, what is relevant is the transient nature of the emotions and dispositions as opposed to the stability of the states or moral habits that are acquired as a second nature.<sup>53</sup>

The treatment of πάθη in *Metaphysics* V 21 (1022b15-20) brings a further problem. There, πάθος receives four meanings:

- (1) A quality (ποιότης) in respect of which a thing can be altered, e.g. white and black, sweet and bitter, heaviness and lightness, and all the others kinds.
- (2) The already actualized alterations.
- (3) Especially, injurious alterations and movements, and above all, painful injuries.
- (4) Experiences pleasant or painful when on a large scale are called affections (trans. Ross).

The first meaning given to πάθος, a *quality* (ποιότης) has already been discussed. Together with the second meaning in the passage, it gives a very broad sense to πάθος: an alteration that something undergoes by reason of an external cause.<sup>54</sup> The third and fourth meanings offer a definition of πάθος closer to what we understand as *emotion*. Here, something different is under consideration and πάθος, we are told, refers especially (μᾶλλον) to injurious alterations and movements (βλαβεραὶ ἀλλοιώσεις καὶ

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<sup>53</sup> For a complete discussion of the problems here with Aristotle treatment of the qualities see Ackrill 1963 and Furth 1988. For the analysis of emotions in the *Categories* in the Medieval tradition see Knuuttila 2003.

<sup>54</sup> See also the general treatment of pathos as passive affection in *On generation and corruption* I, 7 and *Physics* VII, 3.

κινήσεις), painful injuries (λυπηραὶ βλάβαι) and cases of advantageous things and pain on large scale (μεγέθη τῶν συμφορῶν καὶ λυπηρῶν). It is interesting that the affections that we called emotions are particularly associated with injurious alterations: painful injuries and great pleasure and pain. According to Amélie Oksenberg Rorty's paper "Aristotle on the Metaphysical Status of *Pathê*" the painful and harmful condition of *pathê* is such because affections are characterized as an exogenous alteration that modifies the inner nature of a being. In this sense, emotions inflict a certain violence on us. Certainly, some *pathê* could be beneficial and also produce pleasure but ultimately they are always a modification that involves an 'aggression' with respect to a previous state. That previous state is the normal and permanent way of being of an object and then, by the affection, it is temporarily altered.<sup>55</sup>

In conclusion, the *pathê* can be understood in a broad sense as *general affections* received by a subject passively, they are of short duration and so are momentary qualities of an object that, in the case of constant repetition over time, may become permanent qualities of that object. However, we need a more restricted use of the word; we need to understand what Aristotle means when he uses the term *pathos* applied to what now we called human emotions. This is the object of the next section.

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<sup>55</sup> See Rorty 1984, 529.



## 1.2 *Pathê* as emotions

Beyond the general account in *Metaphysics* and *Categories*, the other sources containing relevant material for the study of emotions are *De anima*, *History of Animals*, *Topics*, *Nicomachean Ethics* and *Rhetoric*. In these works, the term πάθος can generally be translated as *emotion* rather than *affection*. It is this more restricted sense of the term πάθος, as *emotion*, that now we are going to explore. Due to its ambiguous nature, however, in each case the meaning of πάθος depends on the context and we should bear this in mind.

There is no single Aristotelian work devoted to the treatment of what we now call *emotions*. In the list provided by Diogenes Laertius at least three works possibly referring to emotions are mentioned, but none of them have survived.<sup>56</sup> In light of this, what we can do is a reconstruction from the remaining texts. *Rhetoric* has been the preferred work of most scholars for such a task. It is the work that offers the more detailed account of emotions in Aristotle. However, I think, that should not be taken as the only source. *Rhetoric* is a work concerned with convincing an audience and so, in my opinion, that what is said in *Rhetoric* cannot be taken as a complete scientific reflection by Aristotle's standards on the nature of the emotions. Emotions are not only cognitive, but are also bodily processes. Like Paul Nieuwenburg, I believe that "we should not expect to find Aristotle's definitive views on emotions in *Rhetoric* 2.1-11."<sup>57</sup> A proper Aristotelian account of emotions should be complemented with the biological corpus, particularly those works concerned with human psychology.<sup>58</sup> One of the most important works there is *De anima*, where Aristotle deals with the complex study of emotions, explaining that it is a twofold phenomenon. This is so because "the emotions are enmattered reasons" (τά πάθη λόγοι ἐνυλοὶ εἰσιν)<sup>59</sup> "Enmattered" refers

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<sup>56</sup> *On being affected or having being affected* (Περὶ τοῦ πάσχειν ἢ πεπονθέναι); *On Emotions or On Anger* (Περὶ παθῶν <ἢ περὶ> ὀργῆς) and *Emotions* (Πάθη).

<sup>57</sup> Nieuwenburg 2002, 87. More drastically Copper 1999, 406: "Aristotle provides no general, analytical account of the emotions anywhere in any of the ethical writings. And we are in for disappointment if we look for this in his supposedly scientific account of psychological matters in the *De Anima*".

<sup>58</sup> *De anima*, *De sensu*, *Generation of animal and Movement of animals*.

<sup>59</sup> *De anima* 403a25.

here to the bodily changes that are the material cause of the emotions and as such are an object of study of natural sciences. The “reason” refers, I interpret, to the formal cause, i.e. a desire caused by a judgment about a situation that makes that particular emotion and not something else. This formal element is the object of study of dialecticians rather than natural scientists. It deals with the “whys and wherefores” at a cognitive level; the reasons for which a particular situation makes us react with anger or pity or any other emotion. This cognitive side of the emotions is what I am to discuss now. In particular, I will focus on the judgments that are the necessary conditions for the arousal of emotions. This will reveal that in order to experience, for example anger, we need to judge that someone has insulted us. If this is a necessary condition for the arousal of anger, then an objection can be made against those who claim that instrumental music can first imitate anger, and secondly, transmit that emotion to the listener.

Now, as previously noted, *Rhetoric* is the work preferred by scholars as the main source for the reconstruction of the *Aristotelian Theory of Emotions*. Following this tradition, I too will now focus on *Rhetoric*. There, we find a sort of definition at 1378a19-21: “The πάθη are all those things changing in respect to which those who have them differ with respect to their discriminations (κρίσεις) and which are accompanied by pain and pleasure.”<sup>60</sup> The term κρίσις is interpreted on a cognitivist reading as involving judgment. In fact, rational judgment appears to be involved in all the emotions discussed in *Rhetoric*, as is emphasised by the use of verbs such as οἶμαι<sup>61</sup> and νομίζω<sup>62</sup> in contexts where it is said that a particular emotion is aroused as a consequence of what we *believe* or *think*. For instance, let us consider fear:

If fear is associated with the expectation that something destructive will happen to us, plainly nobody will be afraid who believes (οἰμένων) nothing can happen to him; we shall not fear things that we believe (οἶονται) cannot happen to us, nor people who we believe (οἶονται)

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<sup>60</sup> ἔστι δὲ τὰ πάθη δι’ ὅσα μεταβάλλοντες διαφέρουσι πρὸς τὰς κρίσεις οἷς ἔπεται λύπη καὶ ἡδονή. (trans. Sihvola). Freese (Loeb, 1926) translates: “The emotions are all those affections which cause men to change their opinion in regard to their judgments, and are accompanied by pleasure and pain” and Roberts (*The Complete Works of Aristotle*, ed. Barnes, 1984): “The emotions are all those feelings that so change men as to affect their judgments, and that are also attended by pain or pleasure”.

<sup>61</sup> 1379b6; 1380b15; 1381a2; 1382b31; 1383a26; 1383b9; 1385b20; 1387b15; 1387b30; 1388b9.

<sup>62</sup> 1380b18; 1382b10; 1383a4; 1385b24.

cannot inflict them upon us; nor shall we be afraid at times when we think (οιομένους) ourselves safe from them (trans. Rhys Roberts).<sup>63</sup>

The idea behind the cognitivist approach is that emotions are complex cognitive processes rather than pure physiological and mechanical reactions. Thus, an emotion always involves the perception of something and a judgment about it; it is an intentional process directed to a particular object. This apprehension is accompanied by an evaluation in the form of a proposition. Anger, for example, is a process that requires us to “perceive” (imagine, remember or think) something and to evaluate that that object *is*, for example, offensive to us or to someone we care about. Emotions would then involve us saying that *X is Y* and that act of predication of *Y* about *X* would be a judgment necessary for the arousal of the emotion. If the judgment is modified, then the emotion is also altered: that is precisely the task of the orator in *Rhetoric*.

The definition of emotions in *Rhetoric* is a strange one. To say that emotions are “all those things changing in respect to which those who have them differ with respect to their discriminations” appears not to say much about their nature but only to describe their effects. The other problem is that the change of a judgment could be caused by a number of different variables, such as a headache, for example.<sup>64</sup> To know how emotions change our judgments is, at least, a starting point to getting an idea of what emotions are. Emotions as described in the definition of *Rhetoric* are responsible for changes in our judgments; the orator therefore needs to affect the emotions of the audience to change their minds. The orator does not, however, change an audience’s mind by inflicting physiological changes, like headaches, on his audience but he does so with arguments. Now let us focus on how emotions can change judgments.

Stephen Leighton has identified three ways in which our judgments are altered because of an emotion according to Aristotle: insincerity, favour/disfavour, and misperception. Insincerity would be the case when we ‘alter’ our judgment because of our feelings towards someone or something. If we love someone then it may be the case that in a courtroom we hold a position ‘A’ when we really think ‘not-A’. As Leighton puts it:

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<sup>63</sup> 1382b29-33.

<sup>64</sup> Fortenbaugh 1970, 54.

“we make certain judgments in public that are at odds with what we really believe.”<sup>65</sup>  
In this case, however, I think that the judgment is not altered at all, but *supplanted* or *covered* by another one.

More interesting are the cases where we are faced with an ambiguous situation and we respond either favouring or disfavouring the person we have to judge. Faced with a situation where we need to judge, for instance, whether someone is guilty or not, we may be inclined towards one or other verdict because of our emotions towards the accused. It is quite clear: if we love or hate the accused then our judgment will be conditioned and inclined to convict or acquit. Hope is also an emotion that works in this way: someone experiencing hope judges in a favourable way that what he desires is achievable. One problem with this interpretation appears in cases where there is no ambiguity. If the facts are clear enough it does not seem to matter how strong our emotions are, our judgment will be based on the facts without distortion. If there were crystal clear evidence that a beloved one is guilty then the favour/disfavour explanation of how emotions alter our judgment would not work.

The third explanation is as follows: emotions can alter our perception and thus our judgments. Leighton quotes *Nicomachean Ethics* in giving two such examples:

Anger (θυμός)<sup>66</sup> seems to listen to arguments to some extent, but to mishear them, as do hasty servants who run out before they have heard the whole of what one says, and then muddle the order, or a dog barks if there is a knock at the door, before looking if it is a friend. So anger, by reason of the warmth and hastiness (θερμότητα και ταχυστήτα) of its nature, when it hears, though not hearing an order, springs to revenge. (1149a23-32, Ackrill's revision of Ross' translation).

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<sup>65</sup> Leighton 1996, 208.

<sup>66</sup> The translation of θυμός as *anger* requires some explanation. Although in many places (for example *Rhet.* 1369a4, 1369b11 and 1378a30-33) the term can be translated with certainty as ‘anger’ there are others where a different translation is required. In *Topics* 113a36-b1 ὀργή is described as belonging to θυμός, not as its equivalent. Also in *Politics* it is said that θυμός is responsible for a friendly feeling (1327b40-1328a); which is in contradiction with the desire of retaliation involved in anger. However, in the present passage we can be sure that both terms are equivalent because what is said here about *thumos* is exactly the same that we read about *orgê* in other places. The characterization of *thumos* as being of a warm and hasty nature; its connection with the perception of a slight and the consequent desire of revenge, all of these are clear signs that θυμός could be replaced by ὀργή. For a further discussion of the relation between the two terms see Pearson 2012, 111-117.

The cause of the misperception here is the warmth and hastiness (θερμότητα και ταχυτήτα) of anger. These two qualities of the emotion are interesting since it seems that there is a reference to something beyond the purely cognitive element. Warmth and hastiness, in my opinion, refer to the bodily aspects of anger. In chapter 2.4 I will focus on the “enmattered” aspect of the emotion in detail, i.e. the role that the body plays in emotions according to Aristotle. However, let me advance something here and note how the “temperature” and “velocity” of the anger have an impact on the cognitive aspect. It may be thought that the warmth and hastiness are metaphors to refer to the nature of anger, but, we will see, they actually refer to a very concrete aspect of the bodily condition that is involved in the emotion, i.e. the physiological changes that occur in someone experiencing anger. Somehow this physical warmth and hastiness make the subject affected to such an extent that he mishears and so has a distorted judgment of reality.

I agree with Leighton with these three ways in which emotions alter our judgments: insincerity, favour/disfavour and misperception, the latter being caused by bodily changes that alter our perception.

These changes, however, only tell us what effect the emotions produce on our judgments but not what emotions are or how they come into existence. An interesting passage quoted by Leighton, which helps to answer these questions, is found in *De Insomniis* (460b3-16):

We are easily deceived about our perceptions when we are in emotional states, some in one state and others in another; e.g. the coward in his fear, the lover in his love; so that even in a very faint resemblance the coward expects to see his enemy, and the lover his loved one; and the more one is under the influence of emotion, the less similarity is required to give this impressions. Similarly, in fits of anger and in all forms of desire all are easily deceived, and the more easily, the more they are under the influence of emotions. So to those in fever animals sometimes appear on the wall from a slight resemblance of lines put together. Sometimes the illusion corresponds to the degree of emotion so that those who are not very ill are aware that the impression is false, but if the malady is more severe, they actually move in accordance with appearances. (trans. Leighton based on Hett's translation).

In this passage there is also a reference to biological changes that cause a misperception. The effect of high temperature alters perception and so someone thus

affected misperceives reality. However, now I want to focus on the first part of the passage where Aristotle says that the coward expects to see his enemy and the lover his loved one. This expectation goes beyond material causes; it is not the product of mere bodily changes but it has to do with certain beliefs. The person suffering fear holds the belief that, for example, an enemy is a threat and so, in his fear, he erroneously perceives other stimuli as his enemy. It is not his temperature or any other bodily condition – or at least not those bodily conditions in the absence of other factors – that cause him to see the enemy, but a belief. To understand this let us take one particular emotion, anger, as example. Anger is defined in *Rhetoric* as a desire for revenge for a slight that *is perceived* as undeserved and is accompanied with pain (1378a30-2). Here the mind perceives an object and makes an evaluation of it; it judges that one has been slighted and that judgment is the origin of the emotion. It is a necessary condition for the arousal of the emotion. As Konstan claims, however, “the judgment is not the emotion itself,”<sup>67</sup> but what elicits or triggers an appraisal and consequent emotion. The judgment is not equal to the emotion but nonetheless it is necessary to produce the emotion. There is an object that the subject perceives and judges and, as a result of such judgment, the emotion arises when the object perceived produces desire and pain or pleasure, or both.

The question now is about the nature of that judgment and whether or not it is exclusively rational. This is important for my purposes because it may be seen that the more emotions are moved away from rational judgments the more plausible it is to find emotions in instrumental music, i.e. music without *words* (λόγοι). However, as I will try to show, even if reason as a necessary condition for the emotions is removed, there is still need of a “judgment” that involves a predication of an object, and that object of the emotions seems to be absent in the perception of instrumental music and in its alleged emotional contagion.

The discussion is divided between those who think that according to Aristotle emotions require a rational component and those who claim that the participation of

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<sup>67</sup> Konstan 2007, 21.

*phantasia* is a sufficient condition for their existence. Among the former group is William Fortenbaugh, who refers to the judgments mentioned in *Rhetoric* as *thoughts*<sup>68</sup> and so he states that, for example, the efficient cause of anger is the thought of a slight. In the case of fear, the emotion would be caused by the thought of imminent danger. He thus affirms that “for Aristotle the thought of outrage and the thought of impending danger are not merely characteristic of anger and fear respectively. They are necessary and properly mentioned in the essential definitions of anger and fear.”<sup>69</sup> The consequence of establishing thought as a necessary condition for emotions is that irrational animals would be excluded from any emotional experience. According to Fortenbaugh, “human behaviour as against animal behaviour is cognitive.”<sup>70</sup> He then adds: “the behaviour of animals manifests considerable critical capacity and therefore may be spoken as discriminating behaviour. But the discriminations of animals remain at the level of aesthesis. They are not cognitive in the sense of propositional judgments open to the persuasion of reasoned logos.”<sup>71</sup> To deny emotions to animals and also to small children based on their lack of rationality in the first case, and – as Aristotle would say – in their undeveloped rationality in the second, is problematic. First of all, it is a claim that appears counterintuitive. Anyone who has had a dog as a pet would say that dogs can express a sort of happiness, sadness, anger or fear. And not only that, they can change their “emotional” state if they perceive that something has changed in a similar way to how a man is moved to another emotional state when his judgment is altered. A dog perceives somebody to be a threat and so acts showing its teeth, however, after a while the perception of the same person as a threat changes and with it the attitude of the dog. Is there any evaluation made by the dog? What kind of discrimination is possible without reason?

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<sup>68</sup> Fortenbaugh 1975, 17: “Aristotle showed that that emotional response is intelligent behavior open to reasoned persuasion. When men are angered, they are not victims of some totally irrational force. Rather they are responding in accordance with the thought of unjust insult. Their belief may be erroneous and their anger unreasonable, but their behavior is intelligent and cognitive in the sense that is grounded upon a belief which may be criticized and even altered by argumentation”.

<sup>69</sup> Fortenbaugh 1975, 12.

<sup>70</sup> Ibid. 39.

<sup>71</sup> Ibid. 48, n. 1.

According to Aristotle there are two different types of desires: irrational and rational.<sup>72</sup> On the one hand rational desires – only available to humans – are those that require an *assumption* (ὕπόληψις) i.e. assuming that something is the case. The term ὑπόληψις can be also translated as *opinion*, and so it is to believe that something is the case. On the other hand, irrational desires, such as thirst, hunger or sexual desires, are not responsive to rational commands. No persuasion is possible against feeling hot or hungry; those affections may be fought back by virtue but not extinguished by reason because they are totally deaf to arguments:

I call irrational all those [desires] that are not the result of any assumption. Such are all those which are called natural; for instance, those which come into existence through the body – such as the desire of food, thirst, hunger, the desires connected with taste, sexual pleasures, in a word, with touch, smell, hearing, and sight. I call those desires rational which are due to our being convinced; for there are many things which we desire to see or acquire when we have heard them spoken and are convinced that they are pleasant (*Rhet.* 1370a18-26).

An idea in the same vein is found in NE: “there is no gain in being persuaded not to be hot or in pain or hungry or the like, since we shall experience these feelings nonetheless” (1113b26-30). On the contrary, when we experience a rational desire we can be convinced with arguments and so change the desire. Now, conviction is the result of persuasion and only rational beings can be persuaded.<sup>73</sup> It therefore seems difficult to explain how non-rational animals could experience emotions as these latter are presented in the *Rhetoric*. There are nonetheless many cases where it seems that animals experience emotional states. Again, let us imagine a dog showing aggressive behaviour against a potential aggressor. If the latter stops being perceived by the dog as a threat then the dog seems to decrease his rage. This is exactly what Aristotle tells us, and not in the biological corpus, but in *Rhetoric*: “Even the behavior of dogs proves that anger (ὀργή) ceases towards those who humble (ταπεινουμένους) themselves, for they do not bite those who sit down” (1380a24-26).<sup>74</sup> In *Rhetoric* this example seems an auxiliary model and does not stand as a sure case of emotions, however, it raises

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<sup>72</sup> *Rhet.* 1370a17-26.

<sup>73</sup> “Opinion is attended by conviction, for it is impossible to hold opinions without being convinced of them: but no brute is ever convinced, though many have imagination. Further, every opinion implies conviction, conviction implies that we have been persuaded and persuasion implies reason. Among the brutes, however, though some have imagination, none have reason (*De anima* 428a-19-24).

<sup>74</sup> “Will beasts act under the influence of pain; for they attack because they have been wounded or because they are afraid” (NE 1116b31-32).



the question of the necessity of a rational desire in order to experience an emotion. Fortenbaugh's position is that Aristotle uses two different *frameworks* to explain why in some instances animals appear to experience emotions. In his paper 'Aristotle: animals, emotion, and moral virtue' he defends the idea that, according to Aristotle: "Animals are marked by sensation and impulse", and that "they do not have a share of the biological faculty of intelligence and therefore cannot judge that an insult has occurred or that a particular danger is imminent."<sup>75</sup> The cases where Aristotle seems to ascribe emotions to animals occur, Fortenbaugh holds, in the biological corpus and not in his ethical works. In each of them there is a different framework being used. In the cases where Aristotle ascribes emotions to animals he is using a Platonic framework that includes the tripartition of the soul and "associates *epithymia* and *thymos* indiscriminately with both human beings and animals."<sup>76</sup> On the other hand, there is a human framework where bipartition is used. This would be the case of the ethical works where Aristotle places emotions "as cognitive phenomena." Fortenbaugh concludes his paper: "[T]he zoological view which construes emotions and temperaments as non-cognitive phenomena is useful for describing animal behaviour but poorly suited for elucidating different kinds of intelligent, human action."<sup>77</sup> All the cases where emotions are ascribed to animals should be understood as anthropomorphism or as analogies or metaphors of human emotions.

Richard Sorabji rejects Fortenbaugh's position claiming that, according to Aristotle, animals, despite not having rationality, are endowed with an analogous faculty that allows them to make perceptual and post-perceptual predications (imagination, dreams and memory). By means of sense perception animals are not only able to perceive something but also to predicate it from something else. This, Sorabji points out, does not mean that animals have conceptions or beliefs. He says that it is more like: "something is *predicated* of something."<sup>78</sup> For example, Sorabji points to *Nicomachean Ethics*, where it may be argued that when the lion perceives *that* (ὅτι) an ox is nearby, we are looking at a case of predicational perception. In fact, the "that"

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<sup>75</sup> Fortenbaugh 1971, 137.

<sup>76</sup> Ibid. 145.

<sup>77</sup> Ibid. 157.

<sup>78</sup> Sorabji 2001, 19.

clause also appears in *De anima* when Aristotle says that through *phantasia* we perceive *that* (ὅτι) a white thing is round or *that* it is a man (418a21-22, 430b29-30). Non-rational animals are deprived of reason and thus of any assumptions or beliefs (DA 428a19-24). They are, however, endowed with *phantasia*<sup>79</sup> – or at least some of them – and so they could also make discriminations and these “predications” even without reason.

However, *to predicate* is a strong verb to ascribe to animals and I am not convinced that the lion perceiving *that* the ox is near is enough to conclude that for Aristotle animals’ minds are endowed with predicational capacities. It is only one case and it is not improbable that it was just a slip. The passage is not focused on animals having *predicational* powers, but whether or not they enjoy smells or sounds.

There may, however, be alternative means of explaining animal emotions without ascribing predications to them. The Greek term κρίσις can be translated as *discrimination*, *division* and *separation*. In cognitive terms all animals are endowed with certain amount of this faculty. It certainly belongs to humans but to a lesser extent also to non-rational animals since is not exclusive of reason but is found in the powers of perception<sup>80</sup> and imagination.<sup>81</sup> A lamb, for example, can discriminate between a wolf and another lamb and so it will flee in the presence of the former. Somehow the wolf must represent pain for the lamb because we are told that in animals “the origin of motion is [...] the object of pursuit or avoidance in the sphere of action.”<sup>82</sup> So, the animal is moved when there is desire of something and sense perception presents to the animals’ mind the object that is the satisfaction of the desire:

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<sup>79</sup> 415a11; 428a10-11, 22-24; 433b28-30; 431a1-7. There are two types of *phantasia*, rational (λογιστική) and of sense perception (αἰσθητική) (*De anim.* 433b29). Non-rational animals only have the second.

<sup>80</sup> NE 1126b3-4; 1109b20 and *De anima* 426b10-121; 432a16.

<sup>81</sup> “Imagination is the faculty in virtue of which we say that an image present itself to us, and if we exclude the metaphorical use of the term, it is some of the faculties or habits in virtue of which we judge (κρίνομεν), and judge truly or falsely. Such faculties or habits are sensation, opinion, knowledge, intellect.” (*De anima* 428a1-5); “Imagination and sensation are common ground with thought, since all three are faculties of discrimination (κριτικὰ) though differing according to distinctions stated elsewhere” (*Movement of animals* 700b19-22).

<sup>82</sup> *Movement of animals* 701b33-34: Ἀρχὴ μὲν οὖν, ὥσπερ εἴρηται, τῆς κινήσεως τὸ ἐν τῷ πρακτῷ διοκτὸν καὶ φευκτόν.

For whenever a creature is actually using sense-perception or *phantasia* or thought towards the thing for-the-sake-of which, he does at once what he desires. For the activity of the desire takes place of questioning or thinking. “I have to drink,” says appetite. “Here’s drink,” says sense perception or *phantasia* or thought. At once it drinks. This, then, is the way that animals are impelled to move and act: the proximate reason for movement is desire, and this comes to be either through sense perception or through *phantasia* and thought. (701a29-701b1. trans. Nussbaum).

According to Aristotle, this practical syllogism does not require the faculty of reason and I think that it may be applied to the case of the lamb and the wolf above. The awareness of the wolf must produce pain in the lamb, and so the lamb flees with fear. I am not sure about Sorabji’s predicational content made by *phantasia*, I do not know what sort of predication the lamb would make about the wolf. Would it be that the lamb perceives the wolf as a threat or as something dangerous and as a consequence experiences fear? This alternative is problematic because it would appear that the lamb holds a belief about the wolf. It also involves the *concept* of danger or threat, but animals cannot grasp concepts according to Aristotle. Can the lamb rather than *believing* that the wolf is a threat only *perceive* it as one? In either case I think that for Aristotle there must be at least some intentionality, some perceptual grasp of an object, i.e. the wolf, which is object of pain/avoidance. In *De anima* we are told that sensation is analogous with thinking in the sense that the pursuit or avoidance of an object, pleasant or painful, is like (οἶον) affirmation and negation (*De anim.* 431a8-9). The lamb, we would say, perceives *that* the wolf is painful and then “avoids/negates” the wolf by some analogous sort of “saying.” If this is the case, we should agree with Martha Nussbaum and say that Aristotle “views pain as an intentional state with cognitive content,”<sup>83</sup> and so the lamb’s pain is *intended over* or is *about* the wolf. The lamb does not need to believe, perceive or predicate that the wolf is a threat, but only *discriminates* that the wolf is something painful. This awareness of the wolf as painful is enough to make the lamb desire to avoid it. This seems to be confirmed in *Nichomachean Ethics*:

For reason or imagination informs us that we have been insulted or slighted, and anger, reasoning as it were that anything like this must be fought against, boils up straight away; while appetite, if reason or perception merely says that an object is pleasant (ἡ δ’ ἐπιθυμία, εἰς μόνον εἶπη ὅτι ἡδὺ ὁ λόγος ἢ ἡ αἴσθησις), springs to the enjoyment of it. Therefore

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<sup>83</sup> Nussbaum 2001, 64.

anger obeys reason in a sense, but appetite does not (NE 1149a32-b3, Ackrill's revision of Ross' translation).

I am not wholly committed to the idea that an animal using its imagination would 'say' that something is pleasurable or painful. If this were the case, it would be only analogous to rational predication. However, what I do claim and what is relevant for my purposes here, is that in any case, whether we accept that animals have emotions as per Sorabji or whether following Fortenbaugh, we ascribe to them only something analogous to human emotions, for Aristotle the existence of an object for the emotions is necessary, and the perception of that object must always be accompanied by the feeling of pain or pleasure. So, even in the cases of irrational emotions, if we allow their existence in accordance with Sorabji's analysis, we require an intentional awareness accompanied by a discrimination of whether the object is painful or pleasurable.

Jessica Moss also claims that for Aristotle animals have at least some emotions.<sup>84</sup> She wants to expand the cause of emotions not only to beliefs but to post-perceptual appearances, i.e. *phantasiai*, as sufficient conditions for the existence of the emotion in humans. One of her arguments is that the mind never thinks without images (*phantasiai*).<sup>85</sup> According to Moss, *phantasia* is enough to make evaluative judgments since Aristotle conceives "all human passions as involving appearances of things as good or bad."<sup>86</sup> She presents *phantasia* as a way of accepting or endorsing a representation in a process that is parallel to that of belief. Anger or pity, for example, would require the operation of *phantasia*. This is so because for Aristotle "insults" and "undeserved well doing", she thinks, are perceptible. According to Moss, Aristotle does not explain how this is possible but nevertheless is committed to this view. To prove this, Moss argues first that Aristotle holds that "all painful and pleasant things are perceptible"<sup>87</sup> and secondly, in conjunction with this, that "the passions are essentially pleasurable and painful responses." Her conclusion is that "the things to

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<sup>84</sup> Moss 2012, 73 and note 11.

<sup>85</sup> 431a16-17; 432a9-10.

<sup>86</sup> Moss 2012, 69.

<sup>87</sup> Ibid. 88.

which they are responses must be perceptible.” To support her claim she quotes *EN* 1149a32-34:

*Logos* or *phantasia* has shown that something was hubris or a slight (ὀλιγοψία), and spirit (ὁ θυμός), as if having reasoned that one must fight against such a thing, is distressed right away.

In order to perceive with *phantasia* an “undeserved well-doing”, which is a requirement to experience anger, we need an underlying concept of justice and I do not think that Aristotle would agree with the idea that such a concept is an object of sense perception. Perceiving a physical attack does not involve an apprehension of a universal concept like justice and, we will see, for Aristotle justice *is* present in the concept of a slight (ὀλιγοψία), the object that is the cause of anger.

Now, although Aristotle does not make the distinction explicitly, it is necessary to distinguish different types of emotions, or more precisely, different objects of emotions. To accept Moss’s view that the faculty of *phantasia* is enough to arouse emotions would lead us to accept that animals can also experience them. There are, however, emotions that require highly complex concepts unavailable to non-human animals. Consider, for example, pity. This is an emotion that requires an idea of justice and so irrational animals cannot experience it, and unless we want to accept that Aristotle says so, we need to leave it exclusively for humans. But the fact is that non-rational animals have no access to the concept of justice.<sup>88</sup> Even in the case of emotions that seem more basic and likely to be ascribed to animals, like anger<sup>89</sup> and fear,<sup>90</sup> there are objections to be made. Anger, as is described in *Rhetoric*, not only involves the concept of justice but also the hope (ἐλπίζ) of retaliation.<sup>91</sup> In turn, fear is defined as the anticipation (προσδοκία) of a future misfortune.<sup>92</sup> If these elements are the

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<sup>88</sup> *Pol.* 1253a7-19: “Speech is intended for the valuable (συμφέρον) and harmful (βλαβερός), and therefore likewise the just (δίκαιος) and the unjust (ἀδίκος). And it is a characteristic of man that he alone has any sense of good and evil, of just and unjust, and the like, and the association of living beings who have this sense makes a family and a state”.

<sup>89</sup> *Rhet.* 1380a24.

<sup>90</sup> *HA* 609a31-b1; 609b16-17; 622b14-15; 627a16-18; 629b8-30; 630B8-13; *PA* 650b27-33; 667a11-22; 679a4-14, 25-30; 692a20-4.

<sup>91</sup> *Rhet.* 1378b2.

<sup>92</sup> *Rhet.* 1382b29.

constituents of these emotions then animals cannot experience them, since no animal experiences hope or anticipation.<sup>93</sup> An animal cannot experience an affection about a reality that is not available to it. Animals deprived of sight, such as a worm, cannot process any visual stimuli. The case would be similar with emotions: animals, being deprived of reason, cannot access moral concepts or have hopes or anticipation. At most, their “emotional reactions”, or what seem to be their emotional reactions, must be confined to the realm of sense perception and feelings of pain and pleasure.

Again, I am not in a position here to resolve the difficult question of whether animals’ emotions are real or just analogous to human emotions. What I do want to conclude from this section is that in either case, there must at least be an intentionality accompanied with an appraisal of pain or pleasure. The objects of those appraisals need to be available to the perceiver, who, either by the mere means of *phantasia* or with the participation of reason, will experience either pain or pleasure towards the objects presented.

Humans, who are the focus of this study, can make more sophisticated discriminations than animals. Not just those available to sense perception and those involving something as pleasurable or not, but also judgments about moral situations that involve complex concepts. All these judgments and concepts, we will see now, are a significant problem for the alleged contagion of emotions through the mere listening of instrumental music.

The emotions presented in *Rhetoric* have as necessary conditions judgments directed towards an object and the accompaniment of pain or pleasure. Therefore, the “intentionality” of the emotions refers to the act of judging that the perceiver does *about* an object and the accompanying feeling of pain or pleasure.

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<sup>93</sup> PA 669a21: “It has been said that the lung exists as a provision to meet the jumping of the heart. But this is out of question. For man is practically the only animals whose heart presents this phenomenon of jumping, insomuch as he alone is influenced by hope (ἐλπίς) and anticipation (προσδοκία) of the future”.

I have purposefully not addressed in this section the role of the body in the emotions. This is a part of the discussion in the next section devoted to the question whether emotions can be aroused without any judgments.

## 2. Second chapter: Emotions without judgments?

As seen above, whether we accept that emotions are aroused by means of a rational evaluation or on the basis of a perceptual appraisal made by *phantasia*, in both cases we are in the presence of a cognitive process that involves a predication that *X* is *Y* and causes either pain or pleasure. This is an agreement among all the accounts of Aristotle's "theory of emotions" mentioned above. In the case of animals, as we saw in chapter 1.2, this predication is only analogous with the human judgment.

All those interpretations should be rejected as inconsistent if it is accepted that according to Aristotle instrumental music is able to arouse emotions in its listeners by means of a sort of a contagious effect. Fortenbaugh's position, and in part my own too, is to deny that Aristotle is talking about instrumental music in book VIII of *Politics* when he – apparently – says that music imitates emotions. Fortenbaugh wrote:

Young children are to be taught moral principles and towards this end words are important. Just as Plato disapproved of wordless rhythms on the grounds that it is difficult to tell what they represent (*Laws* 669e1-4), so Aristotle disapproved of flutes which make the usage of words impossible (1341a24-5). The musical *paideia* is not concerned with developing a pattern of reactions to pleasant and painful sensations, but rather with virtue and the ability to make correct assessments (1340a15-18).<sup>94</sup>

Although Martha Nussbaum defends a strong cognitivist position in her interpretation of Aristotle's account of emotions, still in the same work she advocates the possibility of instrumental music representing and arousing emotions in the listener. Unfortunately she does not explore how such possibility would fit in with the Aristotelian account and she focuses only on modern sources leaving it to us to address the problems that arise from those two claims.<sup>95</sup>

The problem for all the accounts surveyed earlier is that if we accept that music –which supposedly imitates anger – makes listeners angry by virtue of the very process of

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<sup>94</sup> Fortenbaugh 1975, 48-49.

<sup>95</sup> Nussbaum, 2003, 249-294.



listening to it, then there is no need for any judgment, nor intentional content, to work with either reason or *phantasia*. But before analyzing the particular and central case of music, which will be the object of a special section, let me now focus on other ways in which emotions can apparently be aroused, which may help us to understand the relationship between music and emotions.

There are at least two “mechanisms” that may, each, present an alternative to emotions being aroused by appraisals. The first I call “emotions by signs”, the second “emotions by physiology”. The analysis of both will be the task of the next two sections of this chapter.

## 2.1 Emotions aroused by visual signs

- a) “Fear and pity may be aroused by sight (Ἔστιν μὲν οὖν τὸ φοβερὸν καὶ ἔλεινὸν ἐκ τῆς ὄψεως γίνεσθαι); but they may also be aroused by the very structure and incidents of the play, which is the better way and shows the better poet. For the plot in fact should be so framed that, even without seeing the things take place, he who simply hears the account of them shall shudder and feel pity at the incidents [...] Those, however, who make use of the spectacle to put before us that which is merely monstrous and not productive of fear, are wholly out of touch with tragedy (*Poetics* 1453b1-10).
- b) Those who heighten (συναπεργάζομαι) the effect of their words with suitable gestures, voices (φωναίς), appearance, and dramatic action generally, are especially successful in exciting pity: they thus put the disasters before our eyes, and make them seem close to us, just coming or just past. Anything that has just happened, or is going to happen soon, is particularly piteous: so too therefore are the *signs* (σημεῖα) of suffering—the garments and the like of those who have already suffered—the words and the like of those actually suffering—of those, for instance, who are on the point of death. For all this, because it seems close, tends to produce pity. Most piteous of all is it when, in such times of trial, the victims are persons of noble character, for their suffering is undeserved (ἀναξίαις) and it is set before our eyes (*Rhet.* 1386a31-b8).

In the passages a) and b) there are visual cues that are said to arouse emotions alongside the plot, particularly pity. In *Rhetoric* pity is described as follows:

A kind of pain excited by the *appearance* (φαινόμενον) of evil, deadly or painful, which befalls one who does not *deserve* (ἀναξίου) it; an evil which one might expect to come upon himself or one of his friends, and when near. For it is evident that one who is likely to feel pity must be such as to think (οἴεσθαι) that he, or one of his friends, is liable to suffer some evil (1385b11-16).

From the definition of pity in *Rhetoric* we can conclude that a necessary condition for the appearance of this emotion is the appraisal that something bad and undeserved has happened – or will happen – to us or to someone we care about. Passages a) and b) say that pity can be generated by visual effects but also by sounds and dramatic actions. Those sensible objects are called *signs*; they make reference to something else and so there is an act of inference or reading by the perceiver between those signs and what they stand for. For example, a little girl in ragged clothes and with signs of hypothermia inspires pity because – most probably – no one would *think* that an innocent little girl *deserves* such condition. Nonetheless, by themselves, i.e. taken isolated, the signs are useless to arouse emotions; they need to refer to a particular character that is immersed in a narrative context. If we know, as imaginary as this may sound, that the pitiable little girl presented is in fact an evil witch in disguise, then that information is enough to dissociate the signs perceived from the pity that they otherwise would produce. In order to arouse emotions in the audience of a theatre, it is essential that they are convinced about the deeds of the characters in the story. The costumes, scenography or sounds are subsidiary elements that help to *heighten* (συναπεργάζομαι) the effects of the words and so they work as emotions' enhancers.

In *Politics* it is said that works of visual arts only display signs of emotions but no moral characters or only to a slight degree, i.e. we cannot tell if the character portrayed is noble or vulgar just by its appearance.<sup>96</sup> Referring to that passage, Stephen Halliwell claims that, according to Aristotle, faced with a work of visual arts:

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<sup>96</sup> “The objects of no other sense [besides hearing], such as taste or touch, have any resemblance [ὁμοίωμα] to moral qualities; *in visible objects* [ἐν τοῖς ὁρατοῖς] there is only a little, for there are figures which are of a moral character, but only to a slight extent, and all do not participate in the feeling about them. Again, figures and colors [σχήματα καὶ χρώματα] are not imitations of character [ὁμιώματα τῶν ἠθῶν], but signs [σημεῖα], indications which the body gives of emotions [πάθεισιν]. There is not too much difference, but in so far as there is any, young men should be thought to look, not to the works of Pausan, but those of Polygnotus, or any other painter or sculptor who expresses character (*Politics* 1339b41-1340b19)”.

[The perceiver] requires a larger framework of suppositions for its justification [of the moral character]—among other things, a narrative framework, that is (in the terms of *Poetics*), an implicit structure of ‘action’. The perception of character i[n] such cases will be a process of discursive inference, a ‘reading’ of the implied relationship between action and character, rather than recognition of an intrinsic property of the ordered “shapes and colours” of the material artwork.<sup>97</sup>

I agree with Halliwell here. Mere sense perception is neither enough to know the moral character of a sculpture nor to make a complete judgment that conduces to emotional arousal. It is also necessary to understand the context in which they appear. Besides needing a context, visual arts by themselves appear in Aristotle as emotional elicitors of a second kind. There is one passage from *De anima* at 427b21-4 that shows that mere images in paintings are not enough to produce emotions as strong as emotions generated by beliefs:

When we are of opinion (δοξάζομεν) that something is terrible or alarming, we at once feel the corresponding emotion, and so, too, with what is reassuring. But when we are under the influence of imagination (κατὰ δὲ τὴν φαντασίαν) we are not more affected than if we saw in a picture (γραφῆ) the objects which inspire terror or confidence.

Considering this passage, it seems that Aristotle is being inconsistent. How could we react emotionally to how an actor looks but not to a picture of him? One alternative is offered indirectly by Konstan. In his view there was a transition between a classical paradigm of art that focused on idealized figures and the increment of realism or naturalism in the Hellenistic period. He wrote:

In contrast with the Hellenistic styles, the art of the classical age seems almost expressionless. A glance at vase paintings, whether of the black-figured variety or the red-figured that superseded it around the year 500, indicates that for all the advances in draughtsmanship over the archaic period, very little effort was expended in representing emotions by way of facial expression.

He adds:

Expression is minimal [...] because the information relevant to an understanding of the emotions in question lies in the stimulus and its evaluation, not in the visible sign of an otherwise opaque inner state.<sup>98</sup>

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<sup>97</sup> Halliwell 2002, 242-43.

<sup>98</sup> Konstan 2007, 30. Another problem with the passage at 427b21-4 is that it seems to affirm that the emotions produced by *phantasia* are less intense than those produced by beliefs. This appears in contradiction with so many places where *phantasia* is pointed as responsible for the arousal of emotions.

One option is thus to consider that Aristotle had in mind the visual arts which were poor in their expression and so less efficient in affecting the emotions of the observers. The visual cues in the theatre, on the contrary, were contextualized in a bigger picture and so easily associated with the inner states of the characters. In the theatre, although the actors were wearing masks, they were able to use their voice and perform actions:

The thought of the personages is shown in everything to be affected by their language – in every effort to prove or disprove, to arouse emotion (pity, fear, anger, and the like), or to maximize or minimize things. It is clear, also, that their mental procedure must be on the same lines in their actions likewise, whenever they wish them to arouse pity or horror, or have a look of importance or probability. The only difference is that with act the *impression* (φαίνεσθαι) has to be made without *explanation* (διδασκαλίας); whereas with spoken word is has to be produced by the speaker, and result from his language. What, indeed, would be the good of the speaker, if things *appeared* (φαίνοιτο) in the required light even apart from anything said? (*Poet.* 1456a36-b8).

The appraisals that lead to an emotional arousal may be directed towards the actions performed by the characters themselves or to their words. There is a context where the audience can read the signs presented and evaluate the situation. Certainly, *nihil est in intellectu quod non sit prius in sensu*; and following this principle we should say that, necessarily, the emotions aroused need to be first stimulated by the sense perception. In *De anima* it is unambiguously stated that “imagination (φαντασία) [...] is never found by itself apart from perception, any more than is conviction (ὑπόληψις) apart from imagination” (427b14-16). Conviction (ὑπόληψις) is replaced in line 20 by δοξάζειν so there is no risk in affirming that either in the case of an appraisal made by *phantasia* or reason there is always need of an object provided by sense perception at the origin of the emotion. The appearance of a little girl freezing and with her clothes ragged may said to be at the “origin” of our pity, and to some degree this is true. But although our emotion needs the sensory stimulus, the proper object of the emotion is not the little girl’s ragged clothes, her purple lips or shaking voice, but herself, with all those sensible cues, in her unjust condition, and that is the implicit judgment we make when led by all these cues.

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One option of interpretation is that here Aristotle means that if we only imagine something fearful, i.e. a mental image of a lion, it is devoid of real risk. It would be different if we have the image provided by *phantasia* of a real lion marching against us.

## 2.2 Emotions aroused by mere voice

- c) To express emotion, you will employ the language of anger (ὀργιζομένου λέξις) in speaking of outrage; the language of disgust and discreet reluctance to utter a word when speaking of impiety or foulness; the language of exultation for a tale of glory, and that of humiliation for a tale of pity; and so in all other cases. This aptness of language is one thing that makes people believe in the truth of your story: their minds draw the false conclusion that you are to be trusted from the fact that others behave as you do when things are as you describe them; and therefore they take your story to be true, whether it is so or not. Besides, an emotional speaker always makes his audience feel with him (συνομοπαθεῖ), even when there is nothing in his arguments; which is why many speakers try to *overwhelm* (καταπλήττουσι) their audience *doing mere noise* (θορυβοῦντες). Furthermore, this way of proving your story by displaying these signs (σημείων) of its genuineness expresses your personal character. (*Rhet.* 1408a16-26).
- d) It is, essentially, a matter of the right management of the voice to express each particular emotion (πρὸς ἕκαστον πάθος)<sup>99</sup> – of speaking loudly, softly or between the two; of high, low or intermediate pitch; of the various rhythms that suit various subjects. These are the three things –volume of sound, modulation of pitch, and rhythm – that a speaker bears in mind (*Rhet.* 1403b26-32).

Passages c) and d) are very interesting for my project because they directly refer to the effect that mere voice can have over the listener, and so there may be a connection with the effects that instrumental music has on an audience. First, the speaker needs to use a language suitable for his speech and his audience. In this respect, Aristotle seems to be following Plato who believed that there is one type of speech appropriate for each type of audience. According to Plato, anyone who wants to teach rhetoric needs to know three things:

He will classify the kinds of speech and of soul there are, as well as the various ways they are affected and explain what causes each since the nature of speech is in fact to direct the soul, he must know how many kinds of soul there are. If his speaking, teaching, or writing lacks and he still claims to be speaking with art, don't believe him because he is not a real rhetorician (*Phaedrus* 271b).

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<sup>99</sup> Cf. Anderson 1968, 260: "Both Plato and Aristotle contend that music is the great medium of ethos; neither considers the possibility of ethos in nonmusical sound".

The term λέξις used by Aristotle in passage c) may be translated as ‘speech’ or ‘language’ but also may be understood as referring to a particular style of diction. I think that Aristotle is not referring here to vocabulary but to the way in which things are said. The speaker should try to match his words with a particular voice in order to be more convincing. In a similar way for Plato in the *Phaedrus* passage there is a correlation between a particular kind of soul or its affections and a particular type of talking. Volume, pitch and rhythm are the three elements that the speaker should consider in order to express those emotions.<sup>100</sup> This is crucial because, Aristotle says, “the way in which a thing is said does affect its intelligibility.”<sup>101</sup> The human voice is able to “express” emotions in the sense that a particular type of voice – defined by its volume, pitch and rhythm – is a sign of an emotional state. In *Politics*, as indicated above, Aristotle says that in paintings and sculptures moral character is represented only to a slight degree. What we find in visual arts are *indications of emotions*: ἐπίσημα ἐν τοῖς πάθεσιν.<sup>102</sup> So voice, considered as physical sound rather than words with semantic content, can also be considered as a sign of emotions; a bodily expression of an inner state. Volume, pitch and rhythm could be equated in this sense with the paleness or redness that accompanies fear and shame. Other thing is the representative power of the voice in terms of linguistic sign. In *Rhetoric* we read: “Words represent things (ὀνόματα μιμήματα ἐστίν),<sup>103</sup> and they [the poets] had also the human voice at their disposal, which of all our organs can best represent other things (ἡ φωνὴ πάντων μιμητικώτατον τῶν μορίων ἡμῖν).”<sup>104</sup> It would be tempting to interpret here the mimetic power of voice as the capacity to express emotions but the status of the *most*

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<sup>100</sup> At 1413b22, 31 changes in speech and pitch are mentioned in connection with delivery. At 1414a15-17 there is reference to volume.

<sup>101</sup> 1404a10-11: Not, however, so much importance as people thinks. All such arts are fanciful and meant to charm the hearer. Nobody uses fine language when teaching geometry.

<sup>102</sup> 1340a34-35.

<sup>103</sup> *De interpretatione* 16a3-13: “Now spoken sounds are symbols of affections in the soul (Ἔστι μὲν οὖν τὰ ἐν τῇ φωνῇ τῶν ἐν τῇ ψυχῇ παθημάτων σύμβολα), and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But what these are in the first place signs of—affections of the soul—are the same for all; and what these affections are likenesses of—actual things—are also the same [...] Just as some thoughts in the soul are neither true nor false while some are necessarily one or the other, so also with spoken sounds. For falsity and truth have to do with combination and separation. Thus names and verbs by themselves—for instance ‘man’ or ‘white’ when nothing further is added—are like the thoughts that are without combination and separation; for so far they are neither true nor false”.

<sup>104</sup> 1404a20-21.

mimetic refers to the faculty to pronounce words, which are defined by Aristotle as signs of mental affections, which in turn are likenesses of reality.

Now, utterances, noises, screams, etc. may be signs of emotional states but not *representations* of those emotions. The same is true for other bodily changes. For example, paleness is just a sign of fear but not a representation of it. This interpretation is confirmed at 1405a34 where in discussing metaphors Aristotle points out that to refer to poetry as “the scream of Calliope” is a bad metaphor. The reason for this, he says, is that although *poetry* and *scream* are both sounds, the second is *meaningless* (ἀσήμοις).<sup>105</sup> He certainly is not saying that a scream cannot be a sign of pain, but what he is saying is that it has no semantic content. Animals utter different sounds with different purposes<sup>106</sup> but always using their voice (φωνή) as a sign (σημεῖον) of pain or pleasure (*Pol.* 1253a7-19). In *De interpretatione* (16a28-9) Aristotle states that “inarticulate noises – of beasts, for instance – do indeed reveal something, yet none of them is a name” (ἐπεὶ δηλοῦσί γέ τι καὶ οἱ ἀγράμματοι ψόφοι, οἷον θηρίων, ὧν οὐδέν ἐστιν ὄνομα). In modern linguistics this nonverbal feature of speech is called intonation and it refers to the capacity to express emotions in speech by means of acoustic properties. If those acoustic properties can be transferred to music then there will also be expression of signs of emotions in music.<sup>107</sup> Our voice certainly changes

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<sup>105</sup> *De anima* 420b27-421a2; (trans. Smith): “Not every sound, as we said, made by an animal is voice (even with the tongue we may merely make a sound which is not voice, or without the tongue as in coughing); what produces the impact must have soul in it and must be accompanied by an act of imagination, for voice is a sound with a meaning (σημαντικός), and is not merely the result of any impact of the breath as in coughing; in voice the breath in the windpipe is used as an instrument to knock with against the walls of the windpipe”.

<sup>106</sup> *Hist. anim.* 536a26. Cf. *Hist. anim.* 488a31-b1: “Some animals emit sound [*psophêtika*] while others are mute [*aphôna*], and some are endowed with voice [*phônêta*]: of these latter some have articulate speech [*dialekton echei*], while others are inarticulate [*agramata*]; some are given to continual chirping and twittering some are prone to silence; some are musical [*ôdikas*], and some unmusical [*anôda*]; but all animals without exception exercise their power of singing [*adein*] or chattering [*lalein*] chiefly in connection with the intercourse of the sexes” (trans. Thompson).

<sup>107</sup> The relation between the “musicality of the emotions” and the “emotional content” of our speech is a matter for contemporary studies that can be contrasted with Aristotle’s approach. In modern research in the field of musical cognition Henkjan Honing has pointed out that the Infant Direct Speech (IDS) is a sort of music with emotional content. The IDS, or “babble music” as he calls it (Honing 2011, 3), is the baby talk that adults establish with babies of the sort “de do do do, da da da”. Related to this, he explains, we see that there are sentences with different contents which are expressed with different intonations. For example, phrases in English expressing encouragement like “that’s the way” or “well done” are usually characterized by an “ascending and subsequently descending tone”. On the contrary, phrases expressing warnings like “no, stop it” or “be careful, don’t touch it” are characterized by a lower

in different emotional states and Aristotle was well aware of this. The orator needs to use the right volume, pitch and rhythm to match a specific emotion. Is there, however, a specific sound for each emotion? How does pity sound?<sup>108</sup> In Ancient Greek, as well as in modern English, there are interjections and exclamations that have expression: in English *aha* means “I understand”, *aww* may denote that something is cute or pitiful; *grr* stands for “I am angry”, etc. In Ancient Greek  $\tilde{\alpha}$ , according to Liddell and Scott, was used to express pity, envy or contempt;  $\tilde{\epsilon}\alpha$  surprise; and  $\acute{o}\nu\alpha\acute{\iota}$  anger and pain. In passage c) Aristotle says that when the speaker’s arguments are weak he can impact his audience with mere noise ( $\theta\acute{o}\rho\upsilon\beta\omicron\varsigma$ ), so one option is that he is referring to these interjections. It seems that Aristotle thought that the voice was able to express emotions or at least their audible features. However, here we need to draw a fundamental distinction between the expression and arousal of emotions. Even granting that pure vocal sound could be a sign of a psychological state there is a gap between recognizing it in others and experiencing the same emotions ourselves. In other words, to recognize that someone is experiencing anger does not imply that we will feel the same emotion. Besides, it is wrong to affirm that each emotion has a particular audible sound attached or another visible feature: envy, for example, seems totally mute and invisible.<sup>109</sup> Also, blushing can equally be a sign of shame or anger.

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pitch and a “staccato–like rhythm” (Ibid. 4). Based on this fact, he concludes that: “if the speech were to be filtered out so that its sound or phonemes were no longer audible and only the music remained, it would be clear whether encouragement or warnings was involved. This is because the relevant information is contained more in the melody and rhythm than it is in the words themselves” (Ibid.). This may lead to understand IDS as a preparation for speech proper, but Honing offers another option: “[A]n alternative might be to see IDS not as preparation for speech but as a form of communication in its own right: a kind of ‘music’ used to communicate and discover the world for as long as ‘real’ speech is absent. If you subsequently emphasize the type of information most commonly conveyed in babble music, or rather, those aspects of speech in which infants have the greatest interest during their first nine months, the conclusion must be that bubble music is first and foremost a way of conveying *emotional* information. It is an emotional language that, even without grammar, is still meaningful” (Ibid.).

<sup>108</sup> “Aristotle listed and described the emotions –the effects– to which the orator (like the poet and bard, or dramatists and actor, or musician) can appeal: anger, calmness, fear, shame, love and have, pity and so forth (some of which, no matter how attainable by rhetoric, are not –for example envy and emulation– within the capacity of music to imitate)”, Shueller 1988, 65.

<sup>109</sup> Cf. Cicero, *De Oratore* III, 216-17: “Nature has assigned to every emotion a particular look and tone of voice and bearing of its own; and the whole of a person’s frame and every look on his face and utterance of his voice are like the strings of a harp, and sound according as they are struck by each successive emotion. For the tones of the voice are keyed up like the strings of an instrument, so as to answer to every touch, high, low, quick, slow, forte, piano, while between all of these in their several kinds there is a medium note; and there are also the various modifications derived from these, smooth or rough, limited or full in volume, tenuto or staccato, faint or harsh diminuendo or crescendo. For there



Furthermore, it is not evident that an emotion is always displayed in the same way. Anger has as material cause the boiling of the blood around the heart<sup>110</sup> but we are not told that it is always accompanied by a specific visible bodily reaction. We may expect a typical facial expression – frowning, maybe redness and the voice harsher than usual – but this characterization does not do justice to the spectrum of forms in which an emotion may appear. Anger may be *expressed* in an explosive and aggressive way but also in a calm and quiet behavior. An interesting passage in *History of Animals* may help us here:

Vocal sound and modes of language differ according to locality. Vocal sounds are characterized chiefly by their pitch, whether high or low, and the kinds of sound capable of being produced are identical within the limits of one and the same species; but articulate sound, that one might call ‘language’ (ἡ δ’ ἐν τοῖς ἄρθροισι, ἣν ἄν τις ὡσπερ διάλεκτον εἴπειεν), differs both in various animals, and also in the same species according to diversity of locality; as for instance some partridges cackle, and some make a shrill twittering noise. Of little birds, some sing a different note from the parent birds, if they have been removed from the nest and have heard other birds singing; and a mother-nightingale has been observed to give lessons in singing to a young bird, from which spectacle we might obviously infer that the song of the bird was not equally congenial with mere voice, but was something capable of modification and improvement. Men have the same voice or vocal sounds, but they differ from one another in speech or language. *History of Animals* IV, 9 (536b9-21).

It is thus probable that Aristotle did not believe in a unique sonority associated with each emotion. Animals would learn different sounds to express the same feelings according to locality. The inner biology of the body would certainly be the same. For example, in the case of anger, men of all countries and times would suffer the heating of their blood around the heart and, we will see, this change in the temperature of the heart may arouse inner motions with a connection with the acoustic features of an angry voice: the inner bodily alterations may have an effect on the production of sound.<sup>111</sup> However, from the passage above, it seems reasonable to deduce that birds from different localities express their desires with different sounds, for example fear, and its associated desire to avoid the fearsome object. While experiencing fear the coldness of their hearts would be invariable to any bird and, it is logical to think that it would also affect their voices invariably. However, the influence of the cold heart

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are none of these varieties that cannot be regulated by the control of art; they are the colours available for the actor, as for the painter, to secure variety”.

<sup>110</sup> *De anima* 403a29-403b2.

<sup>111</sup> *Generation of animals* V, 7 and *Problemata* XI, 36. Cf. *Problemata* XI, questions 53 and 60.

over the voice would modify a voice that is already altered due to cultural influences, i.e. a voice that has learned a particular sound to express fear. Thus, despite a tendency, i.e. a cold heart affecting a fearful voice, each individual would produce a different fearful voice in accordance with its culture.<sup>112</sup> It therefore seems reasonable to doubt that for Aristotle there would be only one way in which human anger, fear, or any other emotion, would be expressed by the same voice's sound.

However, even accepting that there is a particular voice for a particular emotion, it does not follow that its recognition will move us to experience the same emotions. Let us accept that there is one universal angry voice. If that is the case we may hear a couple fighting and be able to recognize that they are angry even though we do not understand their words; they may be even speaking in another language and we may still be able to distinguish aspects of their vocal sound that we can recognize as *angry*. However, without making a judgment, an appraisal *about* us or some person we care about being insulted, we will not experience the emotion of anger. We do not experience anger just because we hear someone's angry voice. The role that Aristotle attributes to the speaker's pure voice is that it may help to make himself and his story more convincing; to intensify the effect of his words. It works as an accessory or decoration but by itself it says nothing beyond expressing anger.<sup>113</sup> Now, if angry music is a representation of an angry voice, the same would happen. Hearing music representing an angry voice is not enough to cause the experience the of same emotions.<sup>114</sup>

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<sup>112</sup> Modern studies show that newborns' cry melody is shaped by their native language, see Mampe *et al.*, 2009.

<sup>113</sup> Alfarabi (2008, 376-8), in his *Commentary to Aristotle's Rhetoric* comments on the way in which the speech and the speaker himself can be shaped by means of how his words are expressed: "There is also the person's facial expression, or appearance, or the shape and look of his body, or what he does when he speaks, as when he announces a terrible thing approaching and shows the face of someone terrified and fleeing; or when he recommends something and he himself does what he recommends to other. This will show that he is sincere. This type is used with discourses on virtue and lack of virtue. The facial expression, the appearances, the shape, and the action suggest a state that makes the statement credible and also suggest in his adversary a state that makes the statement incredible. Finally there is the manner of speaking, *voice quality*, and intonation *which* suggest the matter about which there is discourse, as when a person speaks of tragedies that have befallen him, and uses a tone showing that he is moved; or when he threatens a person and uses a tone showing that he is angry".

<sup>114</sup> If angry music is not a representation of an angry voice but of the emotion itself, then we face other objections. See for this chapter 3.4.

In conclusion, there are signs of emotions, either visual or audible, used by poets and orators. The characters in a play and the speakers in a trial are more credible if they appear as those persons who have experienced the things they talk about. Their voice and gestures are physical signs of emotional states that the audience is able to recognize. However, those signs by themselves are not sufficient to be the object of the judgments that generate emotions. The signs need to be placed in a context, implicit or explicit, either expressed in the words of the speaker or in the actions of a character. It is only in a particular context that the signs could be judged emotionally. It is not enough for an emotional arousal to recognize a sign of emotions in another, e.g. someone crying (or his/her mimetic representation); it is necessary to make a judgment about a particular situation and not merely to perceive a particular expression of emotion.

## 2.3 Voice as music and music as voice

The analysis of human voice requires a further consideration since what is said in relation to the human voice can be easily transferred to instrumental music. As Darwin pointed out, “in considering the mode in which vocal utterances express emotion, we are naturally led to inquire into the cause of what is called *expression* in music.”<sup>115</sup> In Aristotle we find a similar idea when he says that no musical instrument has voice (φωνή) properly speaking but only by analogy to the human voice (*De anim.* 420b5-7).

As seen above, a speaker needs to consider the pitch, volume and rhythms of his voice; all these elements are present in music too. In *De anima*, Aristotle highlights the connection between the two:

Voice is a sound made by an animate being. No inanimate thing is vocal, though it may by analogy be said to be vocal, as in the case of the pipe, the lyre and all other inanimate things that have pitch [apotesis] and tune [melos] and articulation [dialektos]: for these qualities, it would seem, the voice also possesses (*De anima* 420b5-8; trans. Hicks).<sup>116</sup>

The musicality of the voice was also acknowledged by Aristotle’s disciple Aristoxenus when he wrote that “there is a kind of melody in speech, which depends upon the accents of words, as the voice in speaking rises and sinks by natural law.”<sup>117</sup>

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<sup>115</sup> Darwin 1872, 88-89.

<sup>116</sup> Wagner, 1995, 122: “The oldest, truest, most beautiful organ of music, the origin to which alone our music owes its being, is the human voice”.

<sup>117</sup> *Elem. Har.* 1.18.4-6 (trans. Macran). Three centuries after Aristotle the historian Dionysius of Halicarnassus wrote (*On Literary Composition* XI, 125-6): “The science of public oratory is after all a sort of musical science, differing from vocal and instrumental music in degree not in kind. In oratory, too, the words involve melody, rhythm, variety and appropriateness; so that in this case also the ear delights in the melodies, is fascinated by the rhythms, welcomes the variations, and craves always what is in keeping with the occasion. The distinction between oratory and music is simply one of degree”. The relation of speech and music as two nonverbal mediums to communicate emotions finds later support in Helmholtz 1954, 371; Rousseau 1986 and Spencer 1857, this last one “ventured to explain the characteristics of both [emotions in music and voice] on physiological grounds, saying they are premised on ‘the general law that feeling is a stimulus to muscular action’ (p. 400). In other words, he hypothesized that emotions influence physiological processes, which in turn influence the acoustic

Aristoxenus nonetheless recognizes a fundamental distinction: “In ordinary conversation we avoid bringing the voice to a standstill, unless occasionally forced by strong feeling to resort to such emotion.”<sup>118</sup> His point is that, in comparison with music, in speech we do not maintain the same sound over a long period unless we experience a strong emotion. These *emphases* in speech are also meaningful although not in the same way as words. Aristotle would say that they are *signs* of emotions which can express something beyond words. The expression “it is not what you say, it is how you say it” encompasses the same spirit of Aristotle’s idea quoted above: “the way in which a thing is said does affect its intelligibility.”<sup>119</sup> Later Aristotle goes in the same direction: “It is not enough to know what to say, but one must also how to say it (ὡς δεῖ εἰπεῖν).”<sup>120</sup>

Theophrastus also followed Aristotle and wrote a treatise in one book entitled *On delivery*.<sup>121</sup> The work has not survived but there are references to Theophrastus’ thought on the topic; one of those reports is found in Athanasius.<sup>122</sup>

[R]hetoric delivery is the greatest help in regard of persuasion. [Theophrastus says] referring to the principles and the emotions of the soul and the knowledge of these, so that the movement of the body and the pitch of the voice are in harmony with the entire science.<sup>123</sup>

Whether or not Theophrastus is relying on Aristotle’s *Rhetoric* as Fortenbaugh suggests<sup>124</sup> is a matter of scholarly discussion. It nonetheless sounds probable that he does, due to the similarities between the two positions: for example, the connection

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characteristics of both speech and singing. This motion, which we refer to as *Spencer’s law*, formed the basis of most subsequent attempts to explain reported similarities between vocal expression and music (e.g., Fónagy & Magdics, 1963; Scherer, 1995; Sundberg, 1982)”. I owe this quote and the modern references to Juslin and Laukka 2003, 770.

<sup>118</sup> *Elem. Harm.* I, 9, 31. Similarly Theophrastus, as reported by Plutarch’s *Symposiacs* (p. 623, Ed. Xyl): “There are three principles in music, grief, pleasure and enthusiasm; for each of these passions turns the voice from its usual course, and gives it inflexions different from those of ordinary speech.” Quoted by Twining 1912, 78.

<sup>119</sup> 1404a10-11.

<sup>120</sup> *Rhet.* 1404b15-16.

<sup>121</sup> Diogenes Laertius 5.48

<sup>122</sup> Athanasius’ Prefatory Remarks to Hermogenes’ *On Issues* RhGr vol. 14 p. 177.3-8 Rabe = Theophrastus no. 712 FHS&G, Fortenbaugh 270.

<sup>123</sup> According to Plutarch (*Questiones Convivales* 623a-c) Theophrastus connected voice with the expression and excitement of emotions. In *De recta ratione audiendi* 37f-38a Plutarch says that according to Theophrastus hearing is the most emotional (*pathêtikôtatê*) of all senses.

<sup>124</sup> See also Solmsen 1938, 1941 and Sonkowsky 1959.

between the emotions and bodily states is definitely present in Aristotle. However, Aristotle was not the first to notice it; the connection between the expression in vocal sound and music is already present in Plato. In the *Republic* 399a-c Socrates suggests leaving only two musical modes that could imitate the voices of a courageous and moderate man:

Leave me the mode that would be suitable to imitate the tone (φθόγγους) and intonation (προσφθίας) of a courageous person who is active in battle or doing other violent deeds, or who is failing and facing wounds, death, or some other misfortune, and who, in all these circumstances, is fighting off his fate steadily and with self-control. Leave me also another mode, that of someone engaged in a peaceful, unforced, voluntary action, persuading someone or asking a favor of a god in prayer or of a human being through teaching and exhortation, or, on the other hand, of someone submitting to the supplications of another who is teaching him and trying to get him to change his mind, and who, in all these circumstances, is acting with moderation and self-control, not with arrogance but with understanding, and is content with the outcome. Leave me, then, these two modes, which will best imitate the violent or voluntary tones of voice of those who are moderate and courageous, whether in good fortune or in bad.

We will see that Aristotle echoes Plato in his treatment of music in *Politics*. Moderation is a key element in their appreciation of good art, not only in aesthetic terms but also with respect to ethics.

Aristotle seems to be rationalising the Greek moral maxim of *nothing in excess* (μηδὲν ἄγαν) and to incorporate it not only in his ethics but also in his understanding of music as movements that can be appreciated in sound. This happens because there is a correlation between the inner state of the soul, the body and the behavior of the human being as a whole. Aristotle thus connects different characters with different types of sonorities:

Character also may be expressed by the proof of signs, because for each class and habit there is an appropriate style. I mean class in reference to age –child, man, or old man; to sex–man or woman; to country–Lacedemonian or Thessalian. I call habits those moral states which form a man’s character in life; for not all habits do this. If then anyone uses the language appropriate to each habit, he will represent the character; for the uneducated man will not say the same things in the same way as the educated.<sup>125</sup>

Both Plato and Aristotle divided people into noble and vulgar. The first kind were characterized as being more intellectual and the second driven by bodily desires. These

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<sup>125</sup> *Poet.* 1408a25-32.

features of moral characters are tightly connected with emotions. Consequently, the appearance of people, their voice and even the way they move show their moral condition. Unfortunately, as pointed by Fortenbaugh, Aristotle does not explain how the voice expresses emotions and characters. The description of the emotions in *Rhetoric* is directed towards their rational elements but the use of the voice in delivery is directed to the irrational part of the soul. Fortenbaugh puts it clearly:

Delivery is different from persuasion [...] It does not aim to arouse emotion through *logos* but rather to express emotion by means of voice and bodily movement. This is not to forget that orators use delivery to arouse and calm their audience, but they do so while (and largely because) they are conveying an impression of themselves: that they are calm or angry, deeply moved or quite unmoved [...] What an orator says and his delivery can and should work together. Only the latter is not a matter of *logos* but rather of voice and movement. This means that any account of *pathê* suitable to the needs of delivery will contain information different from that found in Aristotle's *Rhetoric* 2.1-11.<sup>126</sup>

The analysis of delivery reveals that in *Rhetoric* there is a twofold nature of emotions that is consistent with other works of Aristotle. Body and soul are always affected together when an emotion arouses. When we are persuaded of something, it is because there is an opinion, i.e. a judgment, that something is the case, a predication of some attribute or state of some thing. Without the words there is no persuasion, but there is also something appealing to the irrational part of the soul. Although sometimes emotions are called irrational without qualification (τὰ ἄλογα πάθη)<sup>127</sup>, Aristotle believed that somehow they are between rationality and irrationality. He explains that the soul has a rational principle comprising of two parts: “one of which has a rational principle in itself, and the other, not having a rational principle in itself, [which] is able to obey such principle.”<sup>128</sup> The same idea is repeated in several places.<sup>129</sup> If the soul

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<sup>126</sup> Fortenbaugh 1985, 278.

<sup>127</sup> 1111b1; cf. 1105b21-23.

<sup>128</sup> 1333a16-18.

<sup>129</sup> 1098a3-5: “One part has such principle in the sense of being obedient to one, the other in the sense of possessing one and exercising thought”; 1102b13-1103a3: “There seems to be also another irrational element in the soul –one which in a sense, however, shares in a rational principle. For we praise the reason of the continent man and of the incontinent, and the part of their soul that has reason, since it urges them aright and towards the best objects; but there is found in them also another natural element besides reason [...] Therefore the irrational element also appears to be two-fold. For the vegetative element in no way shares reason, but the appetitive and in general the desiring element in a sense shares in it, in so far as it listens to an obeys it; this is in the sense in which we speak of playing heed to one’s fathers or one’s friends, not that in which we speak of ‘the rational’ in mathematics. That the irrational element is in some sense persuaded by reason is indicated also by the giving of advice and by all reproof

can be divided in this way then it is logical to presume that it can also be affected in two different ways. Emotions, although not having a rational principle in themselves, are able to listen to the arguments made by words, and that is precisely why the speaker is able to affect the audience's emotions. But as we have mentioned, there are two types of audiences. One of these types is more easily moved by irrational elements either in the theatre or in the law court. This is why Aristotle points to delivery as something vulgar (1403b35-1404a1) as well as tragedy as more vulgar (φορτικὴ) than epic poetry (1461b29, 1462a4). The reason is that it involves bodily expressions like gestures (σχήματα 1462a3, σημεῖα 1462a6) and motion (κίνησις 1461b30, 1462a8-11). Coincidentally, in *Poetics* we read that the best art is that “which addresses the best public” while “an art addressing any and everyone is of a very vulgar order”. Thus, he continues, the public of common art “cannot see the meaning, unless they [the artists] add something themselves, that causes perpetual movements of performers – bad flute players, for instance – rolling about, if quoit-throwing is to be represented, and pulling at the conductor, if Scylla is the subject of the piece. Tragedy, then, is said to be an art of this order.”<sup>130</sup> Most people, Aristotle thought, were compelled by sensual stimuli in art rather than by the rational element present in the words. In *Rhetoric* it is exactly the same: the audience is of two types and because of the “defects” of the majority the orator needs to use “tricks” to move them:

The right thing in speaking really is that we should be satisfied not to annoy our hearers, without trying to delight them: we ought in fairness to fight our case with no help beyond the bare facts: nothing, therefore, should matter except the proof of those facts. Still, as has been already said, other things affect the result considerably, owing to the defects of our hearers. The arts of language cannot help having a small but real importance, whatever it is we have to expound to others: the way in which a thing is said does affect its intelligibility. Not, however, so much importance as people think. All such arts are fanciful and meant to charm the hearer. Nobody uses fine language when teaching geometry (*Rhet.* 1404a).

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an exhortation. And if this element also must be said to have reason, that which has reason will be twofold, one subdivision having it in strict sense and in itself, and the other having a tendency to obey as one does to one's father”; 1219b27-31: “The parts of the soul partaking of reason are two, but they partake not in the same way, but the one by its natural tendency to command, the other by its natural tendency to obey and listen” and 1333a17: “The soul is divided in two parts, one of which has a rational principle in itself, and the other, not having a rational principle in itself, is able to obey such principle”.<sup>130</sup> 1461b29-32.



In *Rhetoric*, as well as in *Poetics*, there is a precedence of words over performance. The content of what is said is the most important element of the voice considered as sound, and so, as Aristotle says, “it is hearing that contributes most to the growth of intelligence”, but only “incidentally” and the reason for that, he explains, is that “rational discourse is a cause of instruction in virtue of it being audible, which it is, not in its own right, but incidentally; since it is composed of words, and each word is a symbol (*De sensu* 437a11-15).<sup>131</sup> This is so because there is a precedence of reason over irrationality; rationality that lies in the words, not in the sounds accompanying the voice.

Now, Aristotle refers to irrational desires in *Rhetoric* (1370a18-26) putting together those which “come into existence through the body” like hunger, thirst and sexual pleasures and in general all those connected with touch, smell, hearing and sight. By way of contrast, he says that there are rational desires that are “due to our being convinced.” So we can assume that there is a clear distinction between the bare hearing of pure voice’s sounds and hearing words.<sup>132</sup>

According to Aristotle, the science of harmonics is subordinated to arithmetic (*Post. Analytics*. 75b14-17)<sup>133</sup> and so it possible to understand and enjoy part of it in a rational engagement. It is, however, remarkable that when Aristotle reflects in *Politics* on the reasons for which people listen to music he mentions that one motive is the amusement (παιδιή) and relaxation (ἀνάπαυσις) that people get from it, just like the pleasure they get from sleep and drinking (*Pol.* 1339a16-17), which seems to say that

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<sup>131</sup> κατὰ συμβεβηκὸς δὲ πρὸς φρόνησιν ἢ ἀκοὴ πλεῖστον συμβάλλεται μέρος. ὁ γὰρ λόγος αἰτιὸς ἐστὶ τῆς μαθήσεως ἀκουστὸς ὢν, οὐ καθ’ αὐτὸν ἀλλὰ κατὰ συμβεβηκὸς· ἐξ ὀνομάτων γὰρ σύγκειται, τῶν δ’ ὀνομάτων ἕκαστον σύμβολόν ἐστιν.

<sup>132</sup> Consider Walker 2008, 88: “Aristotle says that if a speaker’s style and delivery successfully embody the ‘volume, harmony, rhythm’ of say, anger, the listener will experience a kindred feeling, even if the speaker in fact says nothing at all, and insofar as the speaker’s *hupokrisis* of “anger” rings true, the typical listener will credit what he says as grounds for that emotion [...] there will be limits of course: of what the speaker says seems radically inconsistent with his expressed emotion, the audience may be unpersuaded to join his feeling, just as if the voiced prosody of his style failed to match the listeners’ sense of what ‘anger’ sounds like.”

<sup>133</sup> “[One cannot] prove by any other science the theorems of a different one, except such as are so related to one another that the one is under the other –e.g. optics to geometry and harmonics to arithmetic.”

the pleasure of hearing music is something irrational or at least that *one* of the pleasures of hearing music lacks reason. This may be the reason for which even some animals experience pleasure in music.<sup>134</sup> This irrationality was also considered by Plato who, although followed Pythagoras in respect of the connections between music and numbers, also recognized something irrational in it. Thus he wrote in *Laws* 675c-d:

No animal that enjoys the use of reason in its maturity is ever born with that faculty; or at any rate with it fully developed. During the time in which it has not yet attained its characteristic level of intelligence it is completely mad: it bawls uncontrollably, and as soon as it can get on its feet it jumps about with equal abandon. Let's think back: we said that this situation gave rise to music and gymnastics [...] and also that this was the source of man's appreciation of rhythm and harmony.

Plato recognizes that there is something “corporeal” in music; something irrational and non-verbal. His main interest lies in the rational part and so he declares that when music is deprived of words it is “extraordinarily difficult to know what rhythm and harmony are supposed to signify” and to know “what worthwhile object they imitate and represent” (*Laws* 669e). This is why music must be subordinate to the words: “rhythm and harmony must conform to the words and not vice versa” (*Rep.* 400d). I think that Aristotle holds the same view. In individual human development, irrationality “is prior to rationality” and the proof, Aristotle says, is that “spiritedness and wishing and desire are implanted in children from their very birth, but reason and understanding are developed as they grow older” (*Pol.* 1334b21-24). Certainly there is rationality in a musical composition, structures that are unavailable to non-human

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<sup>134</sup> Aristotle allows *some marvellous instances* where animals seem to enjoy music. Thus, we find evidence in *Politics* and in *History of Animals*: “Let the young practice even such music as we have prescribed, only until they are able to feel delight in noble melodies and rhythms, and not merely in that common part of the music in which most men or children and *even some animals find pleasure.* (*Pol.* 1341a3-16); “When hunted the creatures [hinds] are caught by singing or pipe-playing on the part of the hunters; they are so pleased with the music that they lie down on the grass. If there be two hunters, one before their eyes sings or plays the pipe, the other keeps out of sight and shoots, at a signal given by the confederate. If the animal has its ears cocked, it can hear well and you cannot escape its ken; if its ears are down, you can.” (*HA.* 611b26-31); “The eared owl [...] it is rogue and mimic: while it apes the dance of the hunter, his accomplice comes behind and catches it. The common owl is caught by a similar trick (*HA.* 59723-26). However: “Temperance and profligacy have to do with those two senses whose objects are alone felt by and give pleasure and pain to brutes as well; and these are the senses of taste and touch, the brutes seeming insensible to the pleasures of practically all the others senses like, e.g. harmony or beauty; for they obviously have no feeling worth mentioning at the mere sight of the beautiful or the hearing of the harmonious, except, perhaps, in some marvelous instances“ (1230b36-1231a4).

animals, but there is also sound which, contrary to rational arguments, is empty of predicative content. It is not a coincidence that λόγος, depending on the context, can be translated as *word* or *reason*.<sup>135</sup> Wordless music (ἄλογος μουσική) is not only deprived of nouns and verbs but also of rational content and any predication. Considering this it would be tempting to think that only complex emotions, like those involving reason and concepts such as justice, are not expressible by means of mere voice or in instrumental music. But as I showed earlier also basic emotions need predications, if not rational at least perceptual analogous predications directed at an intentional object. I will return again to this point but for the moment what I want to show is that wordless sound, either in the voice of the orator or in instrumental music, may express the audible characteristics of human emotions, if there are any. Accepting that instrumental music is able to imitate the sound of someone experiencing anger, for example its speed, volume, timbre and intonation, also involves accepting that there is a particular voice for anger. This is problematic, because it limits the different bodily reactions that may accompany anger. Aristotle seems to accept that there is at least a one-to-one relationship between the formal/cognitive aspect of the emotions and the material/bodily element. A particular and distinguishable movement of the blood around the heart is thus always a necessary condition of becoming angry. Nothing is said, however, about the necessity of a particular physiognomy, such as facial expression or voice qualities. Aristotle characterizes anger as an emotion that involves impulsiveness and from there it may be suggested that a certain fast motion can be transferred to the voice of someone experiencing anger. From everyday observation we may agree that the voice of someone experiencing anger is characterized by high volume and speed, and that in terms of timbre it can be described as “rough” rather than “soft”. This characterization is not, however, universal and many instances of anger may fall into a totally opposite place. In any case, even if the two premises are

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<sup>135</sup> The connection between words and reason is well documented in Aristotle: “It is hearing that constitutes most of the growth of intelligence. For rational discourse is a cause of instruction in virtue of being audible, which it is, not in its own right, but incidentally; since it is composed of words, and each word is a symbol. Accordingly, of persons destitute from birth of either sense, the blind are more intelligent than the deaf and dumb” (*De Sensu* 437a 11-16) Also in *History of Animals* 536b3: “Men that are born deaf are in all cases also dumb; that is, they can make vocal sound, but they cannot speak”. In *Politics* 1253a7-14: “man is the only animal whom she has endowed with the gift of speech. And whereas mere voice is but an indication of pleasure or pain, and is therefore found in other animals (for their nature attains to the perception of pleasure and pain and the intimation of them to one another, and no further)”. Cf. Plato, *Timaeus* 47c and ff.

accepted – first, that there is a particular sonority for a particular emotion and, second, that instrumental music is able to imitate that sound –there is no causal necessity to accept that the mere hearing of the sound of the voice or of instrumental music is enough to transmit the emotion expressed to the listener. To recognize that someone is angry is not the same as to be infected by the same emotion. If we hear “angry music” there would be an effect of music that is prior to the emotional judgment: in the first place there is a physical impact in the sense of hearing; there is sense perception of what is heard but not the necessary appraisal of a situation that may arouse the emotion.

This last idea leads us to another way in which emotions apparently can be aroused: in the next section I discuss the emotions aroused by physiological changes.

## 2.4 Emotions aroused by bodily changes

One of the most important elements in the Aristotelian account of emotions is the role played by the body. Most scholarship devoted to the emotions in Aristotle has been centered on cognitive aspects leaving more or less unattended the question of bodily conditions that is essential to fully understand Aristotle’s thoughts on emotions. The *Rhetoric* is mostly silent in this respect and if it were our only source we would be obligated to conclude that emotions are independent of the bodily processes or that the body has a small role to play in his account of the emotions. However, this is not the case, for the *Rhetoric* does not refer to the body because it is a dialectical account of the emotions, not one of the realm of natural sciences. The situation is, of course, different in the biological corpus. In *De anima* both aspects, mental and corporeal are found together:

Emotions of the soul (τῆς ψυχῆς πάθη) appear to be all conjoined with body: such attributes, viz., as anger, mildness, fear, pity, courage; also joy, love and hate; all of which are attended by some particular affection of the body. This is shown by the fact

that sometimes violent (ἰσχυρή) and palpable (ἐναργής) affection (πάθημα) occurs without producing in us exasperation of fear, while at other times we are moved by slight and scarcely perceptible (ὑπὸ μικρῶν καὶ ἀμαυρῶν) ones, when the blood is up and the bodily condition is that of anger. Still more is this evident from the fact that sometimes even without the occurrence of anything terrible men exhibit all the symptoms of fear. If this is so, the emotions are evidently reasons in matter (δῆλον ὅτι τὰ πάθη λόγοι ἐνυλοὶ εἰσιν). Hence they must be defined accordingly: anger, for instance, as a certain movement in a body of a given kind, or some part or faculty of it, produced by such and such cause (ὑπὸ τοῦδε ἔνεκα τοῦδε) and for such and such end (403a16-27, Hicks's translation slightly modified).

This passage may be seen as a counterpart to the cognitivist account of emotions in Aristotle. Differently from *Rhetoric*, here the body takes a more important role. Sometimes, Aristotle says, we experience all the symptoms of fear even without the occurrence of anything fearful (μηθενὸς γὰρ φοβεροῦ συμβαίνοντος ἐν τοῖς πάθεσι γίνονται τοῖς τοῦ φοβουμένου).<sup>136</sup> Based on this, Stephen Everson (1995) thought with respect to the emotions that “when there is a particular affection of the *psuchê*, there is a material state which is sufficient for its occurrence”.<sup>137</sup> Aristotle is careful enough not to say that the emotion of fear is aroused but rather the *symptoms* of it. The state of the body is not enough for the appearance of the emotion, there must be also a reason. As Sherman has pointed out, “Passions are viewed not as blind promptings and urgings that merely happened to us, but rather as selective responses to articulated features of our environment.”<sup>138</sup> We will nonetheless see in this section that the body's state favors the emergence of the emotion because the physical condition of our body can change our perception of the intentional object of the emotions.<sup>139</sup> Here there is nothing sophisticated: changes in our body affect our mood. Being hungry or not sleeping well may cause a “bad humor.” If we are thirsty or under the influence of any desire we may be prone to anger and easily stirred up (*Rhet.* 1379a17-18) if someone gets in our way.

It is true that people's beliefs and, in general, states of mind are what the orator needs to know in order to convince them. Those mental states are in turn shaped by material

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<sup>136</sup> 403a23-24. It is worth noting the modern research made by Joseph LeDoux (*The Emotional Brain*, 1996) which shows that it is possible to experience fear even without being conscious of the object of that fear.

<sup>137</sup> Everson, S. (1995), 'Psychology', in J. Barnes (ed.), *The Cambridge Companion to Aristotle* (Cambridge University Press)186.

<sup>138</sup> Sherman 1991, 9.

<sup>139</sup> *Parts of animals* 651a12-14 and *De somniis* 460b1-16.

causes: hormones, drugs, food, illness, etc. These are elements that may alter our mood and so leave us in a state prone to reacting emotionally. Over this factor the orator has no power and so it does not surprise us that *Rhetoric*'s main focus is not on the bodily factors that predispose the audience of the orator. Aristotle and his school were, however, well aware of the influence of the body over mental states. These connections between mind and body were presented through the humoral theory. The affections of the body affect our behaviour; for example, we read that "melancholic people sleep more because they have the inner region cold" (*On sleep* 457a27), or in *Nicomachean ethics* at 1117a10-15 it is said that sanguine and drunk people seem brave "because they think they are the strongest and can suffer nothing". Physiological changes accompany emotions, such as "when ashamed one goes red [or] when frightened one turns pale" (*Categories* 9b13-15); these are signs of the emotions in the body triggered by a certain beliefs. It is not the case that only reason makes the body react after a judgment, but reciprocally the body can alter the judgment, like someone in anger or drunkenness acts in some sort of ignorance about what he is doing (NE. 1110B25-24). The Peripatetic author of the *Problems* acknowledges the relation between the body and emotions.<sup>140</sup> Most notably in book XXX question 1, the author shows how wine can affect the soul by inducing (παρασκευάζειν, 953a35) different characters in men, making them irritable, benevolent, compassionate, reckless, more talkative, eloquent, bold, insolent, frenzied, savage, taciturn or amorous. Wine and the changes it produces over the temperature and moisture of the different parts of body are not the efficient cause of the emotions but just the material conditions. However, there seems to be a place for an affection of the soul produced by a physical condition but without an external reason. We read: "Black bile, which is naturally cold [...] produces (ποιεῖ) apoplexy or torpor or despondency or fear" (954a21-24). Here the "productive" faculty of black bile should not be taken as the sufficient condition for the appearance of the emotion; at most, without the external stimuli, it can produce a *weak affection* or superficial feeling. It is the announcement (εἰσαγγέλλειν) of something alarming that produces fear in those who have their body cold and so prepared (προωδοποίηται) for the entrance of the emotion. The Aristotelian author says that sometimes we

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<sup>140</sup> Why are the drunken more easily moved to tears? It is because they become hot and moist, and so they have no command over themselves are affected by trifling causes? (*Problems*, III, 24).

experience faintheartedness (ἀθυμία) and feel grief (λυπεῖσθαι) “without being able to describe any cause for it” and when that sort of affection, he continues, occurs to a slight degree it is called superficial affection (ἐπιπόλαια πάθη) (954b15-19). In the passage of *De anima* above we found a parallel to this, sometimes, it says, “we are moved by slight and scarcely perceptible causes, when the blood is up and the bodily condition that of anger. This is still more evident from the fact that sometimes even without the occurrence of anything fearful men exhibit all the affections of fear” (μηθενὸς γὰρ φοβεροῦ συμβαίνοντος ἐν τοῖς πάθεσι γίνονται τοῖς τοῦ φοβουμένου, 403a19-24). In *Movement of animals* 701b16-33 the same idea is repeated; a small change in the body causes the physiological responses characteristic of the emotions: “When by reason of heat or cold or some kindred affection a change is set up in the region of the heart, even in an imperceptibly small part of the heart, it produces a vast difference in the body, blushing, let us say, or turning white, and tremblings and shivers and their opposites.” The evidence in other passages of Aristotle confirms the Aristotelian “spirit” of the Aristotelian problem, most notably in *Parts of animals* II, 4. There we read at 650b27-29: “Great excess of water makes animals timorous. For fear chills the body; so that those [animals] whose heart contains such watery mixture are prepared beforehand (προωδοποιῆται) for the operation of this emotion”. In *Rhetoric* the same idea is expressed: “[Old men] are cowardly, and are always anticipating danger; unlike that of the young, who are warm-blooded, their temperament is chilly; old age has paved the way (προωδοπεποίηκε) for cowardice; fear is in fact, a form of chill.”<sup>141</sup>

The use of the verb προωδοποιέω in *Parts of animals*, *Rhetoric* and *Problemata* referring to the same matter confirms that the idea of the body “preparing the way” for the emotions was present in Aristotle and his school. The general idea of the bodily state preparing the occurrence of emotions can be found in *Parts of animals* 651a12-14: “The character of the blood affects both the temperament and the sensory faculties of animals in so many ways. This is indeed what might reasonably be expected, seeing that blood is the material of which the whole body is made.” Similarly, at 667a11-18 we find that there is a correlation between the size of the heart and the character of an animal: “When the heart is of large size the animal is timorous, while it is more

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<sup>141</sup> *Rhet.* 1389b39-31.

courageous if the organ be smaller and of moderate bulk. For in the former *the bodily affection which results from terror already pre-exists* (πάθος ὑπὸ τοῦ φοβεῖσθαι προϋπάρχει).<sup>142</sup> Thus, the body has influence over the emotion in the sense that it facilitates its arousal; it creates the conditions in which an emotion would more easily occur. For Aristotle, however, emotions are more complex than those mere physiological changes.

The emotions as defined in *De anima* 403a25 are “enmattered reasons” (τὰ πάθη λόγοι ἔνυλοι εἰσιν). This means that for Aristotle emotions are a process involving mind and body together. The λόγοι here are the “reasons” which cause the emotion but also a constitutive element of the emotions themselves; they are the objects of our beliefs, the cognitive element of the emotion.

Let me explain this with the help of what we find in *Rhetoric*. In order to experience pity we need to perceive someone we care about suffering at the same time as we *believe* that his suffering is undeserved. Otherwise we even may feel pleasure, if we see someone who is suffering a deserved misfortune or if he is someone we hate.<sup>143</sup> The same principle appears in *Poetics*. The emotions are about the actions; about the deeds of the characters and in that sense about a narration of deeds. There is need of an ‘aboutness’ which our beliefs reflect. This is the intentionality of the emotions that we presented in the first chapter.

Bodily changes thus act as a breeding ground that *prepare the way*<sup>144</sup> for the emotions but are not a sufficient condition for their arousal. Similarly, as we will see, the action that music or wine can produce in us is empty of content by itself; it is only a physiological change. This does not mean that emotions require an antecedent bodily affection as a necessary condition to be aroused. It means that altering the body predisposes the subject to being easily affected when the stimulus that produces the

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<sup>142</sup> 667a15. See also 650b27 and 692a20.

<sup>143</sup> “For he who is pained at the sight of those who are undeservedly unfortunate will rejoice or will at least not be pained at the sight of those who are deservedly so” (*Rhet.* 1386b26-28 ).

<sup>144</sup> PA 650b27-29 and *Rhet.* 1389b31-31.



emotion appears, i.e. the intentional object that is subject of our judgment. Chilling the heart is not an emotional state in itself but it puts the animal in a state of readiness to react with fear since coldness in the region of the heart is the material cause of fear.<sup>145</sup> That physical change in our body predisposes the mind to be easily moved and so it may change its judgments; but the wine or the music itself is not what is responsible for the contents that could be the object of our emotional judgments.<sup>146</sup> What they do is prepare a suitable biological ambience and so a frame of mind. In *De anima* 403a27 it is clearly stated that “Anger must be defined as a certain movement in a body of a given kind, or some part or faculty of it, produced by such and such a cause for such and such an end (ὅπὸ τοῦδε ἕνεκα τοῦδε).” Accordingly, it continues: “Anger would be defined by the dialectician as desire for retaliation or the like, by the physicist as a boiling of the blood or heat which is about the heart: the one of them gives the matter, the other the reason” (*De anima* 403a29-403b2). Those who advocate that in *Politics* instrumental music has a contagious emotional effect need to show the “reason” for those emotions. I mean, what sort of “desire of retaliation” experiences someone listening to a piece of instrumental music that supposedly expresses anger? Would all listeners of “angry music” have a desire of revenge? Against what?

In this chapter we have investigated two cases where it seems emotions are aroused without any judgment. First, in the section labelled *emotions aroused by signs* we explored the voice of the orator as well as the visual elements in the theatre. In both cases we saw that the mere recognition of something as expressive of an emotion is not enough for the arousal of an emotion. At most, those signs of emotions may contribute to making the message or the situation more credible, but if an emotion is to be aroused in the listener/spectator, a judgment is also necessary. In other words,

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<sup>145</sup>Also, as Fortenbaugh 2008, 38 points: “the condition of the body may be a factor in explaining both strong and weak responses to a particular situation.”

<sup>146</sup>Once again it is worthy to remember that we *can* react emotionally to the music, the wine or any other thing. We may be ‘sad’ that the wine is over, ‘fear’ to drink one more cup or get ‘angry’ because it does not taste as good as expected. Similarly we can judge that the music played is not a fair rendition of the original piece and say that we are angry about it. These cases are not under dispute, the music, the wine or anything else can be an intentional object for our judgment. What had been said is that there is not a mechanical transmission of emotions.

the mere recognition of someone experiencing an emotion is not a sufficient condition for the arousal of the same emotion in the person making such recognition.

In the second section of the chapter we have explored the influence of the body in the emotional experience. It has been shown that for Aristotle the body is always altered as an essential part of the emotional process and so is labelled as the material cause of the emotions. However, the mere bodily changes are not enough to arouse an emotion. At most, bodily changes can predispose the subject and put him in a state of readiness to react emotionally, but the emotion would only appear after an object is evaluated by the mind. The bodily disposition of the subject is not a sufficient condition for the arousal of the emotions; at most it can create a general mood which is objectless. Such mood, since it is objectless, can not be labelled as *emotion (pathos)* by Aristotle in the restricted sense of *Rhetoric* but as a different type of affection.

Our next task is to focus on Aristotle's thoughts on music, particularly its relationship with emotions. In our next chapter we will explore the context in which Aristotle discussed the effects of music; we will see the conceptions of authors before Aristotle about the relation between emotions and music and from there the different approach presented by Aristotle. We will focus on the discussion in *Politics* where Aristotle's major treatment of music takes place and on the basis of which most scholars have argued that Aristotle believed in a contagion of emotions through music.

From what we have seen in this chapter, if music can alter the body, particularly the heart, music would also create an objectless disposition. One of our tasks in the next chapter is to discover if that is an option for Aristotle, and if so, what mechanism he offers to explain such musical impact on the listener and what are the consequences for his overall treatment of music in *Politics*.

### 3. Third chapter: Aristotle on Music

#### 3.1 Music's powers before Aristotle

Before analysing Aristotle on music and emotions in detail it is worth having a quick survey of the earlier Greek ideas about music and emotions. In what follows I will give some examples of what the Greeks thought about the powers of music to influence listeners. By doing so I hope to show how different the approach of Aristotle is and why it is not possible to put him in the same tradition without some important qualifications.

Prior to Aristotle there were numerous stories in literary and philosophical sources telling us about the powers of music.<sup>147</sup> Music, it was thought, was able not only to move humans, but also animals and plants. The semi-mythological figure of Orpheus was a paradigmatic example of this, even charming Hades in the underworld with his music (Eurip. *Med.* 543).

The whole universe was thought to be constructed upon a musical structure. The planets were in mathematical ratios equivalent to musical intervals and so produced the Music of the Spheres (*Timaeus* 36a, 46c-e ; *De caelo* 290b11-291a26.). In the human domain, the powers of music were connected with medicine, for both body and mind. Already Homer mentions its powers, how the muses gave the art of music to the poets (*Od.* 479) and how they cheer up men at the feast (*Od.* 150, 152). Music helped to fight against diseases, for instance, a pestilence was stopped by means of prayers set to music (*Iliad*, 472-474).

Later came the influence of Pythagoras, who thought that music helped to achieve moral perfection (Diog. Laert. VIII, 32-33) and health for the body (Iamb. *De Vit. Pyth.* XXV; Aristox. Fr. 24). His school of thought also developed mathematical and acoustic investigations about the nature of music (Plut. *De Mus.* 30) and it is said that he made technical contributions such as the eight-stringed lyre and it was he who perfected the modern scale (Nicom. I, 9; Cf. Boeth. *Inst. Mus.* 20). Similarly, Damon

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<sup>147</sup> A rich collection of references to stories about the powers of music, on which I am drawing in this section, is found in Bruno Meinecke's chapter *Musica and Medicine in Classical Antiquity*, in *Music and Medicine*, Ed. Dorothy M. Schullian and Max Schoen, 1948.

of Athens thought about the moral uses of music, as Athenaeus relates: “Quite properly Damon of Athens and his followers say that songs and dances are the result of the souls’ being in a certain motion; and those songs which are good and beautiful produce similar souls, whereas the opposite kind produce the opposite”. (Athenaeus Deip. XIV 628c). Plato, perhaps influenced by the Pythagoreans, also conceived music as medicine for the soul (*Laws*, II, 664b-c and X, 903d) and believed that music was able to put the soul aligned with the whole Cosmos (*Tim.* 47d).

Music had healing powers which now would fall under what we understand by shamanism or some sort of obscure magic. Democritus, in Aulus Gellius' report, wrote in his *On Deadly Infections* that it was possible to use music to cure snakebites (Aulus Gellius IV, 13). In turn, Theophrastus, we are told, believed that sciatica was cured by pointing an instrument to the painful area and playing music directed at it. (Athen. Deip. 624). Terpander, called sometimes the “Father of Music”, saved the Lesbians and Ionians from diseases using his music (Boeth. *Int. Mus.* I,1). We are told also that using his art he dissuaded the Lacedaemonians of subversion (Plut. *De Mus.* 42).

Music, of course, was an important part of Greek culture. It was an artistic expression aiming at what is beautiful but also served as a depository of knowledge. As Havelock pointed out,<sup>148</sup> before the invention of writing the oral tradition used mnemotechnics to transmit knowledge from one generation to other. In that context μουσική was the main instrument used: words adorned in rhythms and melodies helped to communicate the cultural heritage because verses and melodies are easier to remember in the world of oral culture.

The connection between music and emotions was also seen as close. This connection seems even a “natural” one to us. The idea of music as the “language of the emotions” seems evident and well spread, not only as a popular opinion, but even among composers and musicians.<sup>149</sup> It is only in the domain of philosophy of music that this

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<sup>148</sup> Havelock 1963, 197-214.

<sup>149</sup> Meyer 1956, 1: “Composers of all cultures, theorists of diverse schools and styles, aestheticians and critics of many different persuasions are all agreed that music has meaning and that this meaning is

popular idea has been an object of critical analysis. In ancient Greece the situation was similar. Only a few thinkers openly rejected that instrumental music could represent emotions and arouse them in listeners and consequently they also rejected its value as an educational and moral tool. The author of the Hibeh Papyri, Philodemus of Gadara and Sextus Empiricus are some of those who doubted the powers of instrumental music. As a counterpart, Aristotle can be placed following a line of thought on music in the tradition of Pythagoras, Damon of Athens and Plato. Of course, this must be clarified. Although Aristotle seems to follow his predecessors in the idea that music contributes to virtue, he took a different approach to it, especially cleansing it of metaphysical, religious and mystical attributions that were considered false by him, like the Music of the Spheres or the idea that the whole cosmos was constructed following a musical–mathematical pattern.<sup>150</sup>

In many respects Aristotle followed his master and music was not an exception: many of his ideas were already present in Plato. Let us consider, for example, the following passage from *Republic* where Socrates discusses the role of music in the ideal city with Glaucon:

Aren't these the reasons, Glaucon, that education in *mousikê* is most important? First, because rhythm and harmony permeate the inner part of the soul more than anything else, affecting it most strongly and bringing it grace, so that if someone is properly educated, it makes him graceful, but if not, then the opposite. Second, because anyone who has been properly educated in *mousikê* will sense it acutely when something has been omitted from a thing and when it hasn't been finely crafted or finely made by nature. And since he has the right distastes, he'll praise fine things, be pleased by them, receive them into his soul, and, being nurtured by them, become fine and good. He'll rightly object to what is shameful, hating it while he's still young and unable to grasp the reason, but, having been educated in this way, he will welcome the reason when it comes and recognize it easily because of its kinship with himself (*Rep.* 401d-402a).

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somehow communicated to both participants and listeners”. Consider Mozart, who in a letter to his father said that in his Seraglio, in the Belmonte’s aria in A major, “the throbbing of his loving heart is indicated [in] the two violins in octaves [...] One sees the trembling – the wavering – one sees how his swelling breast heaves – this is expressed by a crescendo – one hears the whispering and the sighing – which is expressed by the first violins, muted, and a flute in unison”. Or consider Ives 1962, 36, when he describes the opening of Beethoven’s Fifth Symphony as “the soul of humanity at the door of divine mysteries, radiant in the faith that it will be opened—and the human become divine”.

<sup>150</sup> cf. *Timaeus* 36a, 46c-e.

As we will see, Aristotle followed his master in many respects about music and education; for example, the influence of music on character and the importance of habituation in liking what is good and disliking what is bad. However, he also took his own path and made important distinctions that Plato did not consider.

Plato believed that certain musical modes were able to imitate the human voice and so the guardians should be habituated only to the music that represented virtuous men. The expressive power that Plato attributes to music is not as clear as may be thought at first glance. In *Republic* 400d he says that the music should follow the words and not the other way round. It should also be noted that although in the passage above Plato talks about the rhythms and harmonies of *mousikê*, in the previous sections he had dealt heavily with poetry and the contents that should be included in music. In fact, a little before this passage, also at 400d, Plato says that a good character is achieved using fine *words*, harmony and rhythms. That is why I disagree with Malcolm Schofield who says about this passage:

It is striking that it's not the consciously understood words (*logoi*) that are cited as the influence which will do most to shape the soul [...] but the music in *sensu stretto* that is designed to match them. Unconscious assimilation is for Plato more important in the process than conscious understanding and the mode in which the right content is assimilated is more powerful than the content itself. <sup>151</sup>

Plato is explicit twice when he says that instrumental music should be chosen to follow the words (*Rep.* 398d and 400d). It is true that in the passage from *Republic* above Plato mentions instrumental music, i.e. rhythms and harmonies, as what “permeates the inner part of the soul more than anything else, affecting it most strongly and bringing [the soul] to grace.” But this is only one reason for which musical education is most important. The second one is that the person properly educated in *mousikê* would be a better judge of works of art and nature and would also be habituated to reject what is shameful. Now, the words of the poets are also present in *mousikê* for Plato, and although they do not reach the soul of the listener with the same strength as instrumental music does, they still have priority over melodies and rhythms. This is why in *Laws* 669e Plato says that it is extraordinarily difficult to know what

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<sup>151</sup>Schofield 2010, 232.

instrumental music imitates and whether or not an imitation of pure instrumental music has any value:

The poets divorce rhythm and movement from the *melos* by putting tuneless words into *metre*, and rob *melos* and rhythms of words by using stringed instruments and pipes of their own. When this is done, it is extraordinarily difficult to know what the rhythms and harmony without logos are supposed to signify and what worthwhile mimetic enactment they depict (*Laws* 669e).

Certainly, Plato believed in the power of music to influence the soul, but his view is more complex and I think it would be simplistic to accept that he thought instrumental music could arouse any emotion without qualification. I am not, however, claiming that he would face the same problem detected in Aristotle, i.e. the apparent inconsistency between a cognitive account of emotions and an emotional contagion through instrumental music. Plato does say that music can imitate courage and also good or bad moral characters (*Laws* 790e-791b). In the *Republic*, immediately after the passage above, he says at 402c that before educating the guardians it is necessary to know what is “moderation, courage, liberality, and high-mindedness, and all their kindred and their opposites.”<sup>152</sup> He says that we need to know what these things are in themselves but also what their images are. Those images are not mentioned but, given the context, he seems to refer to paintings, sculptures, poems, music and in general any artistic form able to imitate those virtues. From passages like these it has been argued that Plato believed that music imitates emotions and produced those in listeners.<sup>153</sup>

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<sup>152</sup> σωφροσύνης εἶδη καὶ ἀνδρείας καὶ ἐλευθεριότητος καὶ μεγαλοπρεπείας καὶ ὅσα τούτων ἀδελφὰ καὶ τὰ τούτων ἂν ἐναντία

<sup>153</sup> Schoen-Nazzaro 1978, 263. Sorabji 2002, 84. It is interesting that Plato associated the musical *paideia* with the idea that young children cannot understand the reasons of their enjoyment and distastes in the musical representations. I mention this because it seems Plato believed there was something irrational in music as well as in the emotions. In both cases first there is an account of irrational forces acting upon men. In Plato, for example (*Phdr.* 267d1) the words that move emotionally are described as able to do a “magic spell” (κηλεῖν). Similarly, as Fortenbaugh pointed out, Gorgias in his *Encomium of Helen* talked about the soul moved to emotions as being charmed with drugs: “The effect of speech upon the structure of the soul is as the structure of drugs over the nature of bodies; for just as different drugs dispel different secretions from the body, and some bring an end to disease, and others to life, so also is the case of speeches. Some distress, others delight, some cause fear, others embolden their hearers, and some drug and bewitch the soul with a kind of evil persuasion. Gor. Hel. 14. (trans. J. Dillon and T. Gergel).” Something similar was said about music. Polybius in his *Histories* refers to Ephorus, saying that one should not believe him when he says “that music was given to man as the

For Aristotle, emotions are not the product of speeches acting like spells or drugs, but reasoned beliefs shaped through arguments. According to Fortenbaugh, before Aristotle “it was easy to think of emotions as diseases whose victims suffer a misfortune curable only by drugs and inspired incantations.”<sup>154</sup> Music was also cleansed of mysterious realities, as mentioned earlier. Aristotle rejected the Pythagorean ideas still present in Plato’s thinking that connected music to cosmological realities. There was, however, a lot that Aristotle preserved, for example part of his account of acoustics and hearing which will be part of further analysis.

In conclusion, although the context in general seems to show that music was considered to have great power over listeners, there was also some important scepticism. Particularly, Plato considered that it was extremely difficult to know what music was about when unaccompanied by words and accordingly established that music should be ordered to follow words and not the inverse. The examples given in this section offer some idea of the context in which Aristotle developed his ideas. It is clear that in general Greeks believed in the power of music to affect the human soul. However, we should not rush to put Aristotle in the same tradition without important qualifications. This will be task of the subsequent sections of this chapter.

## 3.2 Aristotle on Music

Did Aristotle know much about music? Was he interested in the subject? If he was, to what extent? He was the best disciple of Plato who was a *Philosophe-musicien par excellence*<sup>155</sup> as well as a master of Aristoxenus, the most important music theorist of the Antiquity. Aristotle thus seems placed in between two philosophers who were both very concerned with musical matters. However, despite the influence of Plato and

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trickery of a charlatan.” According to Polybius, Euphorus wrote that “music was made to charm and bewitch” (4.20.5=F 8).

<sup>154</sup> Fortenbaugh 1975, 15.

<sup>155</sup> Bélis 1986, 54.



Aristoxenus, at first sight the evidence suggests that our questions will be answered in the negative. There is no known surviving treatise by Aristotle related to music theory. What we can find in Aristotle's works are some passages where he takes musical terms or problems as analogies to explain other questions. He also discusses some problems of acoustics; the production of sound and its perception. Finally, and more substantially, there are educational concerns about music at the end of the *Politics*. There, Aristotle says that a free man should study music, not so far as to become a musician himself, but enough to be able to judge music played by others.<sup>156</sup> In the same line he affirms that “no freeman would play or sing *unless he were drunk or in jest* (οὐκ ἄνδρὸς μὴ μεθύοντος ἢ παίζοντος).”<sup>157</sup> Maybe these short passages work also as a declaration of Aristotle himself, about his relationship with musical studies. The musical practice, at least the professional one, was considered handwork and so unworthy of a freeman.

The truth is that we have nothing by Aristotle that we can call a treatise of music theory. Some scholars such as Gibson or B elis seem to confuse the fact that there is no extant work of Aristotle devoted to music with the idea that never was one.<sup>158</sup> Barker is more cautious saying, “he produced no original work, so far as we know, in either mathematics or harmonics.”<sup>159</sup> Against these modern scholars is the account of Diogenes Laertius who ascribes to Aristotle two different works called *On music*.<sup>160</sup> He also enumerates several works of Aristotle concerned with arts in general, poetics and education; subjects that could perfectly well have embraced some musical subjects.<sup>161</sup> About Archytas, who was a prominent mathematician and musical theorist, two different works of Aristotle are mentioned by Diogenes Laertius in his list of Aristotle's works: the first consisting of three books and the latter of one book

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<sup>156</sup> *Pol.* 1339a34 – b20.

<sup>157</sup> *Pol.* 1339b9-10.

<sup>158</sup> “[Aristotle] devoted no single work to music”, Gibson, 2005, 23; “il ne lui a pas consacr  de trit , et exception faite du livre VIII la *Politique*”, B elis, 1986, 54.

<sup>159</sup> Barker 1989, 66.

<sup>160</sup> 5.26.5 and 21. In the second one Jonathan Barnes and Gavin Lawrence give the reading Πυθιον και μουσικῆς α' (*Pythian Victors in Music*) putting together the lines 20-21.

<sup>161</sup> Περὶ ποιητῶν (5.22.2); Περὶ παιδείας (5.22.19); Τεχνῶν συναγωγῆ (5.24.21); Τέχνη (5.24.23); Ἄλλη τέχνη (5.24.25) and Πραγματεία τέχνης ποιητικῆς (5.24.27).

compounded of excerpts of Plato's *Timaeus* and Archytas' works.<sup>162</sup> It is worth mentioning, as Huffman notes, that "Aristotle wrote more books on Archytas than any other individual figure."<sup>163</sup> Mathematics and harmonics being the main concerns of Archytas, it is not improbable that Aristotle himself was preoccupied with these matters, at least referring to Archytas. It is true that Diogenes Laertius lived around 500 years after Aristotle and it is fair to doubt about his list; but I think that it is not unreasonable to believe him. If there were a thinker who covered a broad spectrum of studies, it was Aristotle. Furthermore, in his surviving works we find some interesting passages about music; passages which can be "the tip of the iceberg", glimpses of a more extensive study carried out by Aristotle. We do not know if Aristotle wrote about music theory. The evidence is scarce and vague and, I claim, insufficient to answer the question about the depth of Aristotle's knowledge of music.

Gibson seems to be sure that Aristotle was not "a musical expert",<sup>164</sup> that he had a "lack of consistency when referring to music issues" and that his "grasp of the Pythagorean musical theory is less than perfect." The main passage used by Gibson as evidence is in *Metaphysics* X 1053a10 where Aristotle is discussing the "one" or the "unit." This "unit" is the principle and measure in each different science. In the case of music the "unit" is the *diesis*, which is equivalent to a "quarter-tone", the smallest perceptible interval recognized by ancient Greeks. Aristotle says that: "In music [the first principle and measure is] the "quarter-tone" because it is the least interval"; and a few lines later adds: "But the measure is not always one in number, sometimes there are several; e.g. the quarter-tones (not to the ear, but as determined by the ratios) are two." The idea of two minimal units is obscure and – without further evidence – there is no definite answer as to what Aristotle is referring to.<sup>165</sup> Whether or not Aristotle had a good understanding of the science of harmonics is beyond the scope of this research. What we do know is that Aristotle, probably still influenced by his master

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<sup>162</sup> Περὶ τῆς Ἀρχυτείου φιλοσοφίας (5.25.4) and Τὰ ἐκ τοῦ Τιμαίου καὶ τῶν Ἀρχυτείων (5.25.4). Evidence of Aristotle's writings on Archytas is also found in Damacius' *Dubitaciones et Solutiones*, 306: "Aristotle in his work on Archytas [...]".

<sup>163</sup> Huffman, 2005, p.4.

<sup>164</sup> Gibson 2005, 23.

<sup>165</sup> Ibid. and also see Barker 1989, 73.

and Pythagoreans, subordinated the harmonic science to arithmetic.<sup>166</sup> It was his disciple Aristoxenus, “a purer Aristotelian than Aristotle himself,” who confronted the Pythagoreans more decidedly.<sup>167</sup> This idea is proposed by Barker, who suggests that one of the most important contributions that Aristotle made to the study of music was made by him but indirectly, through his student Aristoxenus. Barker explains an Aristotelian principle which he calls the “same domain” rule, meaning that the object of study of a science and its principles must be understood with the elements of that science. In his words, one cannot ‘demonstrate’ or ‘scientifically explain’ features of something falling into one domain or under one genus by reference to the essences of things that fall under another.<sup>168</sup> Aristotle almost always follows this principle but in the case of harmonics he makes an exception and subordinates it to arithmetic. Aristoxenus did not accept that exception and in that sense Barker says that he “was purer Aristotelian than Aristotle himself.” Yet whilst Aristotle followed the Pythagoreans and Plato, saying that music is subordinate to mathematics, or at least the science of harmonics to arithmetic, he did not envision a divine musical model laid down by muses or a celestial imperceptible music. Despite considering harmonics subordinated to numbers he also recognized an approach based on sense perception:

Some [...] sciences have almost the same names; thus there is a mathematical astronomy and a nautical astronomy, mathematical harmonics and harmonics based on hearing. In these cases it is the task of those who use perception to know the fact that, and that of the mathematical scientists to know the reason why: for the latter possess the demonstrations of the causes, and often do not know the fact that, just as people who studied the universal often do not know some of the particular instances because they have not observed them. (*Posterior Analytics* 78b 34-79a6, trans. Barker).

Aristoxenus also articulated this idea, presumably influenced by his studies in the Lyceum:

We must therefore give an account of harmonics and its parts [...] we try to give these matters demonstrations which conform to the appearances, not in the manner of our predecessors, some of whom used arguments quite extraneous to the subject, dismissing perception as inaccurate and inventing theoretical explanations, and saying that it is in ratios of number and relative speeds that the high and the low come about. Their accounts are altogether extraneous, and totally in conflict with appearances. Others delivered

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<sup>166</sup> *Post. Analytics*. 75b14-17.

<sup>167</sup> Barker 1989, 68.

<sup>168</sup> *Ibid.*, 67.

oracular utterances on individual topics, without giving explanations or demonstrations, and without even properly enumerating the perceptual data. We, on the other hand, try to adopt initial principles which are all evident to anyone experienced in music, and to demonstrate what follows from them.<sup>169</sup>

This trust in sense perception is the Aristotelian hallmark of Aristoxenus' approach to music. Plato rejects sense perception as a criterion of science because in his overall philosophy there is a divine mathematical proportion written in the heavens and ruling everything.<sup>170</sup> This mathematical structure of the universe stands as a dogmatic paradigm; an ideology that must be followed even if the evidence of the senses is opposed to it. This is what Aristotle criticizes about the music of the spheres<sup>171</sup> and about the over-mathematization of reality. In *Metaphysics* 985b31-986a11 Aristotle refutes the Pythagorean doctrines and shows how they try to save their model:

[The Pythagoreans] saw that the attributes and the ratios of the musical scales were expressible in numbers; since, then, all other things seemed in their whole nature to be modeled after numbers, and numbers seemed to be the first things in the whole of nature, they supposed the elements of numbers to be the elements of all things, and the whole heaven to be a musical scale and a number. And all the properties of numbers and scales which they could show to agree with the attributes and parts and the whole arrangement of the heavens, they collected and fitted into their scheme; and if there was a gap anywhere, they readily made additions so as to make their whole theory coherent. E.g. as the number 10 is thought to be perfect and to comprise the whole nature of numbers, they say that the bodies which move through the heavens are ten, but as the visible bodies are only nine, to meet this they invent a tenth—the 'counter-earth'. (*Metaphysics* 985b23-986<sup>o</sup>12, trans. Ross).

Aristotle's concerns with music are down-to-earth; what we find in his work is music in the human, non-celestial, sphere. *Politics* is the place where most of what we have of Aristotle on music is found. The specific context is the educational curriculum that Aristotle proposes for his ideal state. There, music played a fundamental role because of its power to affect the soul. In what follows I will present Aristotle's educational curriculum and show what music is able to do to its listeners and why it should be included in the constitution of the state.

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<sup>169</sup> *Elem. harm.* II 32, 10-34 (trans. Barker).

<sup>170</sup> *Timaeus* 36a, 46c-e.

<sup>171</sup> *De caelo* 290b11-291a26.

### 3.3 Music in Politics

If we apply the four causes to music we would have to say that the composition made by the artist is the formal cause; the material cause would be the sound made with the instruments; and the efficient cause the performers. What about the final cause? Following Aristotle's thought, the answer should be happiness. The whole *polis* is oriented to human happiness (*Pol.* VII, 13) and so music contributes to the *polis* attains to it. For Aristotle happiness was "the realization and perfect exercise of excellence"(1332a1) and so music was included in his ideal state as a powerful tool to achieve it, having a preponderant role in his educational program.

Education was so important because a city is only as good as its citizens. For Aristotle, the legislator "should direct his attention above all to the education of the youth; for the neglect of education does harm to the constitution"(1337a11-14). This must be done from the very beginning because the same occurs with children as with the spectator in the theatre: "The spectators grew fond of the voices which they first heard. And the same principle applies universally to association with things as well as with persons, for we always like best whatever comes first" (1336b30-32).<sup>172</sup>

Aristotle's educational curriculum depends on his anthropology. The right education depends on the particular stages of life as well as on the character of those being educated. Here it is important to remember that for Aristotle slavery was in part something natural. According to him, humans were naturally divided into a small group of people disposed to rule and a vast majority of inferior people not suited to govern themselves, among them were all women and natural slaves.<sup>173</sup> This sort of

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<sup>172</sup> Cf. *Rep.* 376e: "the beginning of any process is the most important, especially for anything young and tender.

<sup>173</sup> "And it is clear that the rule of the soul over the body, and of the mind and the rational element over the passionate, is natural and expedient; whereas the equality of the two or the rule of the inferior is always hurtful. The same holds good of animals in relation to men; for tame animals have a better nature than wild, and all tame animals are better off when they are ruled by man; for then they are preserved.

thinking is simply wrong but we need to always remember it when Aristotle talks about education because he has in mind a limited group of privileged individuals. This group, the citizens, should be directed to what is noble and virtuous, to what is done for its own sake and not for something else.

The consequence of this is that leisure has a predominant role in the Aristotelian curriculum. According to Aristotle, the end of war is peace and the end of toil is leisure (1334a14-15). Leisure, Aristotle says, “is better than work and is its end” (1337b33), because “the first principle of all action is leisure” (1137b31). The cultivation of noble pleasure is what corresponds to a free man and music, as we will see, plays a key role in its development.

We also need to consider Aristotle’s understanding of the human soul at different ages. Humans are born with rationality but this is somehow present only in potentiality and is developed over time. The first part of the soul to be educated is thus not reason but those aspects of the soul connected with the body, i.e. desires and emotions. Aristotle says: “As the body is prior in order of generation to the soul, so the irrational is prior to the rational. The proof is that anger (*thumos*) and wishing and desire are implanted in children from their very birth, but reason and understanding are developed as they grow older.”<sup>174</sup> For this reason, Aristotle says, the cultivation of the body should precede that of the soul, and should be followed by the training of the appetitive part. This is not to say that children totally lack reason, but it is something that grows and develops fully after the body and the irrational parts of the soul.

During the first period, which goes between zero and five years, children should play in order to develop their limbs. Those games should not be vulgar, or tiring or

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Again, *the male is by nature superior, and the female inferior; and the one rules, and the other is ruled; this principle, of necessity, extends to all mankind.* Where then there is such a difference as that between soul and body, or between men and animals (as in the case of those whose business is to use their body, and who can do nothing better), *the lower sort are by nature slaves*, and it is better for them as for all inferiors that they should be under the rule of a master. *For he who can be, and therefore is, another's and he who participates in rational principle enough to apprehend, but not to have, such a principle, is a slave by nature.*” (*Pol.* 1254b6-23) And a little further he says again: “It is clear, then, that some men are by nature free, and others slaves” (*Pol.* 1254b39-1255a2).

<sup>174</sup> *Pol.* 1334b 20-25.

effeminate. They should also hear tales (λόγοι) and stories (μῦθοι)<sup>175</sup> which would be chosen by the directors of education and should be imitations (μιμήματα) of future occupations in order to prepare children to them. Until they are seven years old they must live in their home and it is expected that in that period they “acquire a taint of meanness” because of what they see and hear in their domestic contact with slaves (1336b2-3). The indecency of speech then should be totally banned by the legislator. This is why Aristotle does not allow youth to attend the performances of iambi and comedy, at least until they are old enough to drink wine at the common tables and their education has turned them immune to their vulgar effect.

After the first seven years at home children should be educated by the state. The process should be divided into two stages; the first one from seven to fourteen years old and the second from there until twenty-one. Unfortunately Aristotle does not explain any of the differences between the two stages; he describes his whole curriculum without mentioning at which age each discipline should be imparted.

He goes on to present the typical educational program that comprises four branches of studies: gymnastic, reading, writing and μουσική. To these four, drawing is sometimes added. All of these are divided between useful and liberal. Gymnastic is for the sake of the wellbeing of the body, and reading and writing are considered useful for practical purposes. The only branch of study analyzed at length is μουσική and it occupies the last five chapters of the book VIII of *Politics*. For the moment I translate μουσική as *music* but later some fundamental considerations will be made.

Music is included in the Aristotelian educational program primarily because it is a noble way to spend one’s free time. Aristotle constantly reminds us that leisure is more important than what we do under compulsion:

It is clear then that there are branches of learning and education which one must study merely with a view to a *pastime in leisure* (ἐν τῇ διαγωγῇ σχολῆν), and these are to be valued for their own sake; whereas those kinds of knowledge which are useful in business are to be deemed necessary, and exist for the sake of other things. And therefore our fathers

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<sup>175</sup> 1336a30.

admitted music into education, not on the ground either of its necessity or utility, for it is not necessary, nor indeed useful in the same manner as reading and writing, which are useful in moneymaking, in the management of a household, in the acquisition of knowledge (πρὸς μάθησιν) and in political life” (1338a9-17).<sup>176</sup>

From this passage it would be tempting to believe that music is “useless.” However, Aristotle considers four different “usages” for music: amusement and relaxation; edification of moral character; noble leisure; and catharsis. These are different causes of musical practice and so it seems that it is not an activity done for its own sake. Even if we accept that we can use music for purposes beyond itself, it would be unfair, based on the pleasure derived from it, to say that we cannot listen to it for its own sake. The case would be similar with philosophy understood as theoretic contemplation: we do it for its own sake and at the same time we get pleasure from it. Aristotle does not consider pleasure as the final goal of life but more as a necessary accompaniment of a happy life. Similarly, music can be experienced for leisure without further aims:

Innocent pleasures are not only in harmony with the end of life, but they also provide relaxation. And whereas men rarely attain the end, but often rest by the way and amuse themselves, not only with a view to a further end, but also for the pleasure’s sake. It may be well at times to let them find a refreshment in music. It sometimes happens that men make amusement the end, for the end probably contains some element of pleasure, though not any ordinary or lower pleasure; but they mistake the lower for the higher, and in seeking for the one find the other, since every pleasure has a likeness to the end of action. For the end is not eligible for the sake of any future good, nor do the pleasures which we have described exist for the sake of any future good but of the past, that is to say, they are the alleviation of past toils and pains. And we may infer this to be the reason why men seek happiness from these pleasures. But music is pursued, not only as an alleviation of past toil, but also as providing recreation” (1339b25-42).

Aristotle sets out the aims of music in a tripartite fashion, similar to the composition of the human being: the bodily pleasures of amusement and alleviation of toil described in the passage above; the cultivation of moral character (through the spirited part of the soul); and finally, the intellectual leisure and the prudence (φρόνησις) that we get from music. The basic pleasure of amusement and relaxation from work is common (κοινός) and felt and shared by everyone (μετέχειν ἀπ’ αὐτῆς, ἧς ἔχουσι πάντες αἴσθησιν).<sup>177</sup> In this case, pleasure is confused with the aim and sought for its own sake. The situation is different with the noble leisure that we can get from music. Unfortunately, Aristotle does not further explain the implications of the noble leisure

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<sup>176</sup> Cf. NE X, 6.

<sup>177</sup> 1340a2-3.



in the practice of music, nor the practical wisdom/prudence (φρόνησις) associated with it (1339a26). The treatment of music in the classroom is then focused neither on bodily pleasures nor on intellectual ones, but rather on the spirited part of the soul that needs to be educated first in children in order to shape their moral character.

We are now faced with one of the most problematic aspects in the interpretation of Aristotle's thoughts about music and with the core question of this investigation: what kind of *influence* [does music have] *on the character and the soul?* (11340a5-6).

Before continuing it is fundamental to focus on the text because depending of the translation it would be more or less easy to make a coherent interpretation of Aristotle's overall position. A critical passage occurs at 1340a13 where Aristotle says that musical representations “even apart from the rhythms and the melody themselves” (χωρίς τῶν ῥυθμῶν καὶ τῶν μελῶν αὐτῶν.) move the listener accordingly.

Text A) When men hear imitations, even apart from rhythms and melodies themselves (χωρίς τῶν ῥυθμῶν καὶ τῶν μελῶν αὐτῶν), their feelings move in sympathy (συμπαθεῖς). Since then music (μουσική) is a pleasure, and excellence consists in rejoicing and loving and hating rightly, there is clearly nothing which we are so much concerned to acquire and to cultivate as the power of forming right judgments, and of taking delight in good characters and noble actions. (τὸ κρίνειν ὀρθῶς καὶ τὸ χαίρειν τοῖς ἐπιεικέσιν ἤθεσι καὶ ταῖς καλαῖς πράξεσιν) (1340a19) Rhythms and *songs* (μέλη) supply imitations of anger (ὀργή) and gentleness (πραότης), and also of courage (ἀνδρεία) and temperance (σωφροσύνη), and of all the contraries to these, and of the other qualities of characters (ἤθη), which are very close to the real ones, as we know from our own experience, for in listening to such strains our soul undergo a change (μεταβάλλομεν γὰρ τὴν ψυχὴν ἀκροώμενοι τοιούτων). The habit of feeling pleasure or pain at mere representations is not far removed from the same feeling about realities; for example, if anyone delights in the sight of a statue for its beauty, it necessarily follows that the sight of the original will be pleasant to him. 1340a12-29 (trans. Jowett slightly modified.)

The first problem is the lacuna which is found in two main manuscripts. *Politics* has been preserved in five main manuscript sources. There is a Latin translation that dates at least from 1274 made word by word by the Dominican monk William of Moerbeke, who in turn used a Greek codex now lost that is designated as Γ and. There are four

main Greek manuscripts remaining: M<sup>s</sup>, in Milan, and P<sup>(1, 2 and 3.)</sup>, all in Paris.<sup>178</sup> All the remaining manuscripts depend on these five and, according to Susemihl, only “supply confirmatory evidence in isolated passages.”<sup>179</sup> The manuscript M<sup>s</sup>, in the Ambrosian Library in Milan, has a blank space that occurs between χωρὶς and ῥυθμῶν, where τῶν was omitted but later added by another hand. The lacuna also appears in several manuscripts of the first Latin translation made by William Moerbeke which seems to show that their common source, the now lost Γ, also had it. This made Newman think about whether or not the Greek text that Moerbeke used had also the same lacuna and he acknowledges that although probable this is impossible to know.<sup>180</sup>

The lacuna assumption is crucial especially for the influential emendation proposed by Franz Susemihl mentioned in the introduction. According to him, we need to add “τῶν λόγων διὰ”<sup>181</sup> in order to make sense of the passage. The translation would be: “Even without words rhythms and melodies move men’s feeling in sympathy”. Stephen Halliwell thinks that we are “obliged to accept” Susemihl’s emendation at 1340a13 arguing that “without this textual alteration, it remains opaque why Aristotle, when trying to show that music can change its hearer psychologically, would here wish to cite the power of words to elicit emotional sympathy independently of rhythms and melodies.”<sup>182</sup> I think that the emendation is not necessary and in fact distorts Aristotle’s thoughts. Halliwell and all the others following Susemihl are open to several objections that reveal that they hold the wrong interpretation. In what follows I will present those objections and present my own interpretation according to which Aristotle is precisely talking, as Halliwell says, about the “power of words to elicit emotional sympathy independently of rhythms and rhythms.”

The passage under discussion (text A above) has been the object of controversy between those who believe that Aristotle is considering μουσική in a narrow sense as instrumental music and those who understand it to be taken by him in a broad sense as

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<sup>178</sup> According to Susemihl most manuscripts are from the fifteenth century and P<sup>2</sup> and P<sup>3</sup> are from the fourteenth century, but not earlier.

<sup>179</sup> Susemihl 1894, 1.

<sup>180</sup> Newman 1902 (vol. 3) 125.

<sup>181</sup> Susemihl 1894, 592.

<sup>182</sup> Halliwell 2002, 244.

music accompanied (or not) by words. If we accept the first option then Aristotle's treatment of music and its educational implications are concerned only with melody and rhythms. The other option, the right one I think, is that Aristotle also included words. If we accept the first one then Aristotle could be accused of inconsistency. If what we have said about emotions is true, i.e. that they require an intentional object over which we make a judgment, then it would not be possible to arouse emotions in listeners by a sort of musical – objectless – contagion.

### 3.4 Is there a contagion of emotions through instrumental music?

The term μουσική is certainly equivocal and its translation depends on the context. This is explicit at 1339b20-21 where μουσική is characterized as existing *with voice* (μετὰ μελωδίας) or as *bare* (ψιλή) music. The terms μέλος and μελωδία are also ambiguous; both can be used as equivalent to *melody*, i.e. a sequence of notes, roughly speaking, but also could be translated as *song*, i.e. a melody accompanied by words. For example, μέλος is used to refer to the music of Olympus, a famous aulos player, who is described as the “first to introduce instrumental music to the Greeks.”<sup>183</sup> I think, however, that at 1340a19 μέλος should be translated as *song* and not as *pure melody*, so that the lyrics in the music provide the intentional object for the emotions in the “story”. There is an “aboutness” which can be related to the object of emotional judgments:

Rhythms and *songs* (μέλη) supply imitations of anger (ὀργή) and gentleness (πραότης), and also of courage (ἀνδρεία) and temperance (σωφροσύνη), and of all the contraries to

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<sup>183</sup> Ps. Plutarch, *On music* 5.

these, and of the other qualities of characters (ἦθη), which are very close to the real ones, as we know from our own experience, for in listening to such strains our soul undergo a change.

There are some good reasons for this translation. At 1340a13 μέλος is qualified by αὐτός, and the same occurs at 1340a38. In these instances the translation should be *melodies in themselves*, meaning *pure melody* without words. At 1340a19 μέλος appears unqualified and we should be careful and consider, as I think is the case, that it may refer to a melody accompanied by words, i.e. a song. At 1341b23-24 Aristotle describes the elements in music: ἐπεὶ δὴ τὴν μὲν μουσικὴν ὁρῶμεν διὰ μελοποιίας καὶ ῥυθμῶν οὖσαν. A superficial translation would say: *Now we see that music exists by melody and rhythm*.<sup>184</sup> But μελοποιία is not a mere melody; it is literally a *melodic composition* and usually refers to music and lyrics together.<sup>185</sup> More clearly, at 1339b21 μελωδία explicitly means song: music and words *together*. If Aristotle wants to speak about instrumental music he refers to it as *melody in itself* (1340a13; 38), or as *bare* (ψιλή) music at 1339b20. Plato had already considered that rhythms (ῥυθμοί) along with harmonies (ἁρμονίαι) and words (λόγοι) were the constitutive parts of a song (μέλος),<sup>186</sup> thus μέλος involved a cognitive/discursive element beyond mere melodies and rhythms.

Another way in which the instrumental music appears is when we consider the equivalence between *melody in itself* with ἁρμονία. According to Aristoxenus, harmony is a part of a song and so at the very beginning of his *Elementa Harmonica* (I.1) he says: “The science concerned with μέλος has many parts and is divided into several species, of which the study called Harmonics must be considered one.” Here, μέλος is translated by Barker as *melody* but he adds in a note that most probably its meaning is *song*, broadly conceived, although he does so hesitantly because nowhere else does Aristoxenus use the term with that meaning.<sup>187</sup> As an element of music, the

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<sup>184</sup> Jowett translates: *Now we see that music is produced by melody and rhythm*.

<sup>185</sup> Cf. *Poet.* 1449b33, Halliwell (1986, 239) notes: “Aristotle couples *melopoeia* with *lexis*, ‘lenguaje’ or ‘style’, and he defines the latter as ‘the composition of the spoken verses’. *Lexis*, in other words, excludes lyric portions of tragedy, and if we were to take *melopoeia* as referring only to the music of these sections, it would follow that Aristotle had defined and analyses tragedy in such a way as to overlook the verbal component of lyric poetry altogether”.

<sup>186</sup> *Rep.* 398d1-2.

<sup>187</sup> Barker 1984, 126.

science of harmonics is concerned with neither rhythms nor words. Harmonics is about *systemata* and *tonoi*, which can be understood roughly as *scales* and *dominant keys* respectively. Thus, ἀρμονία may refer to *melody* in the sense of the arrangement of the notes; if we add to it words and rhythm then we have μουσική as a whole. This helps to explain the meaning of the pairing *rhythms and harmonies* that Aristotle uses at 1340b17-18 and at 1341b19 when he says “we have to consider rhythms and ἀρμονίαι, and their use in education.” It occurs similarly in *Poetics* 1447a24 where the combination of *harmony* (ἀρμονία) with rhythm are the means of flute playing, not rhythm with μέλος. Similarly also in *Poetics*, at 1448b20-21 we find again the pair ἀρμονία and rhythm, not μέλος and rhythm. This must be considered also at 1341b32-35:

We accept the division of songs (μέλη) proposed by certain philosophers into songs of character, of action, and passionate or inspiring, each having as they say, a mode (ἀρμονίαι) corresponding to it. (trans. Jowett, replacing μέλη as *songs* instead of Jowett’s *melodies*).

As said above, the term ἀρμονία can be understood as a musical mode, roughly speaking as a *scale*. Now, although Aristotle uses elsewhere ἀρμονία as a counterpart of rhythm, i.e. as *melody*,<sup>188</sup> in the passage above it would be a nonsense to say that the divisions of *melodies* correspond to a particular *melody*. I think, however, that *melê* could be understood here as song or as pure melodies which in turn have a corresponding *harmoniai*. It is not improbable that Aristotle had not always made a technical distinction between *harmony* and *melody* and from what we have in *Poetics* and *Politics* that seems to be the case. He seems to declare his ignorance about technical matters; with respect to the hierarchy between rhythms and melodies in education he says: “the subject has been very well treated by many musicians of the present day, and also by philosophers who have had considerable experience of musical education” (1341b27-29).

With all the above it is more than reasonable that at 1340a19 μέλος refers to *song* rather than *melody*. Yet there is one more important reason for this approach. Aristotle

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<sup>188</sup> Aristides Quintillianus sometimes also uses *harmony* instead of *melody*. *De musica* I, 1, 2; II, 4, 57. II, 7, 65.

says that rhythms and μέλη supply imitations of qualities of different characters (ἦθη): anger (ὀργή); gentleness (πραότης); courage (ἀνδρεία); temperance (σωφροσύνη); “and of all the contraries to these [...] which hardly fall short of the actual affections.” In addition, he says that the listener *has the same feeling* (συμπαθεῖς)<sup>189</sup> with the representation and in doing so he is able to judge those representations. Now, virtue, he says, “consists in rejoicing and loving and hating rightly” and so “there is clearly nothing which we are so much concerned to acquire and to cultivate as the power of forming right judgments, and of taking delight in good characters and noble actions” (τὸ κρίνειν ὀρθῶς καὶ τὸ χαίρειν τοῖς ἐπιεικέσιν ἦθεσι καὶ ταῖς καλαῖς πράξεσιν). Here it is explicit that rhythms and songs (μέλη) represent good characters but from what Aristotle says it does not follow, necessarily, that music represents also *good actions*. We therefore have two different statements: first, music represents moral characters and, second, one part of virtue consists in judging correctly and enjoying representations of good moral characters *and* good actions. In *Poetics* we read:

*The objects the imitator represents are actions, with agents who are necessarily either good or bad* (Ἐπεὶ δὲ μιμοῦνται οἱ μιμούμενοι πράττοντας, ἀνάγκη δὲ τούτους ἢ σπουδαίους ἢ φαύλους εἶναι) – the diversities of human character being nearly always derivative from this primary distinction, since *it is by badness and excellence men differ in character* (κακία γὰρ καὶ ἀρετὴ τὰ ἦθη διαφέρουσι πάντες). It follows, therefore, that the agents represented must be either above our own level of goodness, or beneath it, or just such as we are; in the same way as, with the painters, the personages of Polygnotus are better than we are, those of Pauson worse, and those of Dionysus just like ourselves. It is clear that each of the above-mentioned arts<sup>190</sup> will admit of *these diversities* (τὰς διαφορὰς) [...] Even in dancing, flute playing and lyre playing such diversities are possible; and they are also possible in the nameless art that uses language, prose or bare verses. (1448a1-11)

<sup>189</sup> The occurrence of συμπαθεῖω in other places does not denote a recognition more “cognitive” than that necessary in sense perception or in involuntary reflexes. In the *Prior Analytics*, soul and body change simultaneously (70b16 *sympaschein allēlois*, which probably has the same meaning as at 70b7-8 *hama metaballein*). Cf. Ps. Aristotle, *Physiognomics* 808b11-15: “Soul and body seem to me to affect each other sympathetically (*sympathein allēlois*) A change in the state of the soul alters the appearance of the body, and, conversely, when the appearance of the body changes, it changes the state of the soul as well”. Plato compares a *sympathetic* feeling with the reflective act of yawning when others are seen to do the same: “When Critias heard this and saw that I was in a difficulty, then, just as in the case of people who start yawning when they see other people doing it, he seemed *to be affected* by my troubles and to be seized by difficulties himself”. *Charmides* 169c. However, in *In De anima* the sympathetic reaction only occurs when there is a belief. At 427b22 we read: “When we are of the opinion (δοξάσωμεν) that something is fearful we fell the corresponding emotion (συμπάσχομεν)”.

<sup>190</sup> Dance, poetry and instrumental music.

The same objects that are mentioned in *Politics* now are clearly referring to words and not to instrumental music. Music *qua* music is able to represent the diversity of *characters*, i.e. being noble or vulgar, not actions. What would be the noble actions that Aristotle is referring to here? Is instrumental music also able to represent actions that could be an object of our moral judgment?<sup>191</sup> How could instrumental music represent an unjust action or a virtuous one? Moreover, listeners are supposed to love and hate and take delight in good characters and actions, so if we are hearing an instrumental piece of music that imitates, for instance, anger, should we love or hate and enjoy or dislike the anger itself? That does not make any sense. Instrumental music lacks any *aboutness*: if it affects the soul this should be in some way other than “emotionally.” The emotions supposedly contained in music, according to Aristotle’s thoughts presented so far, cannot be the object of our beliefs because instrumental music predicates nothing. As Konstan states, “emotions are elicited by evaluations of events and situations”<sup>192</sup> and thus the question is what sort of events and situations the instrumental music is able to represent. Not being able to represent any situation or event, instrumental music does not meet the requirement of being the object of emotions.<sup>193</sup>

But now, for a moment, let me consider whether Aristotle is in fact saying that instrumental music does arouse emotions. If that were the case then a further problem would arise. In *Politics*, (1340a19-21) music – let us assume for now that Aristotle is talking about instrumental music – is able to represent emotions such as anger (ὀργή),

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<sup>191</sup> There was an instrumental type of music called “imitative”. Aristotle seems to refer to it in *Poetics* 1447a224-26. A particularly interesting kind were the instrumental *nomoi*, instrumental pieces for solo performances similar to our program music. The title and description of the plot work as a guide helping to understand what is being represented. Without the text it is impossible to know what the music is about. Famously, Pollux (*Onomastikon* IV,84, cf. Strabo, *Geography* IX,3,10) mentions the *Pythikos Nomos*: “The auletic nomos has five parts, *peira*, *katakeleusmos*, *iambikon*, *spondeion* and *katachoreusis*. The nomos is a representation [*dêlôma*, lit. ‘showing’, ‘display’] of the battle of Apollo against the serpent. In the *peira* [‘test’, ‘trial’] he surveys the ground to see if it is suitable for the contest. In the *katakeleusmos* [‘challenge’] he calls up the serpent, and in the *iambikon* he fights: the *iambikon* also includes sounds like those of the salpinx and gnashings like those of the serpent as it grinds its teeth after being pierced with arrows. The *spondeion* represents (*dêloi*) the victory of the god; and in the *katachoreusis* [‘dance of triumph’] the god performs a dance of victory. (Trans. Barker)

<sup>192</sup> Konstan 2007, 21, quoting Roseman and Smith 2001, 3.

<sup>193</sup> This, as clarified in the introduction, does not mean to deny that we can get angry because a particular interpretation does not do justice to the original piece, but such a reaction is not based on any content *in* the music, and that is what has been under discussion.

gentleness (πραότης), courage (ἀνδρεία), temperance (σωφροσύνη), frenzy (ἐνθουσιασμός) and also “all of those contrary to these and others characters” (καὶ πάντων τῶν ἐναντίων τούτοις καὶ τῶν ἄλλων ἡθικῶν), to which later, fear (φόβος) and pity (ἔλεος) are also added. All of these are affections (πάθη), courage being the only one which is not always considered an emotion but a virtue.<sup>194</sup> In any case, the more important question is whether these emotions represented in the musical mimesis are about something or are some kind of “empty emotions.” Emotions by themselves are neutral in ethical terms. Anger is not something good or bad by itself; it depends on what its object is. It is right to feel anger *towards* injustice and it is bad to be angry *concerning* justice. Both words “towards” and “concerning” imply content; an “aboutness” over which to make a judgment. Besides, Aristotle clearly states that emotions deprived of content are not a matter of moral judgment: “We are not called good or bad on the ground of our passions, but are so called on the ground of our excellences and our vices, and because we are neither praised nor blamed for our passions (for the man who feels fear or anger is not praised, not is the man who simply feels anger blamed, but the man who feels it *in a certain way*), but for our excellences and our vices we are praised or blamed (NE 1105b29-1106a2).” Aristotle says further, to “get angry, that is easy [...] but to do this to the right person, to the right extent, at the right time, with the right aim, and in the right way, that is not for everyone” (NE1109a26-29). Or consider NE 1106b18-24: “fear and confidence and appetite and anger and pity and in general pleasure and pain may be felt both too much and too little, and in both cases not well; but to feel them at the right times, with reference to the right objects, towards the right people, with the right aim, and in the right way, is what is both intermediate and best, and this is characteristic of excellence.” If a piece of instrumental music represents an emotion like anger, what would be the right object of the emotion? What would be the pedagogical value of experiencing an objectless emotion? Aristotle’s answer has to be *none*.

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<sup>194</sup> Aristotle generally considers courage as a virtue, it is something more permanent than an emotion; but here it seems that can also be understood as something more fleeting, maybe the opposite of fear, some sort of brief impetus that push us to confront an obstacle and not flee from it. Courage is explained in *Eth. Nic.* 3.6, 1115a4–10, 1117b21; *Eth. Eud.* 3.1, 1228a26–1230a36; *MM* 1.20, 1190b9–1191a35, for gentleness see *Eth. Nic.* 4.5, 1125b26–1126b10; *Eth. Eud.* 3.3, 1231b5–26; *MM* 1.22, 1192b23–38; temperance is studied in *Eth. Nic.* 3.10, 1117b23–12, 1119b18; *Eth. Eud.* 3.2, 1230a36–1231b4; *MM* 1.21, 1191a36–b21.



If Aristotle does say that “music” represents actions, as could be argued considering the passage at 1340a18, it must be by means of the words contained in the songs (μέλη). In *Poetics* this is said explicitly: “the action is represented in the play by the plot” (ἔστιν δὲ τῆς μὲν πράξεως ὁ μῦθος ἢ μίμησις),<sup>195</sup> i.e. in the words. In the theatre, the song is only a decoration, literally *the biggest of the condiments* (ἡ μελοποιία μέγιστον τῶν ἡδυσμάτων)<sup>196</sup> that alongside the visual aspects of the performance helps to *heighten* (συναπεργάζομαι)<sup>197</sup> the effects of the whole story:

A tragedy, then, is the imitation of an action that is serious and also, as having magnitude, complete in itself; with seasoned language (ἡδυσμένῳ λόγῳ) [...] Here by seasoned language I mean that with rhythm and harmony (*Poet.* 1449b24-28).<sup>198</sup>

In this passage, as well as in text A (*Pol.* 1340a12-29), Aristotle puts the emphasis on the cognitive aspect of the music, i.e. in the words that convey a “message” that works as an object over which we can reflect and react accordingly.

Some scholars, however, insist that poetry “is curiously absent from the *Politics*”,<sup>199</sup> and that we find “no reference to poetry at all.”<sup>200</sup> On the contrary, we should say that nowhere in the *Politics* is it suggested that lyrics are excluded from the whole analysis in chapters 5 to 7. In fact, theatrical compositions are also included and in reference to them the emotions of pity and fear are mentioned. Also relevant is the exclusion of the aulos from education. The problem is “the impediment which the aulos presents to the use of voice detracts from its educational value” (*Pol.* 1341a24-25). So, if Aristotle

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<sup>195</sup> *Poet.* 1450a3-4.

<sup>196</sup> *Poet.* 1450b15-16. “The spectacle, though an attraction, is the least artistic of all the parts, and has least to do with the art of poetry (1450b20)”.

<sup>197</sup> *Rhet.* 1386a31.

<sup>198</sup> Aristotle seems to be echoing Plato: in the *Republic* it is said that the poet speaks of matters that he does not know, but although ignorant, it seems that he knows because of the “the charm (κίλησις) which melody and rhythm by nature have.” To this Socrates says, “what a poor appearance the tales of poets make when stripped of the colours which music puts upon them, and recited in simple prose” (*Rep.* 601a–b). Music has a natural sweetness (ἡδυσμα), *Pol.* 1340b17. As *seasoning for food*, *De an.* 414b13, NE 1170b29, *Met.* 381b30 Pr. 923a28 *Rh.* 1406a18, *Sens.* 442a10. As *seasoning of a song* *Poet.* 1450b16. Plutarch, *Amatorius*, 769c7-9: “by applying the *hêdusmata* –melodies and metres and rhythms– to speech, poetry makes the educational power of speech more moving as much as it makes its potential for harm harder to guard against”. I owe this quote to Sifakis 2001, 57.

<sup>199</sup> Destrée 2013, 322, n.15.

<sup>200</sup> Solmsem 1961, 215.

is not considering words as part of *mousikê*, why does he reject the aulos? The answer is that he includes words as part of *mousikê*; the musical education of children is not just passive listening and instrumental playing, it involves singing (1340b20) and words.

Finally, the lack of poetry in Aristotle's educational curriculum is questionable; educating children without the use of literature would be something extremely strange in the ancient Greek context. Aristotle does say that reading and writing should be included in the curriculum without mentioning any author in particular, however he also says that the two disciplines should be included for practical reasons, such as making money and domestic economy, fields in which the noble leisure of reading Homer cannot be included. This is another good reason to believe that at least in text A it is in the μέλη that we find the words of the poets that depict characters of different moral qualities doing good and bad things.

Others before me have also defended the idea that Aristotle is referring to music and words together, at least in text A. Janko, for example, believes that in order to react correctly to good characters and fine deeds, the object of *mimêsis* must be representations with words. The passage 1340a14-18 gives, according to him, “clear support to the view that Aristotle thought that poetry, and not only music, was important in moulding character.”<sup>201</sup> Those words, he suggests, are represented in epic poetry and tragedy. In the same vein Lord argues that Aristotle is considering *mimêsis* at 1340a12 as “poetic imitation in the broadest sense.”<sup>202</sup> In opposition to them, Andrew Ford advocates the proposal “to put the music back into *Politics* 8.”<sup>203</sup> His objections are worthy of analysis and that is what I will do in what follows.

Ford defends the idea that Aristotle's focus in *Politics* VIII (chapters 5 to 7) is pure instrumental music rather than music accompanied by words and so *mimêsis* at 1340a12 refers to artistic representations of pure instrumental music. His aim is explained in his introduction: “Only by putting the music back into Aristotle's

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<sup>201</sup> Janko 1987, 182

<sup>202</sup> Lord 1982, 269 n. 12.

<sup>203</sup> Ford, 2004,309.

*mousikê*, which means kicking out words where they don't belong, can we see the special problems that rhythms, modes and melodies posed to the political philosopher."<sup>204</sup> Like Ford, I am also concerned with the problem of pure instrumental music in *Politics*, but contrary to him, I think that in text A, particularly at 1340a12, Aristotle is also considering the words accompanying the music. In what follows I will discuss his position and show why I think he is wrongly removing words from *mousikê* at *Pol.* 1340a12.

Ford goes against the interpretations that claim that Aristotle includes words in his analysis of *mousikê* in VIII, 5. In opposition to Janko, Ford argues that epic poetry used no *melos* and so could not be the *logoi* that are left in the *mimêsis* when rhythms and *melê* are removed. Ford also claims that epic poetry "was not thought in *mousikê* but in *grammatikê*."<sup>205</sup> With respect to the tragedy he says that there nothing in the context that "requires us to think of tragedy."<sup>206</sup> He concludes that epic poetry and tragedy are "double unhelpful as examples of *logos* 'apart from rhythm and *melos*,'"<sup>207</sup> and only dithyrambs and sung nomes could fit in the context. In response I think that Ford's claim that "epic uses no *melos*" is contrary to the evidence. There are literary descriptions of epic poets accompanying their words with the aid of the instrument called phorminx and also visual portraits in vase paintings.<sup>208</sup> With respect to tragedy he says that "it only uses [words] in parts,"<sup>209</sup> but I do not see why this would be a problem for the idea that the tragic plot is what is left when we remove the rhythm and melody. In fact, the idea of removing the musical decorations from the tragic plot was not new.<sup>210</sup>

Ford, correctly in my view, draws a distinction between those sections where, according to him, Aristotle talks about music *and* words and those others where he focuses on pure instrumental music. I disagree, however, on which passages belong to which group. According to Ford, from chapter 5 onwards Aristotle focuses exclusively

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<sup>204</sup> Ibid.

<sup>205</sup> Ford 2004, 322.

<sup>206</sup> Ibid.

<sup>207</sup> Ibid.

<sup>208</sup> West, 1981, Danek 1989 and Danek and Hagel 1995.

<sup>209</sup> Ford, 2004, 322.

<sup>210</sup> Plato, *Rep.* 601a–b and Aristotle, *Poetics* 1453b1–10 and *Politics* 1340a13.

on instrumental music:

When Aristotle first discussed *mousikê* in 8.3 it was as one of the four subjects commonly taught (1337b23–8). As such, it referred to the curriculum provided by *kitharistai* as distinct from the *grammatistai*. This included what we call poetry or, in terms of the *Poetics*, representations of moral action in words (*logoi*), *rhuthmoi* and *harmoniai*. Singing or listening to such ‘songs’ (*melê* in the sense of ‘words and music’) is doubtless part of what Aristotle envisions going on in noble leisure. [...] But (recited) poetry was also taught by the *grammatistês*. *Mousikê* was chosen to exemplify liberal education not because of the instructive content of its words but because it was not obviously practical; it was a clearer example of liberal study than *grammatikê* which imparted useful skills of writing and reading [...] However, from 8.5 to the end of our text Aristotle bears in on *mousikê* in its narrower sense, ‘consisting of the composition of tunes and rhythms’ as he defines it in 8.7 (μουσικὴν ὀρῶμεν διὰ μελοποιίας καὶ ῥυθμῶν οὔσαν, 1341b23-4).<sup>211</sup>

In order to leave *mimêsis* at 1340a12 as pure music he presents his major objection to those saying that music involves words, arguing that rhythms and tunes are responsible for conveying emotions to the listener:

[A] more serious problem with bringing in epic or tragedy here (or even tragic odes) is that the whole point of the immediately ensuing discussion (1340a18 ff.) is to highlight the strong resemblance (*homoiômata*) between real emotions and those conveyed by *rhythms and tunes* (1340a19). Aristotle holds that the *melê* and rhythms communicate character more strongly than do impressions directed to other senses (*ta aistheta*, 1340a28) such as sight and taste, and he closes this argument by affirming that ‘there are *mimêsis* of character in tunes themselves’ (1340a38-9: ἐν δὲ τοῖς μέλεσιν αὐτοῖς). To bring in words obscures Aristotle’s focus on music as a sensory phenomenon, a uniquely potent influence on the system.<sup>212</sup>

I see some problems with Ford’s interpretation. First of all, he makes no distinction between *songs* (*melê* 1340a19) and *melodies themselves*, (μέλεσιν αὐτοῖς, 1340a13 and 38), and it seems clear to me that the two occurrences differ in meaning since Aristotle ascribes different powers to each. In the first the power to represent characters, actions and emotions and in the second the power to differently dispose the listeners. Secondly, he argues that there are “emotions [...] conveyed by rhythms and tunes”, i.e. by pure instrumental music. Here I will not address again the question of how these emotions are transferred by instrumental music, but will focus on the “sensory phenomenon” suggested by Ford. In his view, *tunes themselves* represent character and this finds a parallel with what happens in visual arts. He argues that at

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<sup>211</sup> Ford 2004, 315.

<sup>212</sup> Ibid., 323.

1340a26 Aristotle talks about the “influence on a viewer of a sculpture’s shape ‘in itself’ (διὰ τὴν μορφήν αὐτήν) apart from what is represented.”<sup>213</sup> In the subsequent note he adds: “this basic pleasure [the view of a beautiful shape] in non-narrative form is like that afforded by the ‘drip paintings’ of *Poetics* 1450a39-50b3: ‘very beautiful colours’ applied at random can please (εὐφραίνειν) us, albeit less fully than a figure drawing (which suggests character and action, i.e. *mimêsis*).” In the *Poetics*’ passage Aristotle describes the plot as the soul of tragedy, and then he continues to explain this idea:

“[C]ompare the parallel in painting, where the most beautiful colours laid on without order will not give the same pleasure as a simple black-and-white sketch of a portrait. We maintain that tragedy is primarily an imitation of action, and that it is mainly for the sake of the action that imitates the personal agents” (1450a38-50b4).

Ford thinks that “Aristotle does not need the verbal art to argue for the ethical influence of music for the *Poetics* can simply assert that ‘most’ of instrumental arts are imitative in the sense of expressing action and character.”<sup>214</sup> In support of this claim he refers to *Poet.* 1147a13-16 and 1448a9-10 and gives as an example the Pythian nomos which tells a story “simply by the sound of the aulos.”<sup>215</sup> It is true that in the mentioned passages of *Poetics*, flute and lyre playing are illustrated as imitative, but what they can imitate – as is clearly established in chapter 2 – are the *diversities* of characters, i.e. a noble (σπουδαῖος) person or a vulgar (φαῦλος) one:

The objects the imitator represents are actions, with agents who are necessarily either noble men or vulgar—the diversities of human character being nearly always derivative from this primary distinction, since the line between virtue and vice is one dividing the whole of mankind. It follows, therefore, that the agents represented must be either above our own level of goodness, or beneath it, or just such as we are in the same way as, with the painters, the personages of Polygnotus are better than we are, those of Pauson worse, and those of Dionysius just like ourselves. It is clear that each of the above-mentioned arts will admit of these differences, and that it will become a separate art by representing objects with this point of difference. Even in dancing, flute-playing, and lyre-playing such diversities are possible; and they are also possible in the nameless art that uses language, prose or verse without harmony, as its means; Homer’s personages, for instance, are better than we are; Cleophon’s are on our own level; and those of Hegemon of Thasos, the first writer of parodies, and Nicochares, the author of the *Diliad*, are beneath it. The same is true of the Dithyramb and the Nome: the personages may be presented in them with the difference exemplified... in the Cyclopes of Timotheus and Philoxenus. This difference it is that distinguishes Tragedy and Comedy also; the one would make its personages

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<sup>213</sup> Ibid.

<sup>214</sup> Ford 2004, 321.

<sup>215</sup> Ibid., n. 37.

worse, and the other better, than the men of the present day (trans. Bywater).

Neither actions nor emotions are among the objects instrumental music is able to imitate. The case of the Pythian nomos – not mentioned by Aristotle – would still need words that indicate what sounds stand for each character and action, as is the case with modern program music.

Therefore, an alternative for Ford is to focus on music as a non-narrative “sensory phenomenon”. He writes in his concluding remarks:

“Whatever a teacher might say or a student be prepared to absorb, *what music, qua music, uniquely allows the young to learn about virtue is that noble states are enjoyable* [...] The fact that in *Politics*, as in the *Nicomachean Ethics*, habituation is presented as addressed to the non-rational part of the soul indicates that Aristotle aims to prepare students for ‘judging’ by inculcating in them a basic faculty of discernment, of taste. Just as one’s taste in food (i.e. whether something is sweet or bitter) depends on the health and condition of one’s physical constitution, so one’s likes in music reflect one’s character as formed by repeated exposure to certain music. In ethics as in politics, developing early habits of feeling pleasure and pain rightly makes all the difference (1103b23–5), and is more important than learning or knowing (EN 1103a14–17; 1105b1–5).<sup>216</sup>

If the only thing the young learn from music is “that noble states are enjoyable” then is not clear what role is played by the representation of emotions, characters and their deeds and what sort of judgments the students should make about them. According to Ford, the only thing young listeners are expected to do with respect to virtue is to like – in the constant process of exposure – what is noble. It is not clear how this view would account for the role of music in the process of learning to experience emotions properly – for example get angry – in a right way, at the right time, towards the right person, for the right reasons.<sup>217</sup> Thus in his conclusion Ford states “Aristotle’s keen interest in the effect of music as sound and his clear separation of habituation from *diagogê* and *phronesis* show that he searches the music in *mousikê* not for its aesthetic or philosophical messages, but for its acoustic and physiological powers.”<sup>218</sup>

Ford wants to keep *mimêsis* at 1340a12 as referring to instrumental music, and doing so he must declare that it is narrative, in the sense that a proper artistic imitation is

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<sup>216</sup> Ford 2004, 332, my italics.

<sup>217</sup> I will return to this ‘mechanical habituation’ in the last chapter.

<sup>218</sup> Ford 2004, 332.

not only decoration, but represents characters and their moral qualities in actions:

For Aristotle, properly artistic imitation goes beyond ‘mimicking’ to representing character (*ethos*), the moral qualities of agents as revealed by their choices and actions (*Poetics* 1448a1, 1449b36 ff.). Such pyrotechnics (what Plato calls *thaumatourgia*) should not properly be included among the mimetic arts.<sup>219</sup>

This statement obligates him to claim that at 1340a12 instrumental music represents characters and their deeds as well as emotions. However, at the same time as he describes instrumental music as narrative at 1340a12, he emphasizes the non-narrative power music has to move the soul as a “sensory phenomenon” with its “acoustic and physiological powers”, claiming that the only thing music, *qua* music, can do to listeners it to inculcate “a basic faculty of discernment, of taste.” Nonetheless, although “taste” is important in the sense of like and dislike rightly, the moral education of emotions is not simply a matter of taste, but of judgment about the characters’ deeds. As defended by Konstan, according to Aristotle “emotions are elicited by evaluations of events and situations.”<sup>220</sup> This is what we need to have in mind when we consider the place of emotions in *Politics* VIII, particularly 1340a12, which is worthy to quote again:

When men hear imitations, even apart from rhythms and melodies themselves (χωρίς τῶν ῥυθμῶν καὶ τῶν μελῶν αὐτῶν), their feelings move in sympathy (συμπαθεῖς). Since then music (μουσική) is a pleasure, and excellence consists in rejoicing and loving and hating rightly, there is clearly nothing which we are so much concerned to acquire and to cultivate as the power of forming right judgments, and of taking delight in good characters and noble actions. (τὸ κρίνειν ὀρθῶς καὶ τὸ χαίρειν τοῖς ἐπιεικέσιν ἢθεσι καὶ ταῖς καλαῖς πράξεσιν) (1340a19) Rhythms and *songs* (μέλη) supply imitations of anger (ὀργή) and gentleness (πραότης), and also of courage (ἀνδρεία) and temperance (σωφροσύνη), and of all the contraries to these, and of the other qualities of characters (ἤθη).

The verb “judge” (κρινῶ), first in connection to good character and noble action, and then followed by the emotions represented by music, makes me think of the exactly same verb used in *Rhetoric* for the description of emotions. If, as Ford seems to argue, this judgment has as object the characters, their deeds and the emotions represented in a story by instrumental music, why does he conclude that Aristotle’s focus is music understood as a “sensory phenomenon” with its “acoustic and physiological powers” and that the only thing music *qua* music can do to the listeners it to inculcate “a basic

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<sup>219</sup> Ibid., 321, n. 38.

<sup>220</sup> Konstan 2007, 21.

faculty of discernment, of taste”?

Ford declares that the way to defend *mimêsis* at 1340a12 as poetry would be to consider Aristotle’s use of the word *akroômenoi*. Ford argues that in using this word, Aristotle “could be anticipating his argument from the senses by adding to his observation about the ethical effects of the tunes of Olympus the point that poetic *mimêsis* also affect *sumpatheia* through our sense of hearing”.<sup>221</sup> Then, he continues, “this effect of verbal imitation is one that passes through the ears prepares us for the following argument that sound has the most potent effect on character.”<sup>222</sup> He doubts this defense because he notes that at a22-3 Aristotle uses the verb *akroômenoi* with direct reference to pure music, where certain *harmoniai* “change the states of the soul when we listen to them (μεταβάλλομεν γὰρ τὴν ψυχὴν ἀκροώμενοι τοιούτων).” Nevertheless, at 1340a22-23 there is no mention of the *harmoniai* as he claims, but the changes in the soul are due to the *mimêsis* that represent emotions, characters and their deeds by means of song (*mêle*) and rhythms.

In conclusion, Ford wants to attribute to instrumental music a narrative power but nonetheless he dismisses it as something irrelevant in the overall analysis of music. I agree with him with the idea that to see poetry in all the analysis of *Politics* VIII is wrong because Aristotle *does* deal with instrumental music. However, I think that he exaggerates, and wanting to put back music in *Politics* he had wrongly rejected the role of the words in *mousikê*.

Stephen Halliwell’s interpretation of the “musical emotions” is also worthy of exploration. The reason is that he seems to propose that according to Aristotle “the emotions involved in musical experiences are cognitively based.”<sup>223</sup> He concludes this because the listener needs to feel emotions, the right emotions, “judging well”. I agree: if there is such a thing as “musical emotions” they must be “cognitively based”, because all emotions are “cognitively based” according to Aristotle.

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<sup>221</sup> Ford, 2004, 324.

<sup>222</sup> Ibid. Latter (p. 329), he doubts again whether Aristotle is referring to music with words or not: “We have traversed the discourse *peri mousikês* in 8.5-7 with no need to extend the argument to poetry or literature—except perhaps in our crux [1340a12]”.

<sup>223</sup> Halliwell 2002, 239, n.12.



Halliwell explains further that a “cognitive pleasure” which is “afforded by the contemplation of mimetic works is accordingly a pleasure of recognition and understanding of likenesses.”<sup>224</sup> I doubt, however, that Aristotle thought that the mere recognition of something imitated would bring pleasure. In fact, although there is a natural pleasure in the recognition of imitations (*Poet.* 1448b4-22), the imitations can also produce pain and in some case not only *can*, but *should*. This is the whole point of the musical *paideia*: to habituate listeners to feeling pleasure or pain in the right way, not just to enjoy any representation independently of the content. Young students need to be good judges, not in the sense of art critics who can recognize and understand the likeness, but they need to judge what is good or bad in a moral sense.

The position of Halliwell is valuable because it tries to explain the relationship between music and emotions but I think that he leaves the explanation somehow mysterious and in contradiction with what Aristotle says about the emotions.

Let us consider what Halliwell describes as the reasons for which, according to Aristotle, emotions are aroused from music but not from plastic arts:

[A painting] requires a larger framework of suppositions for its justification—among other things, a narrative framework, that is (in the terms of *Poetics*), an implicit structure of ‘action’. The perception of character i[n] such cases will be a process of discursive inference, a ‘reading’ of the implied relationship between action and character, rather than recognition of an intrinsic property of the ordered “shapes and colours” of the material artwork. The qualities of music by contrast are taken by Aristotle to have a direct communicative effect on the mind and emotions of the (appropriately receptive) hearer, who does not infer that music embodies certain ethical traits but seems to experience the appropriate feelings as a necessary part of attending to the music: the listener’s mind is “changed” in the very act of listening, and this change is constitutive of what it means, in the fullest sense, to hear music.<sup>225</sup>

Here the mind seems to work as non-reflexive sense perception and little room is left for a cognitive process beyond the recognition of the emotions “embodied” in the music. The mind changing in the very act of listening reminds us of the organs of sense perception which change in the same act of perceiving. If “the emotions involved in musical experiences are cognitively based,” as Halliwell claims, it is necessary to show what is the object of cognition. According to Halliwell, musical emotions are

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<sup>224</sup> Ibid. 188.

<sup>225</sup> Ibid. 242-43.

cognitive-based because the listener needs to judge well and feel pain and pleasure in the right way. But if the listener's mind is "changed in the very act of listening", there is not much space for cognition, at least not for the cognition that involves an evaluation as to whether or not the thing represented is worthy of pleasure or pain. If the 'cognition' Halliwell ascribes to the emotions involved in musical experiences is a cognition based in the pleasure of the "recognition and understanding of likenesses"<sup>226</sup> between the music and the real emotions or things represented, then Aristotle would be describing in *Politics* 1340a12-29 a totally different way in which emotions can be aroused. In other words, Halliwell seems to interpret that the musical emotions represented are transferred to the listener in the very act of listening. The cognitive element would be the recognition of the emotions represented as well as the evaluation of whether or not those emotions should be liked or not. In contrast, we have seen, in *Rhetoric* Aristotle shows that the emotions are not aroused by the mere recognition of an emotion or its representation, but are caused by the judgment of a particular situation.

### 3.5 Enthusiasm

Now, there is one important objection to my position that instrumental music does not transmit emotions to the listeners by contagion. Aristotle says explicitly that instrumental music is able to arouse at least one "emotion". At 1340a8-12 it is said that the melodies of Olympus produce "enthusiasm" in the listeners, and enthusiasm is "a πάθος of the character of the soul" (ὁ δ' ἐνθουσιασμός τοῦ περὶ τὴν ψυχὴν ἥθους πάθος ἐστίν). Should we translate πάθος as emotion here with the same meaning of the emotions as in *Rhetoric*? I do not think so. *Frenzy*, the English equivalent of ἐνθουσιασμός, is a non-cognitive state or at least can be induced by material means, for example by applying drugs or wine, which is precisely what the Aristotelian author

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<sup>226</sup> Ibid. 188.

of the *Problems* suggests at 954a36 where it is said that altering the temperature of the body wine can produce ἐνθουσιασμός. Frenzy/excitement is not an object-directed emotion but a general state that is even possible to achieve by mere physiological alterations. Also, *enthusiasm* does not appear in any list of emotions in Aristotle and so I think that he uses the term *pathos* to refer to it as *affection* rather than as an *emotion* proper. The state of ἐνθουσιασμός is objectless and should thus be considered as something different from the emotions discussed in the *Rhetoric*. Emotions are presented as cognitive processes directed towards an intentional object but frenzy is not about something; it is a state empty of content. All the emotions presented in *Rhetoric* are based on beliefs about an object while the state of frenzy does not require any judgment beyond the mere recognition that one is in such state. For example, we feel pity *because* of the undeserved misfortune of someone, we feel angry *because* of an insult. In the case of ἐνθουσιασμός there is no need for a particular belief; we do not need to judge that something is the case. The music affects the listener who enters into frenzy without holding any particular thought, just as wine produces the same effect without providing any object to the mind. It is true that Aristotle uses the term *pathos* for ἐνθουσιασμός but, because it does not involve any judgment, this “affection” of the soul does not qualify among the group of *pathê* presented in *Rhetoric* and that we have translated as *emotions*.

### **3.6 *Emotions-like* close to real emotions?**

If my analysis is wrong and it is not the words in the song that produce anger and all the other emotions in the listener, but rather such emotions are elicited by the power of instrumental music, then all accounts of Aristotle’s emotions depending on intentionality should be regarded at least as insufficient or incomplete. In order to save the case and maintain that emotions for Aristotle were always about something and not objectless reflexes it could be argued that the emotions that instrumental music arouses are a different kind of emotion or a *sui generis* type of them. In fact, Aristotle

says explicitly: “The habit of feeling pleasure or pain at representations *is close* to the same feelings about realities” (ὁ δ’ ἐν τοῖς ὁμοίοις ἐθισμὸς τοῦ λυπεῖσθαι καὶ χαίρειν ἐγγύς ἐστι τῷ πρὸς τὴν ἀλήθειαν τὸν αὐτὸν ἔχειν τρόπον).<sup>227</sup> This *closeness* to the real feelings of pain and pleasure – which are necessary conditions for emotions – seems to indicate that we are dealing with an *emotion-like* state. The only explanation Aristotle provides is an example. If someone enjoys the appearance of a sculpture it will necessarily follow that he would enjoy the sight of the original. The likeness is thus between two pleasures: the pleasure we get from artistic representations is like the one we get from real life and real objects. It is unclear whether the distinction is one of degree or some other qualification but I am inclined to the first option. Aristotle does at least make a distinction between our responses to representations of plastic arts and real situations. In *De anima*, discussing the nature of *phantasia*, he seems to state that just imagining an object is not enough to experience an emotion:

When we are of opinion (δοξάζομεν) that something is terrible or alarming, we at once feel the corresponding emotion, and so, too, with what is reassuring. But when we are under the influence of imagination (κατὰ δὲ τὴν φαντασίαν) we are not more affected than if we saw in a picture the objects which inspire terror or confidence (*De anima* 427b21-4).

Merely imagining something fearful is not the same as believing it. When we believe that something is fearful then we are faced with a real situation. I doubt that Aristotle refers to a theoretical thinking. For example, I do believe that white sharks are fearful; however I do not experience fear as a consequence of my thought. In order to experience the emotion we need to believe that something is *actually* fearful in front of us or is a latent menace. This is not to deny that by imagining or thinking emotions can be aroused; in fact, it is by thinking and imagining that we experience emotions. I think that what Aristotle says is that when we react emotionally to artistic representations it is like when the object of our thinking is hypothetical (imagining the death of a family member for instance) or when we are recalling memories as actors do using what is called “affective memory”. All these emotions have in common a sort of disconnection with immediate action. Similarly to the case in *Politics* –where the

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<sup>227</sup> 1340a23-25. Woerther (2008, 101) states that the emotions aroused by music are “the same” with real emotions.

pleasure or pain that is taken from artistic representations is *close* to what we get from real objects – in *De anima* it seems that we have the same sort of distinction. As we have seen, for Aristotle plastic arts can only show signs of emotions and their moral character is presented only to a slight degree. The appearances or images of visual arts – as well as those *phantasmata* created in the mind by the imagination – produce pleasure/pain and the emotions associated with them to a lesser degree than real emotions. One explanation could be found in *De anima* where Aristotle discusses the locomotion of animals:

It is not the reasoning faculty or what is called intellect that is the cause of motion. For speculative intellect thinks nothing that is practical and makes no assertion about what is to be avoided (φεύγειν) or pursued (διώκειν), whereas motion always implies that we are avoiding or pursuing something. But, even if the mind has something of the kind before it, it does not forthwith prompt avoidance or pursuit. For example, it often thinks (διανοεῖται) of something alarming or pleasant without commanding to fear (οὐ κελεύει δὲ φοβεῖσθαι);<sup>228</sup> the only effect is a beating of the heart or when the thought is pleasant, some other bodily movement (*De anima* 432b26-433a1).

Thus, whether we consider the instrumental music or the music accompanied by words, what we feel would be an emotion-like feeling *close* to real emotions for two possible reasons. First, one option is to consider that the emotions produced by music are close to real emotions because they are of a lower degree, i.e. less intense. Second, the musical emotion does not involve any action tendency like avoiding and pursuing something. We may be afraid of the monster in a movie or afraid of the actions that Oedipus is about to do, but we neither run away from the screen nor try to stop the actor playing Oedipus from killing his father. The object is not real and so the emotion is not strong enough to move us to action as it would have been in a real situation.

The case with instrumental music is even clearer. Assuming that instrumental music could imitate the sound of an angry voice and that the emotion represented would be immediately transmitted to the listener, what would be the object of the emotion? Towards whom or what would be our anger directed? Would it be an objectless emotion? If the answer is affirmative then Aristotle contradicts himself since he

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<sup>228</sup> Hicks translates: “without prompting to fear”; and Smith “without enjoying the emotion of fear”. In both cases I think the meaning of Aristotle’s words is lost. The emotion is felt but there is no action as consequence of it.

describes emotions as object-directed states. My position is that what instrumental music produces is an objectless mood but not a specific emotion.

What Aristotle offers – or more justly, what I think Aristotle would offer if he were able to respond to the blank spaces – is that with respect to emotions music stands between an intentional object and the mind. The object of the emotions, which is the target of the emotional judgment, changes its appearance because of the music. This is what happens with the words of the orator and the tone of his voice or the visual elements in the theatre decorating the plot. The object of the emotion is a situation; a particular content provided by the argument of the orator or the story in the play. If those elements are not present then the mind itself may provide a proper object to be judged. We can understand this idea thinking of a metaphor of music working as a window. When we contemplate the world and some music starts playing, what we perceive is “colored” by it, or following Aristotle own metaphor, *seasoned*. This sort of “musical crystal” is thus placed between our mind and the object that we observe. In the case of a window between the world and us, if the window changes its properties the way in which we see reality is altered. Different types of glass “paint” different filters in front of our eyes and over the objects insight; their shape and color distort the landscape in front of us. Even a clean transparent window changes our perception. If we open the window then things look different; we see and even hear them more clearly. Music, the human voice, and sounds of all sorts also add “textures” to reality. That is how Aristotle describes the usage of the voice by the orator and the characters in a play. Music, as well, rests between the play in the theatre or the words of the poets and listeners. It gives to the words new textures, changing their appearance and meaning. However, the listener does not stop at contemplating the music as our sight does not stop in the window; the object of our judgment is beyond it and our emotions are directed there. This is more clear in films, where the soundtracks, consciously perceived or not, stand in the background of our attention. We cry and laugh about what happens *in* the story, about the narrative, deeds, situations or ideas: we respond emotionally to something. When we put the focus on the window rather than the things seen through it then there is nothing more than shapes and colors, physical properties that are empty of content by themselves. It is similar with pure instrumental music;

with our eyes closed we can follow the melody and the rhythms by themselves and we can see the shapes and textures without trespassing them. Certainly our own thoughts may come up and be shaped by the music but then we would have shifted the focus of attention from things that are beyond the music. This is not to deny an emotional reaction directed by the music. The beauty of an instrumental piece can certainly move us; we can feel anger because the music we hear is a hymn of political ideas that we reject. All of these reactions and many more may also appear without jeopardizing what I have tried to show. What I have rejected, and I think Aristotle would reject too if he wanted to be consistent, is the idea that music is able to produce an emotional contagion.

### 3.7 The case of “angry music”

Anger is the first proper emotion mentioned by Aristotle as capable of arousal by “music”: “In rhythms and songs there are the greatest likenesses to the true natures of anger” (ἔστι δὲ ὁμοιώματα μάλιστα παρὰ τὰς ἀληθινὰς φύσεις ἐν τοῖς ῥυθμοῖς καὶ τοῖς μέλεσιν ὀργῆς).<sup>229</sup> For those defending the musical contagion of emotions then it is necessary to explain how this would be possible. The emotion of anger (ὀργή) is the most discussed by Aristotle; it not only appears among the other emotions in *Rhetoric* but is also discussed in *De anima*. It is in this latter work that Aristotle explains that emotions are always a twofold process compounded of matter and form. As has been shown in chapter 2.4, the mind *and* the body are always affected together when there is an emotion.

In what follows I will look at anger as a paradigmatic example and show why it is inconsistent with Aristotle’s treatment of emotions to argue that instrumental music is

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<sup>229</sup> *Pol.* 1340a18-19.

able to produce emotions by means of an acoustic contagion. This treatment of anger will serve to clarify further what has been presented so far: that Aristotle understands the emotions not as sympathetic instantaneous responses but as appraisals or evaluative responses directed at an object.

There are two places where anger is defined: *De anima* and *Rhetoric*. In *De anima* 1.1, he explains the two elements involved in the constitution of anger: the matter and the form which are in turn realized in the body and the mind. *Rhetoric* is only focused on the formal part of the emotion and does not pay attention to the bodily processes that are part of the emotional response. Here I will leave the “boiling blood around the heart” aside, because it was already discussed in chapter 2.4, and I will focus on the cognitive aspect of the emotion. This means the part of the emotion that a dialectician rather than a physiologist would be interested in. The treatment of anger is found in *Rhetoric* II, 2. There we find a definition of anger:

A desire, accompanied by pain, for a perceived revenge, on account of a perceived slight on the part of people who are not fit to slight one or one’s own. If this is a proper definition of anger, it must be felt towards some individual, e.g. Cleon, and not man in general. It must be felt because the other has done or intended to do something to him or one of his friends. It must always be attended by a certain pleasure—that arises from the expectation of revenge. For it is pleasant to think that you will attain what you aim at, and nobody aims at what he cannot attain (*Rhet.* 1378a21-b4).

This definition limits the sense of anger to a very narrow meaning. For those defending the idea that the listener instantaneously feels the emotion *with the music*, the question is then how this is supposed to work. How would instrumental music represent all the elements involved in the emotional judgment with mere sound? How would it transfer those elements to the listener’s mind? With the “elements involved” I am referring to what was described earlier as the “narrative context” that serves as the object of emotions. Taking the case of anger that arises from the perception that someone has insulted us or someone we care about, if pure music can imitate anger and the listener experiences the same emotion in the very act of listening to it, then somehow he needs to judge something in the music that describes a very specific type of insult. In what follows I explain the complexity of anger and why it is problematic to claim that instrumental music can arouse this emotion in a listener.



David Konstan and Michael Stocker<sup>230</sup> develop the subject of Aristotle on anger in detail, although without mentioning the imitation of anger in *Politics* VIII. As I mentioned earlier, Konstan just dismisses the affections produced by music as something different from emotions without analysing the passage. In his treatment of the subject Konstan mostly focuses on *Rhetoric*, on the basis of which he concludes that “it is clear that anger, for Aristotle, is anything but an automatic reflex or instinct.”<sup>231</sup>

Konstan is aware that an account that focuses only on the body can help to explain what anger is for Aristotle, but such an account would be irremediably incomplete:

It is conceivable, albeit unlikely in my view, that a sufficient refined physiology of anger might be able to single out all cases of true anger—in which the subject had taken account of intentions and other psychological and ethical factors—from other emotions as well as from instinctive reactions such as the startle effect. Such an account of anger would, nevertheless, be crucially deficient, and not only because it would be lacking a phenomenological description of the subject’s inner state of consciousness. On a purely physical analysis, the means of augmenting or diminishing anger reduce to the manipulation of its organic manifestations: rising or lowering of the blood pressure, heart rate, and so forth, as by chemical means. Let us grant that these means may be effective. It remains the case that they are not exhaustive; for another way of inducing or eliminating anger—Aristotle’s way—is to alter the subjects’ view of the reasons for an offense and the context in which it was given, including the possibility that it was deserved.<sup>232</sup>

Aristotle, as we have seen, explicitly denies that pure bodily changes are enough to arouse emotions. At most, they can leave the subject in a state of “readiness” to react emotionally when faced with a particular object. The alteration of the animal’s bodily state “prepares the way” for the entrance of the emotion but without an appropriate object in front of the animal’s mind there is no emotional trigger.

Leaving the body aside, let me now focus exclusively on the cognitive aspect of anger. The concept of anger that Aristotle develops in *Rhetoric* is quite different to ours. What he understood by ὀργή seems to be a specific type of what we understand by the word

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<sup>230</sup> Konstan 2004 and Stocker, Michael 1996.especially chapter 10: ‘The complex evaluative world of Aristotle’s angry man’ (pp. 265-322).

<sup>231</sup> Konstan 2004, 104.

<sup>232</sup> Ibid. 107.

“anger.” Someone may feel anger at himself or at more abstract objects: his football team losing the final, or even a red light when he is in a rush. For Aristotle, those cases would not qualify for the arousal of ὀργή. In *Rhetoric* we are told that “anger” is the desire for revenge because we have perceived that someone has slighted us. A slight (ὀλιγορία) is defined by Aristotle as “the activation of an opinion about something seeming worthless” (1378b10-11). This “severe restriction” of the concept, as Konstan says, can be better explained by analysing the three different types of slights that Aristotle mentions: καταφρόνησις, ἐπηρεασμός and ὕβρις. The first one, καταφρόνησις, can be translated as contempt. It is described as believing that someone is of no value and therefore acting accordingly. *Contempt* or *disdain* are two possible translations for καταφρόνησις. Aristotle says that one feels contempt when one thinks (οἶμαι) that something is worthless (1378b16). Holding that opinion and acting accordingly is what constitutes the slight. *Spite* stands for ἐπηρεασμός; it is defined as blocking the wish (βούλησις) of someone for the mere sake of impeding his/her wish, i.e. with no benefit for oneself, neither revenge nor defence. Aristotle says: “It is a thwarting of another man’s wishes, not to get something yourself but to prevent his getting it. The slight arises just from the fact that you do not aim at something for yourself” (1378b18-20). The last form of slight is ὕβρις; in this context the word may be translated as insolence or insult. Aristotle describes it as “doing and saying things that cause shame to the victim, not in order that anything may happen to yourself, or because anything has happened to yourself, but simply for the pleasure” (1378b24-27). These examples of slight show how specific the meaning of anger is for Aristotle. It may be difficult for us to understand this very restricted sense of “anger”. For Aristotle, we would not feel anger if the slight is done by someone looking for a just revenge because in such an attack we do not perceive injustice, which is a necessary condition in the definition of a slight.<sup>233</sup> Even an attack that aims to get some benefit would not be considered for Aristotle as a cause of anger. As Konstan says, “anger is not a response to harm as such, even when the harm is intentional.”<sup>234</sup> Rather, anger is a response to the perception of injustice, of someone mistreating us in an undeserved and derogatory way, treating us as something unworthy.

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<sup>233</sup> As Konstan points (2004,109, n. 24), in N.E. 1135b25-29, Aristotle says that “anger resides in a perceived injustice”.

<sup>234</sup> Ibid. 109.

Considering the complexity of anger, it would be quite a challenge to argue that instrumental music is able to, first, imitate all the elements involved, and second, transmit those elements to the listener. One alternative would be to emphasise the idea that music arouses emotions “close” to real emotions, in which case it would be necessary to specify what type of emotions those would be. Even more important, it would be necessary to clarify what the object of the emotion would be. If the anger as described in *Rhetoric* is not the only anger that Aristotle has in mind, then what other type of it is available? My answer is that there is not any other anger except the one just discussed. At least, the intentionality of the emotions cannot be excluded from its characterization. There is no objectless emotion in Aristotle; even if we consider the case of the of the angry dog in *Rhetoric* (1380a24-26). Even in that case we are dealing with a subject feeling something *about* something; an intentional response towards something, as in the analogy of the dog deposing his wrath when the man representing menace sits down and demonstrates submission (*Rhet.* 1149a23-34).

As we have seen in the *Rhetoric*, Aristotle thought that there was a particular sound of voice when someone is experiencing anger and so it is not totally impossible to consider that instrumental music was also able to imitate that sound. However, even if this were the case, the listener would hear the angry sound and recognize it as such but there is no reason why he should also experience the same emotion. It is not the case that we imitate the emotion perceived. For instance, we see Oedipus being angry at Tiresias but we do not share his anger. Similarly, just hearing someone screaming in pain does not put us in the same condition; it may certainly draw our attention but until we discover the origin of the scream, we would not react accordingly. For instance, we would react differently if the scream came from someone being unjustly attacked or from a television set. Besides, we do not only need an object but also something said about that object. The Greeks had instrumental pieces that represented actions and the deeds of different characters, but those representations were presented and preceded by words.<sup>235</sup> Presumably, the listeners knew the story first and then recognized the music as a sign of it. So, if they reacted at one point with fear, for

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<sup>235</sup> See note 191.

example, when the Python fights with Apollo in the Pythian nomos, they do so because they are considering the terrible fight between the god and the monster and not because they hear drums and cymbals crashing, or whatever was the musical representation of the fight. Moreover, even if we accept that an instrumental piece of music could accompany a given text and represent acoustically what happens in the story, there is no necessity for the listener to feel the emotion represented. Let us suppose that there is an instrumental piece that represents at some point a character screaming possessed by anger. To do so, the chosen instrument would presumably imitate the sound of the voice of someone screaming in anger (whatever the sound of someone screaming in anger may be, as opposed to someone screaming because of another emotion). The listener then would be able to recognize the sound and, because he knows the story, he would know that the scream heard belongs to someone experiencing anger. All of these would not be sufficient to arouse the emotion in the listener. The emotion could be extremely vividly represented, the instrument may imitate the scream at the point of making it undistinguishable from the real sound, but still the listener would not experience anger as a result. If the story tells us that the angry screamer deserves his pain we may react with pleasure; or if his anger is the product of an undeserved attack we may react with pity. The reaction to the pure sound imitating an angry voice, or the sound of any other emotion or thing, is not enough to produce a contagion in the listener. The content of the piece of art, in this case music, may be “transferred” to the perceiver, I mean here a mere act of cognition, i.e. the object is somehow grasped by the mind. Thus the color of a perceived apple, Aristotle would say, would be also in the perceiver’s mind.<sup>236</sup> In the case of the angry voice, the same would happen. This “transfer” of the content of the musical piece would be all the “contagion” there is: we hear something that sounds like the voice of someone screaming in anger. Beyond that, there is nothing: we do not know who is feeling the anger, neither his reasons nor towards whom his emotion is directed. There is no referential content to anything.

It may be argued that anger exists even without content. For example, it may be said

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<sup>236</sup> This should not be read to mean a subjectivist position. The mind grasps the forms which are the same for everyone. See *De anim.* III 8.

that it can exist from birth (*Cat.* 10a1),<sup>237</sup> most probably due to certain bodily conditions. In that case it refers to a natural disposition to be easily moved to anger; it does not mean that someone would be continuously experiencing anger but that he is irascible. The emotion proper appears only when an appraisal is made about an object.

From this section we should conclude that, if Aristotle says that rhythms and μέλη produce anger and other emotions: a) he is being inconsistent and there is no necessity of intentional object, nor a judgment for the emergence of emotions; b) he is referring to another *sui generis* objectless type of emotion or c) he is using the term μέλος as *song*, i.e. music accompanied by words. Alternatively, a) may be a valid choice but is disproved if b) or c) are correct. b) is a temptation since Aristotle says that the listeners experience emotions “close to the real ones”, however, this alternative is also rejected because he never spoke about objectless emotions, and particularly in the case of anger he seems to say that anger is not an emotion about general and undefined things. This is suggested in one part of the definition of anger quoted at the beginning of this section: “If this is a proper definition of anger, it must be felt towards some individual, e.g. Cleon, and not man in general.” Thus, the only reasonable alternative is c). We react emotionally to the situations and ideas in the words accompanying the music. This idea was already proposed in 1812 by Thomas Twining, in his essay accompanying his translations of *Poetics*, entitled: “On the different senses of the word, imitative, as applied to music by the ancients, and by the moderns:”

The expressions of music considered in itself, and without words, are (within certain limits,) vague, general and equivocal. What is usually called its power over passions, is, in fact, no more than a power of raising a general emotion, temper, or disposition, common to several different, though related, passions; as pity, love-anger, courage, &c. The effect of words, is, to strengthen the expression of music, by confining it—by giving it a precise direction, supplying it with ideas, circumstances, and an object, and, by this means, raising it from a calm an general disposition, or emotion, into something approaching, at least, to the stronger feeling of a particular and determinate passion.<sup>238</sup>

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<sup>237</sup> “Those which are present right from birth as a result of certain affections are called qualities, for example madness and irascibility (ὀργή) and the like; for in virtue of these people are said to be qualified, being called irascible (ὀργίλοι) or mad.” Cf. *Rhet.* 1221b10-15

<sup>238</sup> Twining, 1812, 72.

### 3.8 What does music do to listeners?

So far I have addressed the question whether there is an emotional effect of instrumental music on the listeners in a way that would suggest a negative answer. Against most interpretations, I have claimed that Aristotle did not believe that instrumental music is able to arouse emotions (as understood in *Rhetoric*) by a sort of acoustic contagion. I have, however, only focused on one part of *Politics* VIII, namely 1340a12-29; a passage that I have labeled above as text A. Following that passage, where Aristotle discusses the effects of μουσική understood as music *and* lyrics together, he goes on to contrast the *representational* qualities of visual arts. We have already seen that paintings and sculptures only represent signs of emotions but show little about the moral character of those depicted. The next step for Aristotle is then to discuss the effects of pure instrumental music. This further analysis will respond to Ford's criticism: "Always seeing poetry in Aristotle's *mousikê* intellectualizes musical education as a form of ethical instruction through literature. But this flattens out the argument by neglecting Aristotle's keen and sustained attention to the powers of music itself."<sup>239</sup> Aristotle does not always analyse music understood as music and text. In the text I designate as (B) below, he clearly distinguishes music accompanied by words, which is capable of representing actions and emotions, and instrumental music, which is responsible for arousing different *dispositions* in the listeners.

Text B) On the other hand,<sup>240</sup> even in melodies themselves (μέλῃσιν αὐτοῖς) there is an imitation of character, for the musical modes (ἁρμονίαι) differ essentially from one another, and *those who hear them are differently disposed by each* (ὥστε ἀκούοντας ἄλλως διατίθεσθαι). Some of them make man disposed more gravely (ὀδυρτικωτέρως) and anxiously (συνεστηκότως), like the so called Mixolydian, others in a more light-minded way (μαλακωτέρως τὴν διάνοιαν), like the relaxed modes, another, again, produces moderate (μέσως) and settled (καθεστηκότως) temper, which appears to be a peculiar effect of the Dorian; the Phrygian inspires enthusiasm (ἐνθουσιαστικός) [...] the same principle applies to rhythms; some have a character of rest (στάσιμος), others of motion (κινητικός), and of these latter again, some have a more vulgar (φορτικός), others nobler movement (ἐλευθέριος). (1340a38-b10).

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<sup>239</sup> Ford 2004, 314.

<sup>240</sup> Contrary to what happened with visual arts.

The first question here, in particular to those supporting Susemihl's emendation, is why is Aristotle explaining once again the effects that instrumental music produces? And if this is indeed another explanation that he chooses to give, then why are these effects different to those mentioned earlier? If, as suggested by those following Susemihl, Aristotle first explains the effects of pure melody (μέλη) (in Text A), why bother to do it again? My answer is that only *now* does Aristotle focus on the effects of pure music without words.

In order to understand this passage and to give a psychological explanation of what happens when we hear music, we need to recall what we have said about the material aspect of emotions. Emotions, we said, are compounds of matter and form. By matter, I mean the physiological elements involved, especially the temperature of the blood and the heart. The form is the "reasons," the cognitive element in the emotion. For example, the matter of anger is the boiling of the blood around the heart; the form can have several interpretations, it can be presented as the "reason why" we are angry, which involves also the "about what" or "against whom" we experience anger. If we remove the cognitive element, what is left is only the stirring of the body. This, as has been argued, on a physical level produces the "symptoms" of an emotion: the visible bodily signs accompanying it. In psychological terms, it produces what can be referred to as mood; an ambiguous and objectless affection. That mood "prepares the way" for the arousal of an emotion when a proper object is judged; we would be conditioned and inclined to a particular emotion because of our bodily state. Is it possible then that music affects the body in a particular way, agitating the heart and causing more heat? For Aristotle the answer is in the affirmative. Music, as sound, is not a spiritual thing disconnected from matter. No sound means no music; and sound, according to Aristotle, has a physical impact on us. It is true that in *Politics* Aristotle talks about the impact of music over the soul because he is concerned with the education of character. But this does not mean that he would deny the participation of the body. The only mental activity that could perhaps be separate from the body is thinking, but hearing and the emotions *always* occur in conjunction with a physiological change.

I cannot, in this work, go into the complexities that are involved in Aristotle's account of sound. The topic has served for the discussion between literalists and formalists with respect to sense perception, discussion that is out of the scope of this research<sup>241</sup> However, it seems clear to me that the air inside the ear receives the impact of the outer air and reverberates adopting the same shape. The different shapes that the air adopts are due to the speed of movement: "Lowness of voice depends on the movement being slow and its highness on being quick" (*Generation of Animals* 786b25-26).

Then an interesting process takes part inside the hearer:

For the passages of all the sense-organs, as has been said in the treatise on sensation, run to the heart, or to its analogue in creatures that have no heart. The passage of the hearing, then, since this sense-organ is of air, ends at the place where the *innate breath* (πνεῦμα τὸ σύμφυτον) causes in some animals the pulsation of the heart and in others respiration; and that is why we are able to understand what is said and repeat what we have heard, for as was the movement which entered through the sense-organ, such again is the movement which is caused by means of the voice, being as it were of one and the same stamp, so that a man can say what he has heard. And we hear less well during a yawn or expiration than during inspiration, because the starting-point of the sense-organ of hearing is set upon the part concerned with breathing and is shaken and moved as the organ moves the breath, for while setting the breath in motion it is moved itself. The same thing happens in wet weather or a damp atmosphere. And the ears seemed to be filled with air because their starting-point is near the region of breathing. Accuracy then in judging the differences of sound and smells depends on the purity of the sense organ and of the membrane lying upon its surface, for then all the movements become clear in such cases, as in the case of sight (*Generation of Animals* 781a20-b5, tans. A. Platt.).<sup>242</sup>

This passage has been said to be a later addition. The first to do so was Peck (1942, 563-4) in his translation of the treatise. He did not draw on any textual problem with

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<sup>241</sup> My position against Burnyeat (1995, 421) is that either as a wave or as a mass of air traveling from one point to another, it is clear that Aristotle believed in sound as involving some kind of physical motion of air.

<sup>242</sup> οἱ γὰρ πόροι τῶν αἰσθητηρίων πάντων, ὥσπερ εἴρηται ἐν τοῖς περὶ αἰσθήσεως, τείνουσι πρὸς τὴν καρδίαν, τοῖς δὲ μὴ ἔχουσι καρδίαν πρὸς τὸ ἀνάλογον. ὁ μὲν οὖν τῆς ἀκοῆς, ἐπεὶ ἐστὶ τὸ αἰσθητήριον ἀέρος, ἢ τὸ πνεῦμα τὸ σύμφυτον ποιεῖται ἐνίοις μὲν τὴν σφύξιν τοῖς δὲ τὴν ἀναπνοὴν [καὶ εἰσπνοήν], ταύτην περαίνει· διὸ καὶ ἡ μάθησις γίνεται τῶν λεγομένων ὥστ' ἀντιφθέγγεσθαι τὸ ἀκουσθέν· οἷα γὰρ ἡ κίνησις εἰσῆλθε διὰ τοῦ αἰσθητηρίου, τοιαύτη πάλιν, οἷον ἀπὸ χαρακτῆρος τοῦ αὐτοῦ καὶ ἐνός, διὰ τῆς φωνῆς γίνεται ἡ κίνησις, ὥσθ' ὁ ἤκουσε, τοῦτ' εἰπεῖν. καὶ χασμώμενοι καὶ ἐκπνέοντες ἦττον ἀκούουσιν ἢ εἰσπνέοντες· διὰ τὸ ἐπὶ τῷ πνευματικῷ μορίῳ τὴν ἀρχὴν τοῦ αἰσθητηρίου εἶναι τοῦ τῆς ἀκοῆς, καὶ σεῖεσθαι καὶ κινεῖσθαι ἅμα κινουμένου τοῦ ὄργανου τὸ πνεῦμα· [κινεῖται γὰρ κινουμένου τὸ ὄργανον.]<sup>1</sup> καὶ ἐν ταῖς ὑγραῖς ὥραις καὶ κράσεσι συμβαίνει τὸ αὐτὸ πάθος, καὶ τὰ ὄντα πληροῦσθαι δοκεῖ βπνεύματος διὰ τὸ γεινῆναι τὴν ἀρχὴν τῷ πνευματικῷ τόπῳ. ἡ μὲν οὖν περὶ τὰς διαφορὰς ἀκρίβεια τῆς κρίσεως καὶ τῶν ψόφων καὶ τῶν ὁσμῶν ἐν τῷ τὸ αἰσθητήριον καθαρὸν εἶναι καὶ τὸν ὑμένα τὸν ἐπιπολῆς ἐστίν· πᾶσαι γὰρ αἱ κινήσεις διάδηλοι, καθάπερ ἐπὶ τῆς ὄψεως, καὶ ἐπὶ τῶν τοιούτων συμβαίνουσιν.



the manuscripts but focused on the content of the text, claiming that “the passage originated as a marginal annotation, intended to supply an account of the inner mechanism of sensation, etc., which would supplement the account of the superficial sense-organ of hearing and smell which no doubt originally stood here in the text”. Later, H.J Drossart Lulofs (1965, 182) followed Peck without further arguments. On the contrary, P. Louis (1961) and R. Ferwerda (2005) in their respective translations did not follow Peck’s objection to the authenticity of the text but they did not provide any counterargument. The only direct response to Peck is offered by Abraham P. Bos (2010), from whom I took the previous references. Bos’s main argument has as its target the confusion he ascribes to Peck between “the external, heterogeneous, instrumental parts of perception (eyes, ears, nose), and the homogeneous, instrumental aisthètèria, which are parts of the soul’s instrumental body (*Part. anim.* II 1, 646a12; b6).”<sup>243</sup> In what follows I will present Peck’s six reasons to reject the passage as authentic followed by Bos’ responses and my own consideration.

The first of Peck’s arguments is that “the introductory γὰρ introduces no real explanation or expansion of the preceding argument. The passage is in fact completely extraneous to the argument.” Against this, Bos claims that at 781b1-4 Aristotle “emphatically reformulates his argument” and the passage as a whole is focused on the object just discussed, i.e. on conditions in which hearing is accurate and the purity of the αἰσθητήριον. Bos proved earlier in his paper that the αἰσθητήριον should not be confused with the ear nor with the external air that enters into the ear and reaches the membrane, but with the sense of hearing which is made of “innate air” and goes from the heart to the ear.<sup>244</sup> If Peck were right and the previous and following discussion in the passage were about the external sense-organ, I think it would be an exaggeration to claim that a digression about the inner process of hearing would be “completely extraneous to the argument.”

The second argument is that “The reference to *De sensu* at 781a21 is incorrect [...] There is no such clear statement in *De sensu*; at 439a1 the αἰσθητήριον of touch and

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<sup>243</sup> Bos 2010, 182-183.

<sup>244</sup> 781a23-4; *Sens.* 438b20 and *De anim.* 420a4-7.

taste is said to be πρὸς τῇ καρδίᾳ, but nothing is said to suggest that sight and smell have any further connexion beyond their connexion with the brain.”<sup>245</sup> Bos replies saying that Peck, as well as Ross, interprets *De sensu* 2 erroneously. Bos points that in that work at 438b8–10 we read: οὐ γὰρ ἐπὶ ἐσχάτου τοῦ ὀμματος ἢ ψυχῆ ἢ τῆς ψυχῆς τὸ αἰσθητικόν ἐστίν, ἀλλὰ δῆλον ὅτι ἐντός. In Bos’s view, according to Ross in this passage it is said that the soul is located “on the inside of the eye.” In doing so, Bos says that Ross goes against such an important ancient commentator as Alexander (although no reference is given) and that the passage does not say that the soul is “on the inside of the eye” but, he argues, is “inside the living creature, i.e. in the centre of the living creature, where he constantly situates the soul, including the sensitive soul”. I am not convinced that ἐντός refers to the inside of the living being. The context seems to suggest that Aristotle refers to the interior of the eye, since before and after 438b8-9 he talks about the interior of the eye being made of water. Nonetheless, Bos has another argument against this second objection of Peck’s. In *Parts of animals* 656a29, Peck acknowledges, there is a correct reference to *De sensu*: “The correct view, that the ἀρχή of the senses is the region around the heart, has already been defined in the treatise *Of Sensation*, where also I show why it is that two of the senses, touch and taste, are evidently (φανερῶν) connected to the heart”. Bos says that in that passage there is nothing to deny that hearing and smelling are not also connected to the heart. In *De Sensu* the only reference to the connection between the senses and the heart is at 439a1 where it is said that the senses of touch and taste are closely related to the heart; while smell is related to the brain, due to the lightness of the heat that is proper to odors (438b25, 444a22). Thomas Aquinas discusses in his commentary on *De sensu* the apparent contradiction of two organs being the center of sense perception. He argues that the heart is the only center of sense perception and that the brain is only a subsidiary organ for sense perception. In contrast to Peck, he saw in *De sensu* the connection between all the sense organs and the heart, declaring that “the sensitive power flows from the heart to the brain, and from there it proceeds to the organs of three senses, sight, hearing, and smell.”<sup>246</sup> How Aquinas got such conclusion from *De*

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<sup>245</sup> According to Solmsen (1961, 558, n. 29) in *De sensu* “no physiological implementation of the statement is to be found”. This is true, but what is said in the passage is not that the whole mechanism is *De sensu*, but the connection between the senses and the heart.

<sup>246</sup> Sed a corde derivatur virtus sensitiva ad cerebrum, et exinde procedit ad organa trium sensuum, visus, auditus et odoratus. Sententia De sensu, tr. 1 l. 5 n. 18.

*sensu* is not clear. The text as we know it does not make such a reference, so either Aquinas had another version or he is using material from another text to make an interpretation of *De sensu*.

However, accepting that the reference to the *De sensu* in the passage of *Generation of Animals* is inaccurate is not enough to dismiss the passage as spurious. The description of the region of the heart as the centre of all sensation is found in other, well attested, parts of the Aristotelian corpus: “The sensory faculty, the motor faculty, and the nutritive faculty are all lodged in one and the same part of the body.”<sup>247</sup> More importantly, it is in the same *Generation of animals* that the passages that connect the sense organs to the heart are mentioned. At 743b36-744a5 we read:

The sense organ of the eye is set upon certain passages, as are the other sense organs. Whereas those of touch and taste are simply the body itself or some part of the body of animals, *those of smell and hearing are passages connecting with the external air and full themselves of innate breath; these passages end at the small vessels about the brain which run thither from the heart.*

There are other works where Aristotle refers imprecisely to his own discussions elsewhere.<sup>248</sup> This could result from a mistake by Aristotle or a problem of transmission of the text, and not necessarily because it correspond to the ideas of other author as Peck suggests. These options do not rule out Peck’s argument but at least indicate others alternatives.

The third argument of Peck’s is this: “The passage is concerned exclusively with that part of the mechanism of hearing which is internal, not with the superficial sense-organ, whereas the reason given for accuracy of hearing and smelling is concerned only with the superficial sense-organ (just as the similar argument for sight, which is referred to, is concerned only with the eye itself and the skin on it).” Bos’s response is his already mentioned view that Peck confused the αἰσθητήριον as the external organs, i.e. the ear, the nose, etc. with the proper organs of sense perception. Besides, accepting that the passage under dispute refers to the internal mechanism and the texts

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<sup>247</sup> *Parts of animals* 647a25-26. See also *On sleep*. 455b34-456a6.

<sup>248</sup> See French 2005, 70.

surrounding it to the accuracy of the external sense organs is not sufficient grounds to deny its authenticity. According to Peck, Aristotle's original text only mentions the accuracy of the external sense organs, but even if this were true, it would not mean that he denies other internal conditions for the accuracy of sense perception, as in fact he does.<sup>249</sup>

For his fourth point, Peck wrote: "The passage has nothing whatever to say about smell." Bos agrees with this, but nonetheless thinks that "no doubt Aristotle assumed his hearers would understand that the hearing argument was applicable *mutatis mutandis* to smelling."<sup>250</sup> To this I only have to add, again, that from the omission of the sense of smell it does not logically follow that the passage was not written by Aristotle; it could be a mistake or, as Bos says, just taken for granted.

Peck's fifth argument is that the passage "concludes with a mere repetition of 781a18–20, to the effect that accuracy depends upon the purity of the organ and its membrane, ignoring the whole of the intervening discussion about the internal mechanism." To this, Bos replies that Aristotle "does in fact repeat" the argument but this is not a problem because he is not making a distinction, as Peck argues, between the internal mechanism and the *αἰσθητήριον*, which Peck, Bos says, "stubbornly identifies [... ] with the ear."

Even accepting Peck's interpretation of *αἰσθητήριον* as the ear I think that in the conclusion of the passage Aristotle is not "ignoring the whole of the intervening discussion about the internal mechanism". Aristotle does not need to repeat what he just said. As I see it, keeping Peck's *αἰσθητήριον* as the external sense organ, Aristotle first mentions that accuracy in hearing is due to an ear which has clear and pure inner air inside as well as a functional membrane. He goes on to explain why this is necessary, and the reason is that from the ear the sound needs to travel to the heart, the center of sense perception. If the air within the ear and the membrane are not clean, the heart would not receive the sound or would receive distorted sound. Then, after

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<sup>249</sup> GA 667a14-15 and *On memory* 550a16-10.

<sup>250</sup> Bos 2010, 184.

explaining the inner process, he repeats what he was saying before the digression: that a pure organ of hearing and its membrane are necessary for the accuracy of hearing.

Peck's last point is that "the reference to a place where the connate pneuma causes 'in some' pulsation and 'in others' respiration and inspiration is, as Platt points out, meaningless, for no animal respire unless it has a heart."<sup>251</sup> Bos considers this as something "almost incredible for an expert like Peck" and simply points out that there are animals without respiratory systems that still have pulsation, giving as an example *On breath* 483a15 where he says a non-necessary conjunction of 'pulsation' and 'respiration' is shown. There the text refers to the way pulsation occurs in embryos even without respiration, and earlier at 483a1 the author of *On breath* says explicitly that "the pulse has no connexion with the respiration". However, the reference to a spurious treatise such as *On breath* is problematic, so I think it is better to refer to *Generation of animals* 742a5 where we can also infer that animals first have a pulse and only at the later stage of gestation can they breathe. Another option is to refer to *Parts of animal* 659b13 where we are told that there are animals that do not breathe but nonetheless have an organ analogous to the heart that can perform the same functions (681b14-682a8).

So, summing up, Peck's objections to the authenticity of the passage can be successfully countered, and we can consider it as part of Aristotle's explanation of the process of hearing. Furthermore, the premise that sense perception, and particularly hearing, has an impact on the heart is confirmed in *On memory*. There, as in the passage of *Generation of animals* – although worded differently – the idea of sense perception making a physical stamp of the object perceived is repeated. Thus, when Aristotle asks how memory works, he says:

One might ask how it is possible that though the affection is present, and the fact absent, the latter –that which is not present– is remembered. It is clear that we must conceive that which is generated through sense perception in the soul, and in the part of the body which it its seat, –viz. that affection the state whereof we call memory– to

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<sup>251</sup> Peck 1943, 564.

be some such thing as a picture. The process of movement stamps in, as it were, a sort of impression of the percept, just as persons do who make an impression with a seal.<sup>252</sup>

The physical impression that sense perception creates is confirmed again when Aristotle says that in “those who are strongly moved [...] no memory is formed” (*On memory* 450b2). A physical condition of the heart is required; it needs to stay still to receive the impressions. This interpretation finds further support in *Parts of animals* 667a14-15 where Aristotle says: “in animals of low sensibility the heart is hard and dense in texture, while it is softer in such as are endowed with keener feeling.”<sup>253</sup> Why would there be a difference in the quality of perception depending on the softness or hardness of the heart? My answer is that the heart receives physically the impressions from the sense organs. Again, in *On memory*, Aristotle states that the affection of recollection<sup>254</sup> “is a searching for an image in a corporeal substrate.” This is proven, he says, because those who cannot recollect suffer pain, which is still present even when they have desisted to recollect. It is like throwing a stone, he says, that cannot be stopped once thrown. Similarly, Aristotle adds, those experiencing anger and fear have inner motions that, even though the person “set up counter motions”, are still present “in the same direction as at first”. This, I interpret, is a sort of physical inertia that causes motions in the region of the heart. Aristotle seems to be saying that once an emotion stirs us it is difficult to stop the original impulse. Interestingly for the case of music, Aristotle suggests that something similar occurs when we repeat a song constantly: “This affection is like that which occurs in the case of names, tunes and sayings, when any of them has been very much on our lips; for even though we give up the habit and do not mean to yield to it, we find ourselves continually singing or saying the familiar sounds.”<sup>255</sup> Following what he says it seems that there is a movement in the region of the heart that is the consequence of the involuntary singing.

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<sup>252</sup> ἀπορήσειε δ' ἂν τις πῶς ποτὲ τοῦ μὲν πάθους παρόντος τοῦ δὲ πράγματος ἀπόντος μνημονεύεται τὸ μὴ παρόν. δῆλον γὰρ ὅτι δεῖ νοῆσαι τοιοῦτον τὸ γινόμενον διὰ τῆς αἰσθήσεως ἐν τῇ ψυχῇ καὶ τῷ μορίῳ τοῦ σώματος τῷ ἔχοντι αὐτήν, οἷον ζωγράφημα τι τὸ πάθος, οὗ φαμέν τὴν ἔξιν μνήμην εἶναι ἢ γὰρ γινομένη κίνησις ἐνσημαίνεται οἷον τύπον τινὰ τοῦ αἰσθήματος, καθάπερ οἱ σφραγιζόμενοι τοῖς δακτυλίοις. *On memory* 450a26-b1. Cf. *De anima* 424a17-24.

<sup>253</sup> Cf. *Theaetetus* 191c9-d1.

<sup>254</sup> Recollection (ἀνάμνησις), as opposed to memory, is only available to humans. It is, Aristotle says, a sort of “investigation” about the past which is deliberative (βουλευτικός), for deliberation too is a form of inference (καὶ γὰρ τὸ βουλευέσθαι συλλογισμός τις ἐστίν). *On memory* 453a12-14.

<sup>255</sup> καὶ ἔοικε τὸ πάθος τοῖς γένηται τι αὐτῶν σφόδρα· παυσάμενοι γὰρ καὶ οὐ βουλομένοις ἐπέρχεται πάλιν ἄδειν ἢ λέγειν. *On memory* 453a29-32.

We need to consider the physical motions of sense perception and that, those motions, in turn, resemble the sensible object that caused them (ἔστι δὲ γίνεσθαι κίνησιν ὑπὸ τῆς ἐνεργείας τῆς αἰσθήσεως, καὶ ταύτην ὁμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει *De anim.* 428b13-14).

Moreover, in *On dreams* there is further evidence of the physical impact of sense perception on the heart. We are told there that each particular sense organ produces a motion leaving *images and residual movements* (τὰ φαντάσματα καὶ αἱ ὑπόλοιποι κινήσεις 461a18-19) on the heart. Those affections are the material from where dreams are made and are literally “preserved movements” in the heart originated by sense perception (σωζομένη τῶν αἰσθημάτων ἢ κινήσις ἀφ’ ἐκάστου τῶν αἰσθητηρίων ἐρρωμένα τε ποιεῖ τὰ ἐνύπνια 461a27-28). How is the physical impact of sound preserved in the heart? We do not know. It is certainly difficult to imagine the heart conserving different vibrations on it. However, despite the difficulty of conceiving it, all the evidence collected here suggests that for Aristotle the heart was physically altered by the impact of sound.

Now, there is still one objection to the account of hearing in the passage of *Generation of Animals* 781a20-35. The passage is certainly complex, not only because of the lacunas but also because of Aristotle’s confusing description of the blood vessels. Michael Frampton has studied the physiology Aristotle offers in this passage and has pointed out the contradictions. With respect to the idea of a “pneumatological continuum” and the “channels or vessels” through which sense perception supposedly travels from the outside to the heart he thinks that is the work of “subsequent thinkers who sought to salvage Aristotle’s still incomplete cardiocentric framework.”<sup>256</sup> One inconsistency in Aristotle’s account is the poor description of the channels connecting the organs of the five senses with the heart. He describes a vague vascular system but not a pneumatological one. If the only channels available in his system are filled with blood then it would be difficult to show how sensation would be transmitted. As Frampton notes, “blood is neither continuous (οὐ συνεχές) nor united by growth (οὐδὲ

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<sup>256</sup> Frampton 2008, 122.

συμπεφυκός) with the flesh but simply lies in its receptacle, that is, in the heart and blood-vessels.”<sup>257</sup> However, elsewhere Aristotle says that blood is essential for sensation (*PA* 648a2). Accepting that Aristotle may face technical difficulties in explaining how the connection is made, there is no reason to doubt that its existence is a part of his theory. Moreover, I think that the omission of the description of channels connecting the air from the inside to the world outside is not good enough reason to deny its existence. Also, there is nothing in the text that contradicts other ideas of Aristotle’s, and more importantly, in the same *Generation of animals* (743b36-744a5) the vessels connecting the senses of hearing are mentioned. Even if the existence of pneumatic channels is denied, it could be argued that blood, although non-sentient by itself, is essential for sensation (*PA* 648a2) and with respect to hearing, it could be the receptacle of the vibrations received from the ear and then carried to the heart, for “blood palpitates in the veins” (σφύζει δὲ τὸ αἷμα ἐν ταῖς φλεβῖν, *HA* 521a6).

Thus, again, the passage should be considered authentic, and Peck’s claim that the passage is not original or similarly that of Solmsen that the passage “gives us glimpses of new developments in the pneuma-doctrine,”<sup>258</sup> should be rejected, considering also that the pneuma doctrine, or at least some early view according to which the inner air is responsible for sense perception, was already present before Aristotle.

Another reason to believe in the authenticity of the Aristotelian doctrine of the impact of sound on the heart can be found in the *Problemata*, whose author points out this connection:

Why do those who hesitate in their speech become worse when they are nervous, but better under the influence of drunkenness? Is it because their condition is a state resembling apoplexy of some interior part of the body which they cannot move and which by its coldness hinders their speech? Wine then, being naturally hot, tends to get rid of the coldness, but nervousness creates coldness; for it is a form of fear, and fear is a chilling condition.<sup>259</sup>

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<sup>257</sup> *PA* 350b3-8.

<sup>258</sup> Solmsen 1961, 175.

<sup>259</sup> *Problemata* (XI, 36): Cf. *Problemata* XI, questions 53 and 60.



This passage shows that not only was Aristotle aware of this connection, but there was awareness also in his school of the bodily states and their relationship with emotions. Fear, for example, is in part the result of coldness in the heart. The nervous voice, which is a voice in some state of fear, results also from coldness in the heart. Aristotle himself confirms this: in a passage from the *Generation of animals* it is said that the hearts of the bulls are sinewy “and therefore that part by which they set the air in motion is in a tense state, like a sinewy string stretched tight.”<sup>260</sup> In this case, the air is moved upwards from the region of the heart to the mouth and not from the ears to the heart, but it helps to show that the presence of air in that region is not absent in Aristotle’s works.<sup>261</sup> Moreover, in the *History of Animals* 492a20 Aristotle describes the ear as being connected with the palate (στόματος οὐρανόν).<sup>262</sup> Thus, although scattered across several works in the corpus, Aristotle has all the elements that are required for the reconstruction of the channels connecting the vibrating sound in the air – through the ears – to the heart. In any event, the idea of a continuous transmission of sound waves from the ear to the inner organs was not unknown in Aristotle’s time. For example, in Plato (*Timaeus* 67a7-c1)<sup>263</sup> and Hippocrates<sup>264</sup> we find very similar accounts.

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<sup>260</sup> GA 787b10-16.

<sup>261</sup> See also *De Anima* 420b26-29: “Respiration is also needed primarily for the region about heart. Hence, as we draw breath, the air enters: and so the impact upon the windpipe, as it is called, of the air breathed is voice, the cause of the impact being the soul which animates the vocal organs”; see also PA 669a14.

<sup>262</sup> Probably he refers here to the Eustachian tube.

<sup>263</sup> “In general, let us take it that sound is the percussion of air by way of the ears upon the brain and the blood and transmitted to the soul, and that hearing is the motion caused by the percussion that begins in the head and ends in the place where the liver is situated. And let us take it that whenever the percussion is rapid, the sound is high-pitched, and that the slower percussion, the lower pitch. A regular percussion produces a uniform smooth sound, while a contrary one produces one that is rough. A forceful percussion produces a loud sound, while a contrary one produces one that is soft”. *Timaeus* 67a7-c1. For a detailed analysis of the mechanism of hearing in this passage in *Timaeus* see Barker 2000. Onians 1954, 66-72 gives a very good account of authors before Aristotle that hold that the sound travels through the ears to the inner organs, particular the φρήν (sometimes midriff, others lungs). Onians wrote: “There are many states that the words of a speaker are ‘put into the φρένες’ of the hearer (*Il. I*, 474) [...] Clearest of all, though it has not excited notice, is the account of how Odysseus hears Nestor calling to wake him. ‘Quickly the sound (or blast, breath, ἰωή, used of wind) came about inside his φρένες and he went forth from the hunt’ (*Il. IV*, 276).

<sup>264</sup> “Of the following things, the mixture is not the cause, e.g. irascibility, indolence, craftiness, simplicity, quarrelsomeness and benevolence. Of all such things the nature of the passages through which the soul moves is the cause. People’s mental activity is determined by the kind of vessels through which soul moves or against which it collides or with which ones it mixes. This is why it is not possible to change such things through regimen, for it is impossible to change invisible nature. Likewise, what kind of voice one has is caused by the passages of the breath; for the voice has to be of the nature of the

Aristotle's theory of hearing and the role of the impact of air on the sense organ draws on earlier sources.<sup>265</sup> Very important to this tradition is a passage in the *Laws* at 790d-791b where Plato mentions how young children's nurses and women who cure the frenzy of the Korybantes use music to calm children and patients respectively. Plato says in the voice of the Athenian: "the cure consists in a movement, to the rhythms of dance and song; the mother makes her child 'pipe down' just as surely the music of the pipes bewitches the frenzied Bacchic reveler". To the question of Clinias about how this occurs, the Athenian replies:

Both these affections are forms of fear; 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.

The internal motion of fear and frenzy seems to allude to bodily elements. Aristotle, we have seen, also describes fear in material terms as a bodily condition, i.e. coldness in the heart. That bodily condition is not, however, enough to explain the whole of the emotion, it is only *one* aspect of it. The cognitive aspect of fear that Aristotle presents is absent here. Music then has an influence on the listener altering the body, not providing the object of the emotion. What music does here is diminish or increase certain bodily conditions.

In relation to the *Laws* passage, Richard Sorabji<sup>266</sup> reminds us of Plato's account of sensations (*aisthêseis*) as a "movement in the soul via the body". Sound is described as a shock (*plêgê*) in the air which travels from the ears to the brain and from there to the seat of the liver, which, as noted by Moss, is the receptacle of images and phantoms

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vessels through which the air moves and the things which it collides. And this (the voice) one can make worse or better, since one can make the passages of breath smoother or rougher, but the above is impossible to change by regimen". Hippocrates, *On regimen* I, 36 (Joly, p. 156, 23-32).

<sup>265</sup> Anaxagoras DK 52,7, Diogenes of Apollonia DK 64a19, Empedocles DK 406, 501, Plato *Tim.* 67a7-c1, Theophrastus *De sens.* 9. Apart from Plato, I took this references from Beare 1906.

<sup>266</sup> Sorabji 2002, 86.

and is related to the emotions.<sup>267</sup> According to Sorabji, there is a kinship between the motions of the music and some motions in the soul. Posidonius, who used Plato as a model, later defended this theory. Galen reports:

Why was it for heaven's sake—I shall put this question too to the followers of Chrysippus—that when Damon the musician came up to a woman playing the Greek oboe (aulein aulētris) in the Phrygian mode to some young men who were drunk and doing frantic things and ordered her to play in the Dorian mode they immediately stopped their frenzied antics? For surely they are not taught to revise the beliefs of the rational element by the oboe music. Rather they are aroused (epegeiresthai) or calmed in respect of the emotional element of the soul which is irrational through irrational movements. For help or harm comes to the irrational through irrational things and to the rational through knowledge or ignorance. (trans. Sorabji)<sup>268</sup>

Sorabji thinks that the “soul movements in Posidonius are literally spatial movements of the soul, since this is what they are in Chrysippus and in Plato.”<sup>269</sup> In contrast, for Aristotle “such spatial movement of the soul would be unthinkable,”<sup>270</sup> especially considering *De anima* I, 3

According to Aristotle, beyond the specific organs for each sense, it is the heart where sense perception takes place properly speaking. The heart senses the vibrations, shapes or whatever the affection the air receives (which, in fact do not really matter for my purposes)<sup>271</sup>

Whatever physiological change is produced by listening, the important thing to consider here is that for Aristotle sense perception – as well as emotion – was *always* accompanied by bodily changes. Any explanation that pretends to give an account of Aristotle’s thought on the emotional effects of music must consider what occurs at a physiological level.

Now we know that the physical impacts of the airwaves in the inner ear are transformed by the hair cells in the auditory system into electric signals processed

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<sup>267</sup> *Timaeus* 71b-d

<sup>268</sup> Galen PHP 5. 6. 21-2, p. 330 de Lacy. Quoted by Sorabji 2002, 86.

<sup>269</sup> Sorabji 2002, 116.

<sup>270</sup> *Ibid.* 117

<sup>271</sup> For a discussion about Aristotle on sound see Johnstone 2003.

latter by the brain. Nonetheless, what is important here is not the inaccurate and rudimentary account of the inner process of hearing provided by Aristotle but the emphasis on the participation of the body in the process of hearing and, as already could be inferred, also on the process of the “emotional” response to music.

The movements of the heart have a direct impact on the rest of the body and soul. The physiological changes in the physiognomy, i.e. signs of emotional states (*Pol.* 1340a34), have their origin in temperature changes in the heart. Even a change in the imperceptible part of the heart produces a change:

Sensations are obviously a form of change of quality, and imagination and thinking have the same power as the objects. For in a measure the form conceived be it of [the hot or cold or of]<sup>272</sup> the pleasant or fearful is like what the actual objects would be, and so we shudder and are frightened merely by thinking (φρίττουσι καὶ φοβοῦνται νοήσαντες μόνον). Now all these affections are actually changes of quality, and with those changes some parts of the body enlarge, others grow smaller. And it is not hard to see that a small change occurring at the center makes great and numerous changes at the circumference, just as by shifting the rudder a hair’s breath you get a wide deviation at the prow. And, further *when by reason of heat or cold or some kindred affection a change is set up in the region of the heart, even in an imperceptibly small part of the heart, it produces a vast difference in the body, blushing, let us say, or turning white, and tremblings and shivers and their opposites.* (*Movement of Animals* 701b16-33, trans. Farquherson).

Music, in Aristotle’s account of hearing presented earlier, reaches the heart with tense or relaxed melodies and fast or slow rhythms, thus altering one element of the emotions, i.e. the heart. This motion may produce physiological alterations that seem to be emotional reactions but they are just bodily symptoms of emotions, not emotions properly speaking with their respective intentional objects.<sup>273</sup>

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<sup>272</sup> Secluded by Nussbaum 1978.

<sup>273</sup> The relation between body and sound is reciprocal. Music changes the body and so predisposes the listener to different emotions but also the body of the subject may change the music. In the Pseudo-Aristotelian *De Audibilibus* (803a24-31) we read how the sound of the salpinx, and so its character, is changed by the mood of the player: “In the case of the salpinx; when they are revelling (κωμάζουσιν), men relax the pressure of breath in the salpinx in order to make the sound as soft as possible. The point can also be illustrated from musical instruments; as has been stated, the sounds produced by tightly stretched strings are hard, as are the notes of horns which have been well baked. If one touches the strings violently instead of softly with the hand, they necessarily respond with more violent sounds.” In *Generation of animals* it is also pointed that there is a relation between the sound produced and the tension/relaxation of the body: “The strength in all animals is in their sinews, and so those in the prime of life are stronger, the young being weaker in the joints and sinews; moreover, in the young they are not yet tense, and in those now growing old tension relaxes; hence both these ages are weak and powerless of movement

Many modern interpreters (Butcher, Simpson, Ford, Halliwell and Walker) have tried to explain the effect of music according to Aristotle, making a connection between “movements of the soul” and the movements of music, but they leave it as a mere speculation. The idea is certainly suggestive and, if we trust the reference made by Athenaeus, it was already present in Damon, one of the originators of a theory of music and education to whom Plato and Aristotle refer as an authority. Athenaeus wrote: “It is well said by the school of Damon the Athenian that songs and dances are the inevitable result of a certain kind of motion in the soul: those souls that are beautiful and characteristic of free men create songs and dances of the same kind, while the opposite sort create the opposite” (*Deipnosophistae* 628c). Butcher thought that for Aristotle the explanation of the musical effect was also a resemblance between certain “motions of the soul” and motions of the music. In his work *Aristotle’s Theory of Poetry and Fine Arts* he wrote:

Though we may not be able entirely to comprehend the Greek point of view as to the moral import of music, we must bear in mind that the dominant element in Greek music was the rhythm; the spirit and meaning of any given composition was felt to reside especially here; and the doctrine which asserted the unique imitative capacity of music had for Aristotle its theoretic basis in this, that the external movements of rhythmical sound bear a close resemblance to the movements of the soul. Each single note is felt as an inward agitation. The regular succession of musical sounds, governed by the laws of melody and rhythm, are allied to those *praxeis* or outwards activities which are the expression of mental state.<sup>274</sup>

Butcher does not explain anything about the “inward agitation” that music produces, nor what he means by the “movements of the soul”. Others have tried to explain the connections between mental states produced by music and bodily changes. With respect to how music “moves the soul”, Ford (2004,324, n.48) says that “Aristotle does not give enough information for us to decide how he saw this working” but he speculates that “perhaps he traced it to a kinship between musical psychological

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[...] Bulls are particularly sinewy, even their hearts, and therefore that part by which they set the air in motion is in a tense (σύντονον) state, like a sinewy string stretched tight.” GA 787b10-16. After Aristotle Theophrastus also wrote about the production of sound and motions in the soul: “For the movement productive of melody, when it occurs in the soul, is very accurate, when it (the soul) wishes to express it (the movement) with the voice. It (the soul) turns it (the voice), and turns it just as it wishes, to the extent that it is able to turn that which is non-rational.” (Trans Barker, as amended, page 61.25–62 Düring = FHS &G 716).

<sup>274</sup> Butcher 1951,125.

‘movements’ (*kinêsis* as changes in states over time)”. This is something more concrete than Butcher’s “movements of the soul” but Ford’s point is only a footnote and he does not further explore the “psychological movements” he refers to. Simpson talks about “motions in the soul”:

One might also note that music is a motion, something that Aristotle mentions in the case of rhythm, and that passions and actions too are motions. Music is, of course, a motion in sounds while passions are motions in the soul, but one motion can properly be said to be “like” another motion (while a shape or color cannot be); and since it is manifest that the motions of some music excite motions in the soul ... it is perhaps not unreasonable to say that the musical motions contain “likenesses” of the motions they excite.<sup>275</sup>

And in the same line Halliwell:

The *mimesis* entails something like a kinetic or dynamic correspondence between the use of rhythms, tunings and melodies on the one hand, and the psychological states and feelings belonging to qualities of ‘character’ on the other: the music ‘moves’ emotionally, and we ‘move’ with it.<sup>276</sup>

Halliwell does not mention “motions of the soul”; rather he refers to “psychological states” and to how “music ‘moves’ emotionally.” I do not object the correspondence between the kinesis of music and the “psychological states,” but I would emphasise that those kinetic properties and psychological states are connected through a physical impact of the sound of music on the body. This must be so if we want to keep Aristotle consistent. Sense perception, as well as emotions, are *always* accompanied by bodily changes. I disagree, however, with the idea that music moves emotionally, since its only produces an objectless state.

More interesting is the account of Jeffrey Walker:

Angry music would create a corresponding ‘motion’ in the soul of the hearer and in consequence would ‘stir up’ the bodily state of anger, especially in a person whose bodily nature was inclined to greater average ‘heat around the heart’; and at that point the hearer would in fact be angry, albeit groundlessly. [However] blood boiling around the heart without any accompanying perception of ‘insult’ is not yet ‘anger’ but only a diffuse, a choleric temper perhaps, a readiness to be provoked to anger by the first plausible (or even implausible) provocation that comes along.<sup>277</sup>

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<sup>275</sup> Simpson 1998, 272.

<sup>276</sup> Halliwell 2002, 245.

<sup>277</sup> Walker 2000a, 78-79.

I think that although Walker does not offer an explanation as to how music reaches and alters the heart, and also despite the fact he does not address the textual problems in *Politics* where allegedly instrumental music causes specific emotions, he is more accurate than the other authors examined in this account of the impact of music on the listener. I hold a very similar view but I do not think that a particular type of music would produce a specific bodily condition that matches an emotion. In what follows, I will show that what Aristotle says is that the different modes are characterized by tense and relaxed motions caused by fast and slow impacts in the production of sound. These motions of air produce different general bodily states of relaxation and tension in the heart which in turn produce psychological states of calm and excitement respectively. He does not say that a particular mode produces a specific emotion.

We need to consider that music and sound are movements of two different types. Sound is the movement of air while music is some sort of movement in the “aural space.” Aristoxenus was the first to point out this distinction, talking about the “region of the voice”. Aristoxenus explains that the voice travels with respect to space (*topos*) in two ways: in singing and in speech. In the former, Aristoxenus talks about an *intervallic* voice since it takes long intervals resting in one pitch before moving to another note. When we sing, the voice becomes stationary at some point and takes an interval from there to another position where it also remains still for a while. In the latter case the opposite occurs. When we talk, the voice is called *continuous* and so remains changing without rest: “it seems to sense perception to traverse a space (*topos*) in such a way as never to stand still [...] at least so far as its representation in sense perception is concerned” (*El. Harm.* 8.13ff, trans. Barker). A little later he reiterates that “each of these descriptions is to be understood with respect to sense perception”, and adds: “Whether it is possible or impossible for the voice to move and then to come to rest upon a single pitch, is a question belonging to a different enquiry, and for the purposes of the present science an account of the motion involved in each of these is unnecessary.” Aristoxenus’ approach is based on sense perception; he does not deny that there are other disciplines that take care of the motions of music in other senses but what concerns him is the perception of motion in the listener. A similar approach is probably found in the Aristotelian *Problems*, particularly in XIX, 27:

Why is it that of all things which are perceived by the senses that which is heard alone possesses character? For music, even if it is unaccompanied by words, yet has character; whereas a colour and an odour and a savour have not. Is it because that which is heard alone has movement (κίνησις), not, however, the movement in us to which the sound gives rise (for such movement exists also in the other things which affect our senses, for colour also moves our sight), but we perceive the movement which follows such and such a sound? This movement resembles character both in the rhythms and in the melodic disposition of the high and low notes, but not in their commingling; for symphony does possess character. This does not occur in the other objects of sense-perception. Now these movements are connected with action, and actions are indicative of character (919b26-36).

It seems that the author of this passage distinguishes the physical motion that occurs in sense organs from the perception of the listener of movement from one sound to another. Andrew Barker also suggests this and connects this passage with Aristoxenus *El. Harm.*3.5 ff.<sup>278</sup> A little later, in XIX, 29 the reference to movements appears unexplained:

Why do rhythms and melodies, which after all are only voice, resemble character, whereas savours do not, nor yet colours and odours? It is because they are movements, as actions also are? Now activity possesses and instills character, but savours and colours have no similar effects. (920a3-6).

Aristotle did not approach the matter in the same way as Aristoxenus. For Aristotle, the emphasis is on the physical movements sound produces in the listener.

In the text B from *Politics* (1340a38-b10) discussed above, the most clear allusion to music as motion is in the reference to rhythm: some rhythms, Aristotle says, have a character of rest and other of motion, and some of the latter are vulgar and others nobler. The ἁρμονίαι, he says, work on the same principles: some are relaxed and others enthusiastic. This passage, I think, contains the core of what Aristotle thought was the “emotional” power of instrumental music. In brief, what he presents here is a dual polarity that equates psychic activity with sounds. In terms of sound, instrumental music can be placed between two extremes. Following the principle of the ‘mean’ explained in the *Nicomachean Ethics*, we could say that “musical virtue” is somewhere in-between the extremes. Thus, Dorian is the mean between the relaxed and the

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<sup>278</sup> Barker1984, 197, n. 53.



enthusiastic modes; it is the best one because it is the only one to produce a moderate and settled temper<sup>279</sup> and because “in all things the mean is praiseworthy, and the extremes neither praiseworthy nor right, but worthy of blame” (NE 1108a15-16). Accordingly: “All men agree that the Dorian is gravest and manliest. And whereas we say that the extremes should be avoided and the mean followed, and whereas the Dorian is a mean between the other modes, it is evident that our youth should be taught the Dorian music.”<sup>280</sup> Relaxed modes are equated with the states of low activity while the Phrygian, at the other extreme, is enthusiastic and full of energy. The states that these different modes and rhythms could arouse in the listener are not emotions in the proper sense. Being ὀδυρτικός (querulous),<sup>281</sup> one of the effects of listening to the

<sup>279</sup> However in *Pol.* 1290a12-39: “There are generally thought to be two principal forms as men say of the winds that there are but two north and south and that the rest of them are only variations of these so of governments there are said to be only two forms democracy and oligarchy. For aristocracy is considered to be a kind of oligarchy, as being the rule of a few, and the so-called constitutional government to be really a democracy, just as among the winds we make the west a variation of the north, and the east of the south wind. Similarly of musical modes there are said to be two kinds, the Dorian and the Phrygian; the other arrangements of the scale are comprehended under one or other of these two. About forms of government this is a very favorite notion. But in either case the better and more exact way is to distinguish as I have done the one or two which are true forms and to regard the others as perversions whether of the most perfectly attuned mode or of the best form of government we may compare *the severer and more overpowering modes to the oligarchical forms and the more relaxed and gentler ones to the democratic* (ὀλιγαρχικὰς μὲν τὰς συντονωτέρας καὶ δεσποτικωτέρας, τὰς δ’ ἀνειμένους καὶ μαλακὰς δημοτικὰς)”. The reason to oppose the Dorian mode to the Phrygian rather than present it as an intermediate between the Phrygian and a relaxed mode can be explained following NE 1108b35-1109a19: “To the mean in some cases the deficiency, in some the excess is more opposed; e.g. it is not rashness, which is an excess, but cowardice, which is a deficiency, that is more opposed to courage, and not insensibility, which is a deficiency, but self-indulgence, which is an excess, that is more opposed to temperance. This happens from two reasons, one being drawn from the thing itself; for because one extreme is nearer and liker to the intermediate, we oppose not this but rather its contrary to the intermediate. E.g. since rashness is thought liker and nearer to courage, and cowardice more unlike, we oppose rather the latter to courage; for things that are further from the intermediate are thought more contrary to it. This, then, is one cause, drawn from the thing itself; another is drawn from ourselves; for the things to which we ourselves more naturally tend seem more contrary to the intermediate. For instance, we ourselves tend more naturally to pleasures, and hence are more easily carried away towards self-indulgence than towards propriety. We describe as contrary to the mean, then, rather the directions in which we more often go to great lengths; and therefore self-indulgence, which is an excess, is the more contrary to temperance”. This also explains a passage in GA786b34-78: “it seems that the low voice is a sign of a nobler nature, and in vocal compositions low pitch is better than the high pitched (σύντονα) ones.”

<sup>280</sup> *Pol.* 1342b13-16 : περὶ δὲ τῆς δωριστικῆς πάντες ὁμολογοῦσιν ὡς στασιμωτάτης οὔσης καὶ μάλιστα ἦθος ἐχούσης ἀνδρείον. ἔτι δὲ ἐπεὶ τὸ μέσον μὲν τῶν ὑπερβολῶν ἐπαινοῦμεν καὶ χρῆναι διώκειν φαμέν, ἡ δὲ δωριστικὴ ταύτην ἔχει τὴν φύσιν πρὸς τὰς ἄλλας ἀρμονίας φανερόν ὅτι τὰ Δώρια μέλη πρέπει παιδεύεσθαι μᾶλλον τοῖς νεωτέροις. In *Generation of animals* 786b7-9 we read: “As to the voice, it is deep in some animals, high in others, in others again in due proportion between both extremes.” (Περὶ δὲ φωνῆς, ὅτι τὰ μὲν βαρύφωνα τῶν ζώων ἐστὶ τὰ δ’ ὀξύφωνα, τὰ δ’ εὐτόνα καὶ πρὸς ἀμφοτέρας ἔχοντα τὰς ὑπερβολὰς συμμέτρως).

<sup>281</sup> ὀδυρτικοὶ εἰσὶ, καὶ οὐκ εὐτράπελοι οὐδὲ φιλογέλοιοι· ἐναντίον γὰρ τὸ ὀδυρτικὸν τῷ φιλογέλῳ. *Rhet.* 1390a21-23.

Mixolydian mode is a condition closer to a mood rather than an emotion; a general psychological state without a particular object instead of a definite emotion with its correspondent intentional object. Thus, in *Rhetoric* we read that “[Old men] are querulous and not disposed to jesting or laughter, the love of laughter being the very opposite of querulousness”. Being not disposed to laughter is not a mental state with a particular object and the same is true of the inverse; being disposed to laughter does not involve any particular belief in the agent, nor a particular judgment. This is why I think the disposition of being querulous can be caused by the effect of instrumental music. The impact of sound and music causes bodily changes – and contrary to the emotions – it does so without any necessary judgment involved. Therefore, the condition of being querulous generates a predisposition towards objects potentially presented to the mind but is not a belief about something.

The same is true of being “anxious” (συνεστηκότως): it is a state that does not involve any opinion, does not require a “reason” and so, following the author of *Problems*, we could call it at most a *superficial affection* (ἐπιπόλαια πάθη) (954b15-19).<sup>282</sup> Besides, none of the states mentioned in this passage are mentioned in any of the “lists” of the emotions that we find in other works like the *Rhetoric*, the *Nicomachean Ethic* and *De anima*.

The question about how this happened is, however, left unanswered in *Politics*. Is it the case that the relaxed modes were the opposite of the tense ones in a similar way to how the major and minor chords are opposites in our perception? Was it just a cultural convention or was it based on some natural element in the modes? It seems that Aristotle conceived some natural reasons to relate particular types of music with different characters. For example in *Pol.* 1342b20-22 it is said that due to their age old men cannot sing in the high-strung modes (τὰς συντόνους ἀρμονίας) and so the relaxed ones (τὰς ἀνειμένας) are suitable for them. This condition is something natural for the old age. In *Rhetoric* (1390a), for example, we read that old men are regarded as self-

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<sup>282</sup> “We are often in a condition of feeling grief, though for what reason we are unable to say, and sometimes we are in a cheerful condition, but why is not clear”. Such affections and those called superficial come to be in everyone to small extent. (πολλάκις γὰρ οὕτως ἔχομεν ὥστε λυπεῖσθαι, ἐφ’ ὅτῳ δέ, οὐκ ἂν ἔχομεν εἰπεῖν· ὅτε δὲ εὐθύμως, ἐφ’ ᾧ δ’, οὐ δῆλον. τὰ δὲ τοιαῦτα πάθη καὶ τὰ ἐπιπόλαια λεχθέντα κατὰ μὲν τι μικρὸν πᾶσι γίνεται).

controlled because their *desires have relaxed* (ἐπιθυμῖαι ἀνεΐκασι) and in a passage from *Generation of Animals* (787b10-16) already quoted we have seen that the joints and sinews of old people tend to relaxation, weakness and lack of motion. If this is so, the use of terms such as *relaxed* or *tense* in a musical context is a direct reference to the pitch of the modes.

The question of the character of the *harmoniai* is a difficult one. It may appear a little reductionist to ascribe the fundamental difference between the moods produced by the *harmoniai* exclusively to the pitch and ignore the structural differences of the “scales”, but odd as this may appear there is enough evidence to suggest that a significant part of the musical ethos was based on pitch.<sup>283</sup> If this is what Aristotle has in mind when he says “relaxed” modes, there should then be a relationship between the different types of physical motion of sound involved in different pitches and the effect on listeners. In fact, in *De anima* that is exactly what we found:

Without sound we cannot distinguish high and low or acute and grave pitch. The latter terms are used by analogy from tangible objects. *For the acute, that is the high, moves the sense much in a little time, while the grave or low note moves little in much time.* Not that what is shrill is identically rapid nor that what is low is slow, but it is the rapidity, in the other the slowness, which makes the motion or sensation such as has been described. And it would seem that there is a certain analogy between the acute and grave to the ear and the acute and blunt to the touch. *For that which is acute or pointed, as it were, stabs, while the blunt, as it were, thrusts, because the one excites motion in a short, the other slow* (*De anima* 420a30-420b4).

For Aristotle, sound is always the result of a physical impact of something on something and in something (ἀεί τινος πρὸς τι καὶ ἐν τινι, 419b10), and that impact “does not occur without spatial motion”(πληγὴ δ’ οὐ γίνεται ἄνευ φορᾶς, 419b13).

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<sup>283</sup> “Clearly a ‘tense’ mode involved more high notes and was taxing for that reason. It was not necessarily higher pitch overall than a slack mode. It might be that both occupied the range d-d’, for example, but that in the tense mode the melody moved more in the upper part of that octave, in the slack one more in the lower”. (West 1992, 179). Barker (1989a,164) wrote about the distinction of the *harmoniai* according to pitch: “There is quite good evidence, admittedly, from several periods, that each *harmonia* was in practice associated with a particular range of pitch, some being thought as “high”, others as “low” (e.g. Pratinas ap. Ath. 624f, cf. Lasus, quoted immediately before, at 624e; Heraclides ap. Ath. 625d; Ar. *Pol.* 1342b20ff; ps. Plut. 1136c); and this is fact no doubt helped to give them the different perceived characters to which our sources refer. But the earliest technical analyses about which we have any information pay small attention to this phenomenon, and specify the *harmoniai* almost exclusively by the different interval-structures that they exhibited. (See especially Arist. *Quint.* 15.10-20, 18.5-19.10, Aristox. *El. Harm.* 2.22-5, cf. Cleonides 197.4-199.3, Bacch. 303.5-27, 308.17-309.12).

The sense organ receives this physical impact which is differentiated depending on whether it is fast or slow, i.e. high or low pitched.

The author of the *Problems* also acknowledges the relationship between the pitch and the physical motion of a sound saying that “the low note is soft and tranquil, and the high note full of movement” (*Problems* XIX, 49, 922b31-32).

And also an idea in the same direction is found in a later source. In Ptolemy we read:

The same melody has an activating effect in the higher keys, and a depressing one in the lower keys, because a high pitch stretches the soul, while a low pitch slackens it. Therefore the keys in the middle near the Dorian can be compared with well-ordered and stable states of the soul, the higher keys near the Mixolydian with the stirred and stimulated states, and lower keys near to the Hypodorian with the slack and feeble moods (*Harm.* 2:7:58 and 3:7:99, trans. Sachs).

Ptolemy is certainly a late source far away from Aristotle. However, Ptolemy’s idea of music relaxing and tensing the soul depending on the pitch finds its parallel in the reconstruction I have offered of Aristotle’s account of the effects of hearing music, i.e. an impact of sound that alters the heart, relaxing or tensing it according to the pitch of the music.

The equation between the high pitch and excitement is not completely clear. The Mixolydian was associated with high pitch in terms of sound (*Bacch.* 303.7) and with lamentation in terms of the psychological effect that it could produce (*Rep.* 398e). The order in which the *harmoniai* are mentioned in the passage of *Politics* could suggest that there is an ascending grouping in terms of intensity. First is mentioned the Mixolydian, followed by the relaxed modes then, in the middle, appears the Dorian and finally the Phrygian is mentioned. If the Mixolydian, as we are told by several sources, was associated with high pitch then its association with the relaxed modes seems unfitting. However, the connexion between the Mixolydian with a high pitch and a mood that reflects an intense motion can be saved but in the opposite direction. The Mixolydian could make the listeners *querulous* or *serious* (ὀδυρτικός) and *grave* (συνεστηκός). Aristotle refers to ὀδυρτικός in *Rhetoric* saying that being querulous/serious means not being disposed to jesting or laughter, and that the love of

laughter is the very opposite of querulousness. As for *συνεστηκός*, (literally *compacted* or *contracted*) most scholars translate it, as I too did above, as *grave* or *restrained*. Barker, however translates it as *anxiety*, following the usage of the noun *systasis* in different sources (Thuc. VIII.71, Eurip. *Hippol.* 983). It is very plausible, I think, that hired mourners used the Mixolydian in funeral lamentations and, if that was so, the exaggerated lament, accompanied sometimes even with the tearing of hair and clothing, could be a female high pitched music (cf. *Laws* 800e).<sup>284</sup> The *contracted* character of this mode may thus be related to the high pitch and so with a *tense harmonia*. The *anxiety* may therefore also be related to a tense state of mind as well as a high pitch.

The discussion in this section does not claim to be conclusive for all Greek authors who discuss the ethos theory in music. The explanation of the character of the *ἁρμονίαι* based on pitch is coherent, at least in Aristotle's account, but we cannot overlook the evidence of other sources<sup>285</sup> which claim that the difference between the *ἁρμονίαι* was due to structural composition of the “scales” and not difference in pitch. In this respect I follow D.B. Monro, the author of *The Modes of Greek Music* (1894), who argued that the “difference of pitch was the chief or sole ground of distinction between the ancient *ἁρμονίαι*.”<sup>286</sup> It is useful to quote at length his account of the relevance of pitch in relation to the modes and the character of the music.

The beauty and even the persuasive effect of a voice depend, as we are more or less aware, in the first place upon the pitch or key in which it is set, and in the second place upon subtle variations of pitch, which give emphasis, or light and shade. Answering to the first of these elements ancient music [...] has its system of Modes or keys. Answering to the second it has a series of scales in which the delicacy and variety of the intervals still fill us with wonder. In both these points modern music shows diminished resources. We have in the Keys the same or even a greater command of degrees of pitch: but we seem to have lost the close relation which once obtained between a note as the result of facts and the same note as an index of temper or emotion. A change of key affects us, generally speaking, like a change of colour or of movement –not as the heightening or soothing of a state of feeling. In respect the second element of vocal expression the rise and fall of the

<sup>284</sup> Cf. Ath. 174F and Pollux IV, 76.

<sup>285</sup> Arist. Quint. 15.10-20, 18.5-19.10; Aristox. *El. Har.* 2.22-5.

<sup>286</sup> Monro, 1985, 79-81. Newman notes that “grief was believed to compress and joy to expand the mind” He gives as references Eurip. *Alcest* 771, Bothe (797 Dindorf) τοῦ νῦν σκυθρωποῦ καὶ ξυνεστῶτος φρενῶν, and *Hippol.* 937 Bothe (938 Dindorf), μένος μὲν ξύστασις τε σῶν φρενῶν, and Cic. *Tusc. Disp.* 4. 31. 66, eodem enim vitio est effusion animi in laetitia quo in dolore contraction. So the Stoics defined *λύπη* as *συστολή ἄλογος* and explained *ἡδονή* as *ἔπαρσις* (Diog. Laert. 7. III, see Pearson, *Fragments on Zeno and Cleanthes*, p. 180). Newman 2010, vol. 3, 542-3.

pitch, Greek music possessed in the multiplicity of its scales a range of expression to which there is no modern parallel. The nearest analogue may be found in the use of modulation from a Major to a Minor key, or the reverse. But the changes of genus and ‘colour’ at the disposal of ancient musician must have been acoustically more striking, and must have come nearer to reproducing, in the idealized form, the tones and inflexions of the speaking voice. The tendency of music that is based upon harmony is to treat the voice as one of a number of instruments, and accordingly to curtail the use of it as the great source of dramatic and emotional effect (Monro 1894, 125-126).

If Aristotle’s understanding of the modes matches Monro’s description then the expression of emotions through music according to Aristotle is much more limited than most scholars claim. Instrumental music neither represents nor imitates emotions as understood by the cognitivist approach presented in *De anima* and *Rhetoric*. At most, there is an imitation of the acoustic features of emotions and a *mimesis* of a polarity of motions which may be matched with specific emotions and *ethos*. The physical properties of the music, particularly its pitch, were naturally connected with physical motions. Different *êthê* for Aristotle are always presented in polarities: age: young/old; genre: male/female, moral: noble/vulgar. Even our bodies could be of a certain *êthos*: weak/strong (*Pol.* 1339a24). In this context the Dorian mode is the noblest and most masculine; suitable for men in the prime of life. The others are extremes that match feminine and vulgar characters; too high pitched and with too much motion, which is not suitable for good citizens. In *Nicomachean Ethics* we read about this characterisation:

A slow step is thought proper of the proud man (μεγαλόψυχος), a deep voice, and a level of utterance; for the man who takes few things seriously is not likely to be hurried, nor the man who thinks that nothing great to be excited (σύντονος), while a shrill voice and a rapid gait are results of hurry and excitement. NE 1125a13-16

Note how σύντονος, which is an adjective used to refer to high-pitched music, is here transferred to a psychological and moral state.

Further, in *Generation of Animals*:

The deep seems to belong to a nobler nature, and in songs the deep note is better than the high-pitched ones (δοκεῖ γενναιότερας εἶναι φύσεως ἢ βαρυφωνία, καὶ ἐν τοῖς μέλεσι τὸ βαρὺ τῶν συντόνων βέλτιον) the better lying in superiority, and depth of tone being a sort of superiority. GA 787a1-2.<sup>287</sup>

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<sup>287</sup> Cf. note 279 above. In the pseudo-Aristotelian *Physiognomics* 806b27 we read: “[The voice] when deep (βαρεῖα) and strong (ἐπιτεινομένη) it is a sign of courage; when high-pitched (ὀξεῖα) and weak (ἀνειμένη), of cowardice”. Although at 807a13-25 it is said that it is not pitch the sign of courage/cowardice but the volume of the voice.

Tension and relaxation are the two ways in which music affects listeners. This polarity is expressed in the pitch. Higher pitch is related with tension in the physical sense; it involves tension in the organs or instruments producing the sound as well as tension in the listener's bodies. As the body is tensioned the mind is somehow, in a way that is unexplained, influenced and "moved" in the same direction when faced with an object which triggers an emotion that also involves tension. Tension in psychological terms involves agitation, lack of calmness, and so is a characteristic of anxiety, frenzy or uncontrolled mourning. On the other hand, a calmer sound, without going to the other extreme, is a sign of serenity and so appropriate for reflection and rational behaviour.

Let us consider, for example, what we mean by the expression "depressive music." There seems to be a notion of pushing something down as well as something low and slow. In psychological terms, depression is a lack of energy, force or motivation. A depressive behaviour is easily associated with rest, tiredness or fatigue; it involves slow movements and even the facial and bodily expression tends to go in the downward direction. The voice is opaque, without strength and in a lower pitch than usual. On the contrary, a happy psychological state may be characterized as uplifting and full of energy. The voice is stronger and the bodily expression is in the upward direction.

Low, slow and down can be seen as characteristic of the body in a typical sad/painful frame of mind. On the contrary, high, fast and up are characteristic of a cheerful/delighted soul. These properties are also present in music. Pitch, speed/tempo and direction of the melody are in fact used in music to match different psychological states. In turn, those physical movements of sound are also associated with moral qualities. A noble movement is in the middle between the extremes, not too relaxed, not too tense. This, in my view, is what Aristotle thought about music with respect to its power of representation of a human's state of mind. This is also the only kind of musical representation that we can hold, at least if we want to maintain Aristotle's account of emotion as a cognitivist one. The influence of music on the body, and

through it on the soul, is preserved without contradicting the cognitive element of the emotions.

### 3.9 Tripartition of the musical effects

Aristotle, as set out in the previous section, offers a tripartite division of the effects that music produces, i.e. music that elates, music that depresses and music that produces a steady temper in between the other two. This division may be older than Aristotle and certainly was preserved after him. Other authors, either following Aristotle or other sources, repeated this tripartition or very close variations of it. One such reiteration is found in Aristides Quintillianus:

We call one [musical composition] through which we arouse mournful emotions (πάθη ληθηρά) ‘depressing’ (συσταλτικός), one through which we lift up the spirit (θυμὸν ἐξεγείρομεν) ‘exalting’ (διαστατικός), and one ‘intermediate’, through which we bring the soul round to peacefulness (τὴν μέσην, δι᾽ ἣς εἰς ἡρεμίαν τὴν ψυχὴν περιάγομεν). These are called ‘characters’ because it is primarily through them that conditions (κατάστημα) of the soul are diagnosed and put right. But this is not done by them alone: rather, while they assist, as parts, in the remedial treatment of the emotions, we have established that it is ‘complete’ melody which offers, in addition, an education that lacks nothing. For just as in the case of medicine drugs (ιατρικῶν φαρμάκων) no one substance has the natural capacity to cure the afflictions of the body, but full recovery is brought about by a mixture of several, so also in our own field melody alone makes only slight contribution towards putting things right, while complete combination of all the elements is fully sufficient. (Aristides Quintillianus I, ch. 12, 30. 9-24, trans. Barker).

The era in which Quintillianus lived is situated between the 1<sup>st</sup> and 3<sup>rd</sup> centuries AD at least three or four hundred years later than Aristotle. Nevertheless, there is a chance that in this passage he was following the Aristotelian tradition. He, as well as Aristotle, discussed the *êthos* of instrumental music in relation to education. Like Aristotle, Quintillianus explicitly states that music by itself is not enough for education, rather,



what is needed is music accompanied by words. Interestingly, he also distinguishes between *complete* (*teleion melos*) and *instrumental* melody (Aristid. Quint. 4, 20); the former being “that which is composed of *harmonia*, rhythm and speech” (Aristid. Quint. 28,8).<sup>288</sup> Another similarity with Aristotle is Quintillianus’ use of medical metaphors. In his discussion of musical *êthos* and education Aristotle says that the amusement that music produces is like a drug (*φαρμακεία*)<sup>289</sup> and later he says that the relaxed modes are intoxicating (*μεθυστικός*).<sup>290</sup> The tripartition that Quintillianus offers is similar but not the same as that of Aristotle. The terms Quintillianus uses are *συσταλτικός* (contracting) for the depressing mood; *διαστατικός* (extending) for the exalting mood and “one intermediate through which we bring the soul round to peacefulness”. Aristotle does not use the same terms as Quintillianus but nonetheless he talks about three main effects that the melodies produce. The passage is worthy of being quoted again here to remind us:

Even in melodies themselves there is an imitation of character, for the musical modes differ essentially from one another, and those who hear them are differently disposed by each (ἐν δὲ τοῖς μέλεσιν αὐτοῖς ἔστι μιμήματα τῶν ἠθῶν καὶ τοῦτ’ ἐστὶ φανερόν· εὐθὺς γὰρ ἢ τῶν ἀρμονιῶν διέστηκε φύσις, ὥστε ἀκούοντας ἄλλως διατίθεσθαι καὶ μὴ τὸν αὐτὸν ἔχειν τρόπον πρὸς ἐκάστην αὐτῶν). Some of them make man anxious (*ὄδυρτικός*) and grave (*συνεστηκός*), like the so called Mixolydian, others enfeeble the mind (*μαλακωτέρως τὴν διάνοιαν*), like the relaxed (*ἀνειμένως*) modes, another, again, produces moderate (*μέσως*) and settled temper (*καθεστηκός*), which appears to be peculiar effect of the Dorian; the Phrygian inspires enthusiasm (*ἐνθουσιαστικός*) (*Pol.* 1340a39-b5).

Quintillianus’ passage above has two parallels in the Greek literary corpus: one in a later Byzantine source, Manuel Bryennius (*Harm.* 3.10), and the other in Cleonides (*Intro. Harm.* 13), which in turn is the source of Bryennius. Cleonides, an “abbreviator and popularizer”<sup>291</sup> of Aristoxenus, also mentions the three terms employed by Aristides Quintillianus: *συσταλτικός*; *διαστατικός*<sup>292</sup> and *ἡσυχαστικός*:

<sup>288</sup> See also 5,4 and 30, 17-24. Complete melody is present in Plato’s *Laws* 653-73, *Rep.* 398d, and Aristotle’s *Poet.* 1447a22.

<sup>289</sup> *Pol.* 1337b41-42.

<sup>290</sup> *Pol.* 1342b25.

<sup>291</sup> Strunk, 1952, 34.

<sup>292</sup> Cleonides and Bryennius use *διαστατικός* while Aristides Quintillianus uses *διαστατικός*. Most probably Quintillianus’ text needs to be corrected. Liddle and Scott’s entry to *διαστατικός* refers to Cleonid. *Harm.* 13 as well as Aristid. Quint. 1.12.

Modulation in melodic composition takes place whenever there is a modulation in *êthos* from *diastaltic* to the *systaltic* or *hesychastic*, or from the *hesychastic* to some of the others. *The diastaltic ethos in melodic composition is that which reveals heroic deeds and the grandeur and loftiness of a manly soul and an affection akin to these* (ἔστι δὲ διασταλτικὸν μὲν ἦθος μελοποιΐας, δι’ οὗ σημαίνεται μεγαλοπρέπεια καὶ διάγραμμα ψυχῆς ἀνδρῶδες καὶ πράξεις ἡρωϊκαὶ καὶ πάθη τούτοις οἰκεῖα). It is most used in tragedy and in all things that border on this character. The *systaltic* ethos is that by which the soul is brought into dejection and an effeminate disposition (διάθεσιν). Such a state will correspond to erotic affections and to dirges and expressions of pity things resembling these. The *hesychastic* ethos is that which accompanies quietude of soul and a liberal and peaceful state. To it will correspond hymns, paens, eulogies, consolations, and things similar to these. (trans. Oliver Strunk).

As Jon Solomon points out,<sup>293</sup> Cleonides’ description of the *diastaltic* *êthos* is equivalent with the description of the Dorian *êthos* by Heraclides Ponticus (in Ath. 624D). Heraclides describes the Dorian *ethos* as ἀνδρῶδες and μεγαλοπρεπής; Cleonides as μεγαλοπρεπεία... διάγραμμα ψυχῆς ἀνδρῶδες. Similarly, Aristotle (*Pol.* 1340b3) says that the Dorian produces a “moderate and settled temper” (μέσως καὶ καθεστηκότως) and is described as “the gravest and manliest” (περὶ δὲ τῆς δωριστι πάντες ὁμολογοῦσιν ὡς στασιμωτάτης οὔσης καὶ μάλιστα ἦθος ἐχούσης ἀνδρεῖον *Pol.* 1342b13-14). Jon Solomon thinks that Aristides Quintillianus and Cleonides describe the musical ethos in “musical–medical terms” which is “not an intellectual musicological experience, but an emotional–physical (or ‘musical’–physical) experience”. In contrast, he argues, Plato and Aristotle equate the ethos with the *harmoniai*. His conclusion is that “the former refer to physical effects, the latter to musicological constructs”<sup>294</sup>. It is true that Aristotle equates the ethos with particular modes but he also refers to the *emotional-physical* nature of the musical ethos. The names of the different modes are just examples of a more general classification that refers to the physical nature of the modes; a tripartition which involves relaxed, moderate and tense modes.

This is what underlies his thought when he says that old men “cannot very well sing the high strung mode, and nature herself seems to suggest that their songs should be of the more relaxed kind” (οὐ ῥάδιον ἄδειν τὰς συντόνους ἀρμονίας, ἀλλὰ τὰς ἀνειμένας ἢ φύσις ὑποβάλλει τοῖς τηλικούτοις).<sup>295</sup> This distinction is not made based

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<sup>293</sup> Solomon, 1981, 98, n. 33.

<sup>294</sup> Ibid.

<sup>295</sup> *Pol.* 1342b21-23.

upon a *musicological experience*, but on physical and natural properties of the music and the performers.

The case with Plato is not as clear as with Aristotle. Plato rejects the lamenting modes for his guardians, i.e. “the Mixolydian, the Syntono-Lydian [tense–Lydian], and some others of that sort”. He also rejects the drinking modes which accompany “drunkenness, softness, and idleness”; those are the Ionian and *those* Lydian modes (καὶ λυδιστὶ αὖ τινες) which are called *relaxed* (χαλαραὶ).<sup>296</sup> Thomas Mathiesen thinks that both “Plato and Aristotle contrasted tense and relaxed, that is, high-pitched and low pitched modes”.<sup>297</sup> However, contrary to Aristotle, Plato does not mention the tense modes as a more general group opposed to the relaxed ones, nor the existence of an intermediate between the two. The Dorian and the Phrygian are the only two modes accepted by Plato; the first imitates the tones (φθόγγοι) of a courageous man in war or in difficulty, someone who “is fighting his fate steadily and strongly” (παρατεταγμένως καὶ καρτερούντως), whereas the second imitates the voice of someone in peace, who in all circumstances acts with self-control (ἑαυτὸν ἐπέχοντα) and moderation (μετρίως).<sup>298</sup> Although the words are not the same, Plato’s conception of the Dorian mode finds parallels with Aristotle – both believed that the Dorian (Plato adds the Phrygian) was related with *moderation* – but whilst Plato mentions the *relaxed modes* and the *tense–Lydian*, it is Aristotle who puts a straightforward tripartition between relaxed, tense and middle modes.

### 3.10 *Diathesis*

The tripartition presented in the previous section is not only based on the properties of music but also on the effects of it. Languid relaxation and excitement are the two

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<sup>296</sup> *Rep.* 398e.

<sup>297</sup> Mathiesen 2006, 76.

<sup>298</sup> *Rep.* 398e-399c.

extremes of this division. As I have argued, these effects of pure music are not labeled as emotions; when listeners are affected by the music itself, i.e. without words, Aristotle says they are *differently disposed* (ὥστε ἀκούοντα ἄλλως διατίθεσθαι).<sup>299</sup> I think that this is a key element to the understanding of Aristotle's position with respect to the effects of music. Following this interpretation not only the cognitive account of the emotions is safe but also an interesting position is revealed. Instrumental music produces different dispositions, i.e. “moods”, which are by themselves objectless. These dispositions or moods are a physiological *and* mental pre-disposition empty of content. The listener so affected is ready to react emotionally when an intentional object is presented (the object of their judgments being the characters and their deeds in the drama or in real life). Music then, according to my interpretation of Aristotle's writing, creates a breeding ground which sets the listener in a state of propensity towards particular emotions. Different music, elating or relaxing listeners (by means of a physical disturbance in the region of the heart) acts as a catalyst for emotions but these only appear *after* there is an intentional object presented for our judgment. This is why Aristotle says that listeners of pure instrumental music are differently disposed. The term *diathesis*, I claim, is different from *pathos* essentially because the former refers to a passive condition which is prior to the appearance of any object in the mind; the *pathê*, narrowly understood as *Rhetoric's* emotions, are always active mental and bodily processes directed towards an object.

In what follows I will try to show what Aristotle means by *diathesis* and why we should consider its place in *Politics* VIII in order to make sense of what he says about music and emotions.

As we saw earlier, in *Categories* Aristotle discusses the different types of quality (ποιότης). State (ἔξις) and disposition (διάθεσις) are not the same types of qualities; states are permanent, like having learned something or having acquired a virtue such as justice or temperance. A disposition, on the contrary, is easily changed. The examples that Aristotle provides first are hotness and chilliness as well as sickness and health. Later he adds the knowledge of something in an imperfect way: “Those who

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<sup>299</sup> *Pol.* 1340a40-41.

lack full mastery of a branch of knowledge and are easily changed are not said to be in a state (*hexis*) of knowledge, though they are of course in some διάθεσις, a better or a worse, in regard to that knowledge” (*Cat.* 9a5-8). The translation of *diathesis* is not easy and depends on the context. The only place Aristotle gets closer to a technical description seems to be this passage in *Categories*. Sometimes it can be understood as synonym of state (*hexis*), but in other places it can be translated as the general arrangement of something (*Metaph.* 1022b1), as its condition or disposition, especially with regard to the body (*GA* 778b34). The main point in *Categories* is that, contrary to *hexis*, *diathesis* is easily changed:

Let us call one kind of quality (*poiôtêtos*) state (*hexis*) and disposition (*diathesis*). A state differs from a disposition in being more stable and lasting longer. Such are the branches of knowledge and virtues. For knowledge seems to be something permanent and hard to change, unless a great change is brought about by illness or some other such thing. So also virtue; justice, temperance, and the rest seem to be not easily changed. It is what is *easily changed and quickly changed* (εὐκίνητα καὶ ταχὺ μεταβάλλοντα) that we call dispositions, e.g. hotness and chill and sickness and health and the like. For a man is in a certain disposition in virtue of these but he changes quickly from hot to cold and from being healthy to being sick. Similarly with the rest, unless indeed even one of these were eventually to become through a length of time part of man’s nature and irremediable or exceedingly hard to change—and then one would perhaps call this a state” (*Cat.* 8b27-9a5, trans. Ackrill).

Instrumental music, viz. melodies in themselves (μέλη αὐτή)<sup>300</sup> we are told in *Politics*, is able to *change the dispositions of the listeners* (ἀκούοντας ἄλλως διατίθεσθαι).<sup>301</sup> These changes are vital for the educational purposes of Aristotle. If a young listener changes his disposition we would not call that a state. But, as the *Categories* says, if his disposition “were eventually to become through a length of time part of man’s nature and irremediable or exceedingly hard to change [...] then one would perhaps call this a state (*hexis*).” In *Politics*, when Aristotle discusses the uses of music, he questions whether “music conduces to virtue, on the ground that it can produce a character of certain quality and habituate (ἐθίζουσιν) us to enjoy in the right way” (1339a22-24). The verb ἐθεῖν (to habituate) is key in Aristotle’s treatment of musical *paideia*. The temporary dispositions that music produces in the listener, following *Categories*, can be transformed into permanent *states*, or more properly, according to

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<sup>300</sup> *Pol.* 1340a38-39.

<sup>301</sup> *Pol.* 1340a40-41.

the context, *habits*. Having a habit is thus a consequence of repetition over time of a particular disposition. The disposition, as I said above, contrary to the emotions is not in itself an active attitude towards a particular object; rather it is a passive state which is an objectless tendency or inclination. In other words, to be prone to anger is different from being angry. The first state does not require a definite object in front of us; but in the case of active anger we need a concrete object.

In *Magna Moralia* there is an important distinction between states and emotions, where *states* should be understood as moral habits. This may help us to understand the dispositions produced by music:

If we would explain the essential nature of virtue (*ἀρετή*), we must make ourselves acquainted with the phenomena that arise in the soul. They are of three kinds: emotions (*πάθη*), faculties (*δυνάμεις*), and states (*ἕξεις*). Clearly, then, virtue must fall under one of these headings. Now among emotions we have anger, fear, hatred, longing, envy, pity, and the like; and these are all accompanied by pain or pleasure. Faculties, again, are the potentialities by which we are said to be capable of these emotions: the potentialities of anger, grief, pity, and the like. Lastly, *states are conditions of soul which render us well or ill disposed in regard to the affections. For instance, if we are too much disposed to anger, our disposition is a bad one as regards that affection; nor is it otherwise if we fail to conceive anger when due occasion arises* (ἕξεις δ' εἰσὶν καθ' ἃς πρὸς ταῦτα ἔχομεν εὖ ἢ κακῶς, οἷον πρὸς τὸ ὀργισθῆναι, εἰ μὲν λίαν ὀργίλω, κακῶς ἔχομεν πρὸς ὀργήν, εἰ δ' ὀλως μὴ ὀργιζόμεθα ἐφ' οἷς δεῖ, καὶ οὕτως κακῶς ἔχομεν πρὸς ὀργήν.). The mean or middle state is thus one which avoids excess of emotion on the one hand, and entire insensibility on the other. When, therefore, such is our state of soul, <as regards anger> our disposition is good; and similarly as regards the other feelings. For whereas gentleness of temper and mildness are a mean state between wrathfulness and insensibility to anger, so it is with boastfulness and self-deprecation. To overrate one's endowments is the part of the former, to dissemble them, the part of the latter; so that it is the just mean between these two which constitutes sincerity. (*Magna Moralia* 1186a9-28, trans. Stock<sup>302</sup>)

A state (*hexis*), which can be distinguished from a disposition (*diathesis*) by its stability, is related to emotions as a proclivity or readiness to experience them in the right or wrong way. In the case of anger, for example, there is a mean between the two extremes. On the one hand the excess of anger and on the other hand, entire insensibility. How we react depends on the state in us prior to the situation that causes the emotions. This means that the state, which refers to a moral habit in this passage,

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<sup>302</sup> The passage is almost the same in *NE* II 5.

prepares us to react “when the due occasion arises.” Prior to the “arising of the occasion” there is no object judged at all.

What is said about states in the passage of *Magna Moralia* can be easily applied to dispositions. The states mentioned, i.e. the moral habits, are nothing other than permanent *dispositions* that have become such due to their repetition over time. In *Categories* it is said that “states are also dispositions” although “dispositions are not necessarily states” (*Cat.* 9a1011).<sup>303</sup> Dispositions can, however, turn into states if “these were eventually to become through length of time part of a man’s nature and irremediable or exceedingly hard to change” (*Cat.* ba3-4).<sup>304</sup>

The process of habituation to reacting in a particular way is what I think Aristotle has in mind when he says that instrumental music can differently dispose the listeners (*Pol.* 1340a41). There is no need for an intentional object in order for the disposition to come about. As well as with a state (ἕξις) a disposition exists in us even when there is nothing in front of us. For example, the courageous man is not courageous only when he is facing a danger. Someone is disposed to react emotionally in such disposition even though there is no object for judgment in front of him/her. The emotional reaction then is a posterior phenomenon which exists only in the presence of a concrete object; the object that music by itself does not provide. Again, this does not mean denying that we can react emotionally toward a piece of music. It is totally possible to feel anger towards a piece of instrumental music. For example, we may *judge* that it is an immoral piece or that it represents values that we reject; we may also *believe* that its performance does not pay justice to the original composition and feel anger because we pay a lot of money to see it and it is one of our favorite pieces. These reactions are absolutely possible and nothing of what I have argued intends to dispute that. This does not mean that I am allowing exceptions to the cognitivist account of emotions; in the cases mentioned here there is a judgment and a belief held about the music, not emotions transmitted from the music to the listener. The problematic scenario is where we consider the *musical contagion* of emotions attributed widely and almost

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<sup>303</sup> εἰσὶ δὲ αἱ μὲν ἕξεις καὶ διαθέσεις, αἱ δὲ διαθέσεις οὐκ ἐξ ἀνάγκης ἕξεις.

<sup>304</sup> διὰ χρόνου πλῆθος ἤδη πεφυσιωμένη καὶ ἀνίατος ἢ πάνυ δυσκίνητος οὖσα, ἣν ἂν τις ἴσως ἕξινῆδη προσαγορεύοι.

uncontroversially to Aristotle: a piece *represents anger* and therefore its listeners *feel angry*. This is what is inconsistent with Aristotle's account of emotions and why I think my reading offers a coherent interpretation that reconciles his account of emotions and what he says in *Politics* about music and its impact on the listener.

In education, since in the beginning of life the irrational part is stronger than the rational, there must be an emphasis on the unreflected response of the students. As I have shown, there is still space for rational responses: the right judgments that the listeners should reach when told a story. When it comes to the effects of pure instrumental music, there is no major participation of reason. It is more like what gymnastic does to the body (*Pol.* 1339b23) or, as mentioned above, like the custom to habituate young children to cold temperatures in order to make them stronger (1336a12-15). In the case of instrumental music, it is the objectless dispositions of the listeners that are altered. After constant repetition they are habituated to the effects that music produces in them; i.e. relaxation, excitement or a middle state between the two. The listeners so habituated should enjoy, by habituation, the type of music to which they have been exposed.

In *Eudemian Ethics* there is reference to the moral habituation and the formation of character. Interestingly, there is also a reference to the different motions to which a student is habituated:

That moral excellence, then, is concerned with the pleasant and the painful is clear. But since the character (*ἥθος*), being as its name indicates something that grows by habit – and that which is *under guidance other than innate is trained to a habit by frequent movement of a particular kind* (*ἐθίζεται δὲ τὸ ὑπ' ἀγωγῆς μὴ ἐμφύτου τῷ πολλάκις κινεῖσθαι πῶς*) – is the active principle present after this process, but in the things inanimate we do not see this (for even if you throw a stone upwards ten thousand times, it will never go upwards except by compulsion), – consider then, character to be this, viz. a quality in accordance with governing reason belonging to the irrational part of the soul which is yet able to obey the reason. Now we have to state in respect of what part of the soul we have character of this or that kind. It will be in respect of the faculties of passion, in virtue of which men are spoken of as a subject to emotions, and in respect of the habits, in virtue of which men are described, in reference of those emotions, either as feeling them in some way or as not feeling them (*EE* 1220a38-b12 trans. Solomon).

A young student then – contrary to the stone – after being moved once and over again in a particular “direction”, with a certain intensity and speed, can be changed in his



ways. Similarly, instrumental music habituates listeners by *disposing* them in the right way. The young listener in the classroom “is trained to a habit by frequent movement of a particular kind.” In the educational context, as we have seen, the Dorian mode is that which disposes listeners in the best way possible. It is a mean between the two extremes; most probably between the excitement of the tense–high pitched modes and the relaxation of those slack–low pitched ones.

The reference in this passage of the *Eudemian Ethics* to the movements that cause moral habituation is certainly strange. It would be adventurous to try to link these movements with the movements that music produces. However, a little earlier, Aristotle connects them with the different dispositions that the soul adopts in order to achieve virtue:

Every *disposition* (διάθεσιν) is produced and destroyed by some sort of application of the same thing, e.g. health from food, exercises, and weather. This is clear from induction. *Virtue* (ἀρετή) too, then, is a sort of *disposition* (διάθεσις) which is originated (ἢ γίνεται) by the best *movements in the soul* (ψυχὴν κινήσεων), and from which are produced the *soul's best works and emotions* (τὰ ἄριστα τῆς ψυχῆς ἔργα καὶ πάθη); and by the same things, if they happen in one way, it is produced, but if they happen in another, it is destroyed (EE 1220a26-34 trans. Solomon).

The phrase “movements in the soul” in the passage above needs some further explanation. We have said that instrumental music produces a physical movement in the region of the heart. Now Aristotle refers to *movements in the soul* that produce different dispositions. We said earlier that according to *De anima* I, 3 the soul does not move, so it is necessary to explain further what Aristotle is saying here. An explanation can be found in *Physics* VII, 3. There, studying motions in general, Aristotle explains that an alteration, which is a particular type of motion, occurs by sensible causes. He takes the case of alterations of human beings, particularly how virtue and knowledge are not by themselves alterations. With respect to this he says that “virtue puts its possessor in good disposition with regard to its proper emotions” (ἔτι δὲ ἡ μὲν ἀρετὴ εὖ διατίθησι πρὸς τὰ οἰκεῖα πάθη, 247a3-4). In doing so, he says that the “becoming of the dispositions is necessarily the result of an alteration in the sensible part of the soul, which is altered by a sensible object” (γίνεσθαι δ’ αὐτὰς ἀναγκαῖον ἀλλοιουμένου τοῦ αἰσθητικοῦ μέρους. ἀλλοιωθήσεται δ’ ὑπὸ τῶν αἰσθητῶν 247a6-7).

Now, virtue is concerned with bodily pleasures and pains and these, in turn, depend on remembering and anticipating the objects brought by sense perception. Pain and pleasure are alterations of the sensitive part (αἰ δ' ἡδοναὶ καὶ αἰ λῦπαι ἀλλοιώσεις τοῦ αἰσθητικοῦ, 247a16-17) and so, in this sense, virtuous dispositions are originated by bodily alterations.

The dispositions that the physical motions of music produce in the listener that I have claimed are not motions involving pleasure or pain but motions in terms of calm or relaxation of the organ of the sensible part of the soul: the heart. In any case the dispositions are in both cases produced by bodily alterations. This is even clearer in the following discussion in *Physics* VII, 3 when Aristotle says that as well as virtue, the acquisition of knowledge is not an alteration by itself but nonetheless is accompanied by bodily conditions:

The possession of understanding and knowledge is produced by the soul's settling down out of the restlessness natural to it.<sup>305</sup> Hence, too, in learning and in forming judgments on matters relating to their sense-perception children are inferior to adults owing to the great amount of restlessness and motion in their souls. Nature itself in some cases causes the soul *to settle down and come to a state of rest* (καθίσταται δὲ καὶ ἡρεμίζεται), while in others other things do so; but in either case the result is brought about through the alteration of something in the body (247b17-248a4 trans. Hardie and Gaye).

The passage of *Eudemian Ethics* above (1220a26-34) referring to the “movements in the soul”, I think, should be understood as movements of a particular function originated by the soul, in this case sense perception and appetite which are both enmattered functions that always involve bodily changes. We need to remember that “it is impossible that motion should belong to the soul” (DA 406a2) and if it is said that the soul is moved or that there is a movement in the soul, it is in the sense that something is moved by the soul or that something reaches the soul. *De anima* explains this:

The question whether the soul is moved would more naturally arise in view of such facts as the following. The soul is said to feel pain and joy, confidence and fear, and again to be angry, to perceive and to think; and all these states are held to be movements: which might lead one to infer that soul itself is moved. But this is not a necessary inference. For suppose it ever so true that to feel pain or joy and to think are movements, that to experience each of these is to be moved and that the movement is due to the soul: suppose that to be angry, for instance, or to be afraid means a particular movement of the heart, and that to think

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<sup>305</sup> See *Laws* 675c-d.

means a movement of this or some other part, some of these movements being movements of locomotion, others of qualitative change (of what sort and how produced does not concern us here): yet, even then, to speak of the soul as feeling anger is as if one should say that the soul waves and builds. Doubtless it would be better not to say that the soul pities or learns or thinks, but that the man does so with the soul: and this, too, not in the sense that the motion occurs in the soul, but in the sense that motion sometimes reaches to, sometimes starts from, the soul. Thus, sense perception originates in particular objects, while recollection, starting from the soul, is directed towards the movements or traces of movements in the sense organs (408a34-b18, trans. Hicks).

It is true that in the passage of *Eudemian Ethics* (1220a26-34) there is no reference to musical movements but, although probably unconnected, it fits very well with what we have been saying about music and it may help to better explain it. Virtue and knowledge are states and, as we know from the *Categories*, states are nothing more than permanent dispositions following constant habituation. This also is the case in *Politics* VIII where musical movements cause the dispositions and, in turn, those dispositions are causes for different actions and emotions. For example, those relaxed modes mentioned in *Politics* which “enfeeble the mind” accompanied by those rhythms which have a “character of rest” would move the listener to a particular disposition. By habituation, i.e. by constant exposure to them, the listener would adopt that disposition as a permanent state. Then, when a particular situation arises, the actions and emotions of someone in such a state would be aligned with it. With different types of music, the listener would be disposed and habituated to react either with calm or excitement, or in the educational context, in a middle state provided by the Dorian mode.

Other passages making reference to *diathesis* and motions can be found in *On virtues and vices*. This work is not considered as one by Aristotle himself but nonetheless it has been considered a work of the Peripatetic school:<sup>306</sup>

In general it belongs to virtue to make the disposition (διάθεσις) of the soul good using quiet and ordered motions (ἡρεμαίαις καὶ τεταγμέναις κινήσεσι) and in agreement with itself throughout all its parts. Whence the disposition of a good soul (ψυχῆς σπουδαίας διάθεσις) seems a pattern (παράδειγμα) of a good political constitution. (1251b26-30).

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<sup>306</sup> Zeller, 1883, 145.

The quiet and ordered motions (ἡρεμαίαις καὶ τεταγμέναις κινήσεσι) may be equated with the Dorian, which is a moderate and steady mode (μέσως καὶ καθεστηκότηως) and is compared with a good political constitution.<sup>307</sup>

Now, it may be argued that the disposition that music causes, as mentioned in *Politics*, is just a general response of the listener. It may be said that Aristotle is not using the term *diathesis* in a technical meaning but that he just uses it as a synonym of *state*, *frame of mind* or any other word that may refer to how the listener is changed by the music. So far I have tried to show that within Aristotle's own work it is possible to suggest that the *diathesis* produced by music has an especial meaning. However, this interpretation also finds some support from later sources.

Theophrastus, as reported by Priscian (8.1)<sup>308</sup> when talking about the transparent, says that "it is necessarily [...] either a *pathos* or a *diathesis*", and so we can confirm that some distinction existed between the two terms. Pamela Huby<sup>309</sup> mentions the close connection between *diathesis* and *hexis* and the distinction made by Aristotle, but she thinks that it is impossible to know whether Theophrastus made such a distinction. If Theophrastus were following Aristotle in this distinction, although in another context, it would be a good sign for my interpretation: on the one hand music accompanied by words is able to provide an intentional object in its representation of human beings and thus we would be able to react, judge, and then *emotionally sympathize* with the representation; on the other hand, pure instrumental music only produces a certain *diathesis*, but not *pathos*.

In *On the senses*, Theophrastus uses διάθεσις exclusively to refer to bodily dispositions; of the body in general or of particular sense organs, such as being in a disposition of hot or cold, or full of fire or air (DS 4, 19, 35, 39, 64, 72).<sup>310</sup> In medical

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<sup>307</sup> See note 275 above.

<sup>308</sup> Steel 2014, 16.

<sup>309</sup> Huby 1999, 53.

<sup>310</sup> Baltussen 2000, 89.

contexts, the term is used by Erasistratus<sup>311</sup> and Aretaeus, who connects it with epilepsy.<sup>312</sup> Galen, in his *On Prognosis*<sup>313</sup> and in *De symptomatum differentiis* opposes *diathesis* to *pathos* as well.<sup>314</sup> *Diathesis* is not always related to bodily dispositions but it is interesting that there is such a connection because, as I have shown earlier, the dispositions that music produces are not just mental states but involve physical changes through the sense of hearing and so also on the heart. As the bodily conditions “prepare the way” (προοδοποιεῖν)<sup>315</sup> for the emotions, the dispositions that music creates are also a breeding ground that facilitates their emergence.

Philoponus, in his *Commentary to De anima*, distinguishes between *diathesis* and state (ἔξις) which, he acknowledges, are usually used as synonyms but can also have a contradistinguished meaning.<sup>316</sup> After that, he refers to *De anima* 403a19 where Aristotle says that sometimes something fearful is in front of us but we are not moved to feel fear. This happens because our body is in a disposition that precludes the arousal of the emotions. At other times we are moved to an emotion even if there is just a slight reason. Commenting on this passage Philoponus wrote:

That, as he states, these emotions are not peculiar to the soul but to the composite, is evident from people who suffer increase and decrease of emotions because their bodily *disposition* (*diathesis*) is of certain kind. There are people who have such a bodily mixture that in spite of the presence of numerous exciting factors they are not moved to anger, because in them the blood in the region of the heart is in a cold condition and difficult to move, whereas others are inclined to this affection so that even when the exciting factors are very slight and feeble, they are immediately provoked to anger because their dispositions is of such a kind that the blood in the region of the heart is always boiling [...] Consequently, if these emotions were peculiar to the soul, they should not be dependent on the body nor have their origin in its disposition, but whatever the state of the body is, the soul should similarly be moved or not be moved to the emotions. (Philoponus, in An.,

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<sup>311</sup> Indirectly mentioned by Galen, *De historia philosophica*, in *Opera Omnia*, ed. C.G. Kühn, 20 vols. (Leipzig, 1821-31, 19:344). I took this reference from Erwin H. Ackerknecht, *Diathesis: The word and the concept in medical history*, *Bulleting of the history of medicine*, vol. 56, 1982, The Johns Hopkins University Press pp. 317-325. p.319

<sup>312</sup> *The extant works of Aretaeus, the Cappadocian*. ed. and trans. Francis Adams (London: printed for the Sydenham Society, 1856), p. 296. I took this reference from Ackernecht, *op. cit.*, p. 318.

<sup>313</sup> Galen, *On Prognosis*, in *Corp. Med. Graec.*, V., 8, 1, ed and trans. Vivian Nutton (Berlin: Akademie-Verlag, 1979).

<sup>314</sup> Galen, *De symptomatum differentiss*, in *Opera omnia*, 7:43 ff. Quoted by Ackernecht, *op. cit.* 318.

<sup>315</sup> PA 650b27; *Rhet.* 1389b39-31.

<sup>316</sup> Philoponus *On Aristotle On the Soul*. 6, 17-19. Trans. Philip J. van der Eijk.

Philoponus acknowledges that the disposition of the body is prior to the emotional response or at least that the latter presupposes and depends on a certain disposition of the body. The disposition of the body involves an inclination towards one emotion or its opposite.

In a different, although related context, Aristotle says that the orator should put his audience in the right disposition. Doing so, it is easier to convince them; i.e. to make them judge in one way or another, and so to experience different emotions.

The orator must not only try to make the argument of his speech demonstrative and worthy of belief; he must also make his own character look right and put his hearers, who are to decide, into the right disposition (διακεῖσθαι). Particularly in political oratory, but also in lawsuits, it adds much to an orator's influence that his own character should look right and that he should be thought to entertain the right feelings towards his hearers; and also that his hearers themselves should be in just the right disposition (διακεῖμενοι). That the orator's own character should look right is particularly important in deliberative speaking: that the audience should be in the right disposition (διακεῖσθαι), in lawsuits. When people are feeling friendly and placable, they think one sort of thing; when they are feeling angry or hostile, they think either something totally different or the same thing with a different intensity: when they feel friendly to the man who comes before them for judgment, they regard him as having done little wrong, if any; when they feel hostile, they take the opposite view (*Rhet.* 1377b22 - 1378a3).<sup>318</sup>

The orator should change the dispositions of the listeners, putting them in the right frame of mind. In order to make them feel and believe what he wants first then to, he needs to influence them in a certain way. This is different to the dispositions that instrumental music produces because feeling friendly or hostile towards a speaker

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<sup>317</sup> Hicks wrote about *De anima* 403a16ff: "Aristotle's object in what follows is to prove that every mental operation has its bodily concomitant. As many of the bodily changes are internal and unperceived, he argues indirectly (*sêmeion de* a19) from the difference of temperament in man and man. This difference of temperament cannot be due to the object, i.e. the external causes (*pathêmatôn* a20) which tend to excite emotion, for in that case the same slight would rouse all men alike to anger, the same terrors would excite fear in all alike, whereas it is notorious that the choleric temperament is prone to anger on trivial occasions and the melancholic temperament so timid that it gives ways to groundless alarms, these differences between man and man being due bodily constitution. Thus anger cannot take place without the body, without a concomitant affection of a definite part of the body, and this bodily affection cannot take place without soul, for the body in which takes place is at all events animate: *to ergon ouk huparxei aneu aisthêsêôs*" (Hicks 1907, 198). I think Hicks is right in the sense that bodily differences change the emotional reaction. However, he missed the point that the beliefs about the object can also be different, e.g., all men do not equally perceive the same slight.

<sup>318</sup> In *Republic* 489a Plato uses *diathesis* as attitude to someone.

already involves a judgment. Instrumental music is objectless and so there is no previous judgment as in this case. However, the relevance of this passage is that it shows that a disposition, here in the verbal form *διάκειμαι*, refers to a stage prior to the feeling of the emotions. The listeners are ‘arranged’ in certain way – in this case feeling friendly or hostile towards the orator – and then, now on the basis of what the orator says, they judge accordingly and feel the corresponding emotions.

It is important to note that the dispositions of the audience do not only exist before the emotion and disappear when the emotion is aroused. The emotions themselves involve dispositions. For instance, Aristotle says that the orator needs to know how those feeling anger are disposed (*πῶς τε διακείμενοι ὀργίλοι εἰσὶ*, *Rhet.* 1378a23). This means that someone already angry is particularly disposed to react when faced with a new object. This does not mean that the angry person will respond with anger to every new object present to him, but at least he will have a tendency to react with anger.

Closer to a musical context, there is a passage from Proclus.<sup>319</sup> Quoting an Aristoxenian doctrine of *êthos* he uses *diathesis* as a moral state. In particular, he says that the philosophers’ *diathesis* is extended to their voices (*φθόγγοι*) “making manifest the ordered nature which characterizes every one [of their words].” According to Wehrli, the voice, “as expression of man’s essence, is as it were the basis for the ethical character of music.”<sup>320</sup> Anderson<sup>321</sup> rightly connects this passage with Plato’s *Republic* (399a7-8), where Socrates asks for music that would be able to imitate the voice (*φθόγγος*) of a courageous and temperate man. Anderson also thinks that *diathesis* here “comes straight out of the *Metaphysics* and *Categories*.”<sup>322</sup> One reason to agree with the connection between *diathesis* here and its usage in Aristotle’s work is that he also makes a connection between a particular moral *diathesis* and a particular type of sound. The Dorian mode, as we have seen, is the most stable and ordered and has the faculty to put the listener in a stable and ordered disposition. The quality of the Dorian mode, as middle point in terms of pitch between the relaxed and tense modes, is thus

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<sup>319</sup> Wehrli Aristoxenus fr. 75. (= Proclus’ *Platonis Timaeum* I 27c).

<sup>320</sup> Die Stimme als Wesensausdruck des Menschen ist sozusagen Grundlage für den ethischen Charakter der Musik. Wehrli 1945,71.

<sup>321</sup> Anderson 1980, 88.

<sup>322</sup> Ibid.

also transferred to listeners. Something similar happens here, although the transmission is not from the ordered sound of music to the listeners' disposition, but from the ordered disposition of the philosopher to his voice. The voice of the philosopher, Proclus claims here, is ordered as is the disposition of the philosopher himself. Here it is worth remembering that Aristotle also believed in the voice as a sign of different characters among men (GA 786b7-9, 787a1-2).

Another relevant passage that connects music and *diathesis* is found in Philodemus of Gadara's *On music*.

And therefore a musician who seeks such a science, by which he will be able to distinguish *how to dispose the sense organs* (αἱ ποιαὶ τῶν αἰσθήσεων πῶς διατεθήσονται), is seeking a knowledge of the non-existent, and idly imparts precepts on the subject, since no melody, *qua* melody, being irrational (καθὸ μέλος ἄλογον), either rouses the *soul from a state of tranquility and repose and leads it to the condition which belongs naturally to its character* (ψυχὴν οὐτ' ἐξ ἀκινήτου, καὶ ἡσυχάζοθσαν, ἐγείρει καὶ ἄγει πρὸς τὴν κατὰ φύσιν ἐν ἧθει διάθεσιν), or soothes and quietens (πραῦνει καὶ εἰς ἡρεμίαν καθίστησιν) it when it is aroused and moved in any direction; *nor can it turn it aside from one impulse to another, or intensify or diminish an existing disposition* (οὐδὲ τὴν ὑπαρχουσαν διάθεσιν εἰς αὐξήσιν ἄγειν καὶ ἐλάττωσιν ὁρμῆς ἀποστρέφειν). For music is not an imitatory art, as some people fondly imagine, nor does it, as this man says, have similarities to moral feelings (οὐδὲ γὰρ μιμητικὸν ἢ μουσικῆ, καθάπερ τι[ν]ες ὀνειρώττουσιν, οὐδ' [ὡς] οὗτος, ὁμοιοτή[τα]ς ἡθῶν,) which, though not imitative, yet express all ethical qualities such as magnificence, humbleness, courage, cowardice, orderliness and violence—any more than cookery (IV col. 36, trans Wilkinson).

Philodemus' attack is directed to Diogenes of Babylon ("this man" in the passage). Almost all we know of Diogenes' account on music comes indirectly from Philodemus' reports about him. This premise may lead us to doubt how accurate and objective Philodemus was in presenting his adversary's ideas. As an Epicurean, Philodemus follows the notions that all sense perception is irrational (D. L. X, 31). His particular position is clearly summarized by Wilkinson:<sup>323</sup> "In itself music is purely formal, ἀκοῆς μόνον (col. 10, 19). And therefore it has, φύσει, no cognitive effect; for it is not until δόξα comes into play that sounds acquire meaning; and if no cognitive effect, then no ethical effect; for passions and moral can only be influenced by cognitive means, by λόγοι and διανοήματα."<sup>324</sup>

<sup>323</sup> Wilkinson 1938, 178.

<sup>324</sup> Wilkinson response to Philodemus: "[Philodemus] was not in apposition to realize that music, especially by its rhythm, may have an effect on the nervous system almost directly, as the savage's tom-



According to Wilkinson, Diogenes, although a Stoic philosopher, was “probably a follower of Aristotle” at least in musical matters. Also, as Linda Helen Woodward<sup>325</sup> has examined, although Aristotle is never mentioned in Philodemus’ *De Musica*, there is good evidence to support the claim that Diogenes is following an Aristotelian doctrine. One reason to think this is the reference Philodemus makes to “how [instrumental music] dispose[s] the sense organs” (αἱ ποιαὶ τῶν αἰσθήσεων πῶς διατεθήσονται). Aristotle does not talk about the specific disposition of the sense organs in *Politics*; rather he refers to how the whole listener is differently disposed according to different modes. However, the different dispositions, as I claim, must come about through the body and particularly the heart. It is interesting to note that Philodemus criticizes the idea that music is able to calm and quieten (πραῦνει καὶ εἰς ἡρεμίαν καθίστησιν) the listener when in a state of excitation. Aristotle uses the same words when he refers to someone calming his anger, which is a state of excitement in the heart: “growing calm may be defined as a settling down or quieting anger” (ἔστω δὴ πράυνσις κατάστασις καὶ ἡρέμησις ὀργῆς, *Rhet.* 1380a8-9), and again in the passage quoted from *Physics* above, where he says that someone can “settle down and come to a state of rest” (καθίσταται δὲ καὶ ἡρεμίζεται) by an alteration of the body.

Another reason to believe in the connection between Aristotle and Diogenes is that the latter says that music is not imitative but is a resemblance of character (ὁμοιότητος ἡθῶν) and, interestingly, Aristotle uses a related word (ὁμοίωμα) to refer to music in *Pol.* 1340a18. A further connection can be found in column 27,1-14:

Moreover, the beauty and utility in movement and rest is characterized by the healthy body in gymnastics, and also [the capacity to] render capable of discernment those senses which apply to these. Painting for its part, teaches the sense of sight to judge well many visible things. As for music, if it is less necessary than the others, its extreme beauty is obvious if it is seized by the ear.

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tom seems to have; we may well believe that certain rhythms are exciting or erotic by nature and others hypnotic” (Wilkinson 1938, 179).

<sup>325</sup> Woodward 2010.

In his treatment of education Aristotle talks – besides music of course – about gymnastic and the body (*Pol.* 1339b23) and also about painting and how useful it is to judge the plastic arts (*Pol.* 1338a16–19). Delattre, referring to this passage and its parallelism of topics and terminology, thinks that it “ensures that Diogenes explicitly referred to Aristotle.”<sup>326</sup>

There is a correspondence between Diogenes (col. 36 above) and the Pseudo-Aristotelian *Problemata*, particularly XIX, where music is a *kinetic* sort of motion and it has resemblance (ὁμοιότης) of moral characters. These similarities have led Andrew Barker to say that they are “too striking to be coincidental”.<sup>327</sup> Another similarity is that Diogenes, like Aristotle, rejects the *aulos* (col. 41. 29-34) and that music understood as useful for leisure (διαγωγή) and as a *natural pleasure* is present in both, in Aristotle (1340b1, cf. 339b19) and in Diogenes, in Philodemus’ *De Musica* (col. 12.1-8): “Not only is music very useful for a life of leisure, but also it befits us to practice it as and how it chances, not by Zeus in order to sing in accompaniment to stringed instruments for natural pleasure alone.”<sup>328</sup> This and the other mentioned similarities between Diogenes and Aristotle confirm that the notion of a change of disposition was present in the discussion about the effects of music on the listener.

In conclusion, in the passage of *Politics* VIII 1340a38-b10, Aristotle refers to the effects of musical modes without words and how “those who hear them are differently disposed (ὥστε ἀκούοντας ἄλλως διατίθεσθαι). The different dispositions are due to the physical impact of the sound of music on the body of the listener. This must be so because all the affections of sense perceptions involve the participation of the body, particularly the heart. This is how there is a “motion in the soul”, in the sense that there is an enmattered faculty as sense perception that moves with the bodily organ.

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<sup>326</sup> Delattre 2007: vol. II, 340, n. 1.

<sup>327</sup> Barker 2001, 363.

<sup>328</sup> οὐτ' εἶναι μόνον αὐτῆν χρησιμωτάτην πρὸς διαγωγὴν, ἀλλὰ καὶ προσῆκειν ποιεῖσθαι [μουσικ]ῆν ὡς ἔτυχεν, οὐχ ὅπως [εἰς] φυσικὴν ἡδονὴν μόνον], μὰ Δία, ταῖς χορδαῖς προσάδωμεν.

The treatment of *diathesis* by other authors after Aristotle helps us to confirm that emotions are not the same as dispositions and that many times the latter term (διάθεσις) refers to states of the body.

This impact of music produces an alteration in the sense of hearing and also in the heart thus disposing the listener in a particular way. Instrumental music leaves the listener in an objectless mood and so predisposed to react emotionally when an object is presented to the mind for its judgment.

### 3.11 Musical pleasure and happiness

According to Aristotle, listening to music as well as practising it in a moderate way, i.e. not to the extent of becoming a professional musician, is helpful for the achievement of virtue and thus helpful for achieving happiness. These ideas seem uncontroversial among interpreters, however there is some debate about how this process occurs. In this section I want to focus on the role of music in human happiness and reveal how this process takes place. Let me start with a passage where Aristotle mentions three uses that music may have:

It is not easy to determine the nature of music, or why anyone should have a knowledge of it. Shall we say, for the sake of amusement and relaxation, like sleep or drinking, which are not worthy in themselves, but are pleasant, and at the same time 'care to cease,' as Euripides says? And for this end men also appoint music, and make use of all three alike -sleep, drinking, music- to which some add dancing. Or shall we argue that music conduces to virtue, on the ground that it can form our minds and habituate us to enjoy in the right way (χαίρειν ὀρθῶς) as our bodies are made by gymnastic to be of a certain character? Or shall we say that it contributes to the enjoyment of leisure and practical wisdom (πρὸς διαγωγὴν τι συμβάλλεται καὶ πρὸς φρόνησιν), which is a third alternative? Now obviously youths are not to be instructed with a view to their amusement, for learning is no amusement, but is accompanied by pain.<sup>329</sup> Neither is leisure suitable to boys of that age, for it is the end, and that which is imperfect cannot attain the perfect or end (ἀλλὰ μὴν οὐδὲ διαγωγὴν γε παισὶν ἀρμόττει καὶ ταῖς ἡλικίαις ἀποδιδόναι ταῖς τοιαύταις (οὐθενὶ γὰρ ἀτελεῖ προσήκει τέλος). But perhaps it may be said that boys learn music for the sake of the amusement which they will have when they are grown up (*Pol.* 1339a14-33, trans. Jowett).

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<sup>329</sup> Cf. *Rhet.* 1371b4-5: ἐπεὶ δὲ τὸ μανθάνειν τε ἡδὺ καὶ τὸ θαυμάζειν: Since learning and admiring are pleasant.

A key element already presented needs to be remembered: music, i.e. music *and* words on my reading, represents the deeds of *dramatis personae* of different moral characters or the ideas of the lyric poet. In front of those representations the listener exercises his virtue that “consists in rejoicing and loving and hating rightly”. He must do so “forming right judgments and taking delight in good characters and noble actions”. *Taking delight* here is the equivalent of *loving*. The same idea is constructed in *Nicomachean Ethics*. There, Aristotle says that in order to be virtuous “we ought to have been brought up, from very youth, as Plato says, to find pleasure and pain as it is appropriate. For this is right education” (1104b11–13, cf. 1105a6-7, 1179b29). In turn, in Plato’s *Laws* we read:

I maintain that the earliest sensations that a child feels in infancy are of pleasure and pain, and this is the route by which virtue and vice first enter the soul [...] I call ‘education’ the initial acquisition of virtue by the child, when the feelings of pleasure and affection, pain and hatred, that well up in his soul are channeled in the right courses before he can understand the reason why (*Laws* 653a-b).

Aristotle (*Pol.* 1334b21-24, *NE.* 110317ff) states that in the human soul the irrational part appears prior to the rational. He also characterizes young people as being driven by pleasures. For example, the study of music is suited to them because “young persons will not, if they can help, endure anything which is not sweetened by pleasure, and music has a natural sweetness (ἡδυσμα).”<sup>330</sup> According to *Rhetoric* II, 12, the character of young people is hot-tempered, they are sanguine and so prone to anger, they show absence of self-control and are inconstant in their desires, consequently, “their lives are regulated more by their character than by reasoning.”<sup>331</sup> The meaning of ‘character’ here is clarified in *Eudemian Ethics*: “Character is a quality of the part of the soul that is non-rational, but capable of following reason, in accordance with a prescriptive principle” (1220b6-8; cf. 1212a5-13). Following this “irrationality” of youth, Myles Burnyeat, in his essay *Aristotle on learning to be good*, states:

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<sup>330</sup> *Pol.* 1340b15-19.

<sup>331</sup> *Rhet.* 1389a33-34.

Musical appreciation will teach and accustom one to judge rightly and enjoy decent characters and noble actions through their representation in music (*Pol.* 1340a14ff) [...] the child's sense of pleasure, which to begin with and for a long while is his only motive, should be hooked up with just noble things so that his unreasoned evaluative responses may develop in connection with the right objects.<sup>332</sup>

In contrast with Burnyeat's "unreasoned evaluative responses", we find Fortenbaugh stating that: "The musical *paideia* is not concerned with developing a pattern of reaction to pleasant and painful sensations, but rather with virtue and the ability to make correct assessments."<sup>333</sup> I think that both Fortenbaugh's and Burnyeat's interpretations can be right if we distinguish what aspects of music are being considered. We can react doing "correct (or wrong) assessments" of the technical aspects of the work of art as well of the story within it when words are included. At the same time, we can have "unreasoned evaluative responses", as Burnyeat suggests, by merely liking or disliking the object perceived. In my view, when music is accompanied by words Fortenbaugh is right; in that case we can judge the goodness or badness of what we hear (either its technical or moral aspects). In the case of instrumental music, Burnyeat is right. Instrumental music, although a rational construction ruled by the science of arithmetic, is "wordless" and so "irrational" (*ἄλογος*). Young people, those that have not developed their rationality fully, only have "unreasoned evaluative responses" towards it.

Nancy Sherman's chapter 'The Habituation of Character', in her book *The Fabric of Character: Aristotle's Theory of Virtue*,<sup>334</sup> claims that there are traditional interpretations<sup>335</sup> arguing that there is a mechanical habituation of moral character; i.e. there is "a non-rational training of desires towards appropriate objects."<sup>336</sup> In contrast, she states that this habituation is "primarily a form of critical practice."<sup>337</sup> She acknowledges that although children (and animals) have no deliberative capacities of

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<sup>332</sup> Burnyeat 2012, 271.

<sup>333</sup> Fortenbaugh 1975, 49.

<sup>334</sup> Sherman 1991.

<sup>335</sup> "A mechanical theory is here [*Nicomachean Ethics*] given by both of the intellect and the moral character, as if the one could be acquired by teaching, the other by a course of habits." Grant 1885, 241-2; quoted by Sherman 1991, 2.

<sup>336</sup> Sherman 1991, 1.

<sup>337</sup> *Ibid.*

*choice*: προαίρεσις, and *action*: πράξις (1111a25-6, 1111b8-9, EE 1224a26-30 and 1240b31-4), they still possess a deliberative part (βουλευτικόν) “but in an undeveloped form” (ἀτελής, 1260a13-14). This capacity, Sherman argues and I agree with her, and their deliberative faculty is developed over time “gradually and incrementally”. As she says: “we are not children, and then, at once, at the majority of age, reflective adults”. Pure mechanical habituation, she argues, “ultimately makes mysterious the transition between childhood and moral maturity.”<sup>338</sup>

One of the main sources in support of the position claiming that habituation of character is an unreflective process can be found in *Nicomachean Ethics*:

Think that we are made good by nature, others by habituation, others by teaching. Nature’s part evidently does not depend on us, but as a result of some divine cause is present in those who are truly fortunate; while argument and teaching (ὁ δὲ λόγος καὶ ἡ διδασχὴ) surely do not influence everyone, but rather the soul of the listener must be cultivated beforehand by means of habits for loving and hating finely, just like the earth that is to nourish the seed. For the individual whose life is governed by passion will not even listen to an argument that dissuades him or even understand it (οὐ γὰρ ἂν ἀκούσειε λόγου ἀποτρέποντος οὐδ’ αὖ συνέιη ὁ κατὰ πάθος ζῶν); for how can we persuade such an individual to change his ways? And in general, emotions seems to yield not to argument, but to force. The character, then, must be somehow be there already with a kinship to excellence, loving and hating what is base (NE 1179b23-31, trans. Ross).

This passage seems to put Aristotle in contradiction with himself. Emotions, although belonging to the irrational part of the soul, are open to listen and obey reason. Here, in contrast, we read that emotions, or at least people affected by them, are literally deaf to reason: “they seem to yield not to reason, but to force” (ὅλως τ’ οὐ δοκεῖ λόγῳ ὑπέικειν τὸ πάθος ἀλλὰ βίῳ). I think that the contradiction is only apparent. Following the preceding and subsequent discussion it is clear that in this passage Aristotle refers to *some* young and *some* older people who are governed by their passions. Arguments (οἱ λόγοι), i.e. reason, he says: “seem to have the power to encourage and stimulate the generous-minded among the young (φαίνονται προτρέψασθαι μὲν καὶ παρορμηῆσαι τῶν νέων τοὺς ἐλευθερίους ἰσχύειν), and to make a character which is gently born, and true lover of what is noble, ready to be possessed by virtue”. On the contrary, he continues, arguments “are not able to encourage the many to nobility and goodness” (1179b4-10).

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<sup>338</sup> Ibid., 2.

That the youth, or at least the best of them, can respond to rational arguments is also confirmed in *Rhetoric*. There, their character is described because, Aristotle claims, if we want to convince them we need to know how they are *disposed*. Thus, his point in the passage above is that many respond more to coercive punishment rather than to aiming at what is noble. He is not denying what he says in *Rhetoric*, namely that the emotions can be changed by means of argumentation. As I have already shown, in *Rhetoric*, *Politics* and *Poetics* Aristotle makes a distinction between audiences: some are noble and others vulgar, which is the same as saying that some are more rational and others more passionate. The latter types, in the context of *Poetics*, are more moved by artists who decorate the story with music and other visual tricks rather than by those who only present the bare facts. In the context of *Rhetoric*, they are more persuaded by orators who appeal to their emotions rather than pure rational arguments. Children, like most people, are more inclined to follow their desires and emotions than reason. However, as Sherman rightly proposes, it would be reductionist and absurd to claim that their education is completely devoid of reason. It is true that habituation is more important than argumentation in order to educate children, but the moral habituation is not composed of pure “unreasoned evaluative responses”. Sherman says:

Cultivating the dispositional capacities to feel fear, anger, goodwill, compassion, or pity appropriately will be bound up with learning how to discern the circumstances that warrant these responses. Hitting the mean in our affective response, i.e. getting right degree and nuance of the reaction, and in general its inflection, would be inconceivable apart from some critical judgment which informed it.<sup>339</sup>

Moral characters are formed out of corresponding acts (1103a31-b21; *Rhet.* 1369b6), i.e. we become just by doing just acts. Now, virtue, as has been described by Aristotle, is an act of critical judgment. Loving and hating, or feeling pain or love (Aristotle seems not to make a distinction), towards an object are acts of discrimination. This is most clear in the passage of *Politics* that we discussed above:

When men hear imitations, even apart from rhythms and melodies themselves (χωρίς τῶν ῥυθμῶν καὶ τῶν μελῶν αὐτῶν), their feelings move in sympathy (συμπαθεῖς). Since then music (μουσική) is a pleasure, and virtue consists in rejoicing and loving and hating

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<sup>339</sup> Sherman 1991, 8.

rightly, there is clearly nothing which we are so much concerned to acquire and to cultivate as the power of forming right judgments, and of taking delight in good characters and noble actions.<sup>340</sup>

If we maintain that, as I think is the case, according to Aristotle we become virtuous by doing virtuous acts, there should be a way in which listening to the music makes the listener participate in the moral characters represented. It is true that we become virtuous doing virtuous acts but, as Sherman claims, “actions presuppose the discrimination of a situation as requiring a response, reactive emotions that mark that response, and desires and beliefs about how and for the sake of what ends one should act.”<sup>341</sup> The act of discrimination, I think, is only possible in response to the narrative contained in the music or supplied by context. It is not a reflection like feeling pleasure or pain when something is sweet or sour; it involves beliefs and criteria, although in children these are not *fully* developed. The moral judgment of the characters and their deeds is fundamental in the musical *paideia*.

However, there seems to be space for another sort of judgment that could be concerned with technical aspects of the music. Aristotle wonders whether or not students should learn to play music themselves or just get used to being passive listeners. We read in *Politics*:

Why should they learn themselves, and not, like the Persian and Median kings, enjoy the pleasure and instruction which is derived from hearing others? (for surely persons who have made music the business and profession of their lives will be better performers than those who practice only long enough to learn). If they must learn music, on the same principle they should learn cookery, which is absurd. And even granting that music may form the character, the objection still holds: why should we learn ourselves? Why cannot we attain true pleasure and form a correct judgment (κρίνειν ὀρθῶς) from hearing others, like the Lacedaemonians?— *for they, without learning music, nevertheless can correctly judge, as they say,*<sup>342</sup> *of good and bad melodies* (ἐκείνοι γὰρ οὐ μαθάνοντες ὁμῶς δύνανται κρίνειν ὀρθῶς, ὡς φασι, τὰ χρηστὰ καὶ τὰ μὴ χρηστὰ τῶν μελῶν) Or again, if music should be used to promote cheerfulness and a noble pastime (εὐημερίαν καὶ διαγωγὴν ἐλευθέριον), the objection still remains— why should we learn ourselves instead of enjoying the performances of others?<sup>343</sup>

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<sup>340</sup> *Pol.* 1340a12-18.

<sup>341</sup> Sherman, 1991, 15.

<sup>342</sup> “They say”, but probably is not true, because, as Aristotle explain latter (1339b23-39), musical education that involves performance is necessary to become a good judge. Also, as Kraut 1997, 189-190 suggests, “Aristotle’s low opinion of Spartan ‘virtue’ [...] makes unlikely that he agrees that they do in fact develop character through music”. And also Kraut gives as references: “VII. 2 1324b5-9, VII. 14 1333b5-35, VII 15 1334a41-b5, and VIII. 4 1338b11-17”.

<sup>343</sup> *Pol.* 1339a33-b6.



It may be claimed that Aristotle is referring to a technical judgment about the music. The word *χρηστός* can be used to mean *good* in a technical way, in the sense of *appropriateness or practical aptitude*. Thus there are bees that are *better* than others (*HA* 55A27) and there are also *good* householders (*GA* 744B17). But the word is also used in a moral sense (*EE* 1214a21, *NE* 1146a13). This latter usage, I think, is the one used by Aristotle. In the *Politics* passage, after mentioning the effects of music upon the character he returns to the question of whether or not students should learn to play and sing:

Clearly there is a considerable difference made in the character by the actual practice of the art.<sup>344</sup> It is difficult, if not impossible, for those who do not perform to be good judges of the performance of others [...] they who are to be judges must also be performers, and [...] they should begin to practice early, although when they are older they may be spared the execution; they must *have learned to judge what is good and delight in it, thanks to the knowledge which they acquire in their youth* (τὰ καλὰ κρίνειν καὶ χαίρειν ὀρθῶς διὰ τὴν μάθησιν τὴν γενομένην ἐν τῇ νεότητι).<sup>345</sup>

Sherman notes, and I agree with her, that “his principal point is not that they will be bad aesthetic critics. That may be true too. What he means, rather, is that they will be inadequately prepared to judge ethical character in the music, in literature and in real life.”<sup>346</sup> Lord makes a similar argument, but he explicitly states that musical training “cannot possibly be understood as to be training of ‘good judges’ in the sense of good literary critics.”<sup>347</sup> If this were the case, Lord holds, children would have to learn different musical modes, but instead they are only allowed to listen and practise the Dorian mode. The training in music, Lord concludes, “does not greatly contribute to an ‘aesthetic’ appreciation”, and thus, the ‘correct judgment’ Aristotle mentions should be “understood as moral judgment of noble things” rather than an aesthetic judgment of “beautiful things as such.”<sup>348</sup> Similarly, Schoen-Nazzaro thinks that

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<sup>344</sup> “For the pleasure proper to an activity increases that activity. For those who perform their activities with pleasure judge better and discern with grater precision each thing, e.g. those finding pleasure in geometry become geometers, and understand the subject–matter better, and similarly also, lovers of music, lovers of building and so on, make progress in their appropriate function when they enjoy it” (1175a29-35).

<sup>345</sup> *Pol.* 1339b23-39.

<sup>346</sup> Sherman 1993, 18.

<sup>347</sup> Lord 1982, 99.

<sup>348</sup> *Ibid.*, 99-100.

music provides pleasure because we delight in seeing the proportions between the emotions imitated and the real emotions: “mathematical beauty of harmonic progressions will not be the measure of the enjoyment given by a piece. Rather, for Aristotle the intellectual enjoyment of music will be based on the contemplation of the proportion between the development in a musical imitation and the emotion itself”.<sup>349</sup> A different position is offered by Pierre Destrée; he thinks that perhaps according to Aristotle the pleasure that an adult gets from music is “the understanding of its structure” and adds that when Aristotle asks if music contributes to *phronêsis* (1339a25) he “most probably refers to the critical judgment about the beauty of music”.<sup>350</sup> The early training in music would then contribute to the future adulthood of the free citizens and musical critics. Destrée notes: “this aesthetic *theôria* accessible to every citizen of the best city should be considered to be an approximation of the philosophical one.”<sup>351</sup> Depew thinks in a similar direction arguing that “this technical knowledge [of music] is crucial to the subsequent development of both practical and theoretical knowledge.”<sup>352</sup>

In opposition to Destrée, I think that it is quite clear that Aristotle’s concerns about music are not related to “the understanding of its structure.” Children, slaves and animals can still experience pleasure through, at least, *some* part of music. The rational act of understanding the musical structures seems irrelevant for the formation of character, even for the students that learn to perform. They learn in order to be better “judges” but if the technical skills were the goal of their training then, as Lord suggests, it would be more logical to instruct them in all the modes. It is evident that some technical skills and knowledge would come even if only the Dorian mode were thought; but Aristotle is silent about it.<sup>353</sup>

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<sup>349</sup> Schoen-Nazzaro 1978, 270.

<sup>350</sup> Destrée 2013, 318.

<sup>351</sup> *Ibid.*, 319.

<sup>352</sup> *Ibid.*, 368.

<sup>353</sup> The position of Friedrich Solmsen also goes against the idea of an intellectual understanding of music: “The effect of music is ethical not intellectual; in the terms of Aristotle’s system it relates to the moral rather than the intellectual virtues. Had Aristotle really, as it is alleged, carried the ideal of the philosopher in the life of the citizens, the occupation recommended for their leisure would not be music and the virtues and capacities to be developed in the leisure hours would not be the moral but the intellectual” (Solmsen 1961 216). An the next page he continues: “The *scholê* which Aristotle establishes in his best state is not the philosophical or intellectual variety (for we have to form our

Although related, the terms *technical* and *aesthetic* are not the same. It is one thing to claim that Aristotle does not care much about whether or not music students learn the technical aspects of music, such as the mathematics behind it, but it is another thing to claim that he does not care about the beauty of the musical representations, either instrumental or accompanied by voice. Students learn in order to enjoy what is καλά and similarly they learn to judge ὀρθῶς. Both terms, as has been pointed out by Elizabeth Jones, have a semantic range that goes from *technical* good to *moral* good. I think it would be a mistake to consider the judgments in only one perspective. Something totally wrong from the technical point of view would be unable to express its object and a piece of music expressing a good moral character would also certainly be considered beautiful. So, there may be room to consider that the student must judge correctly in both a technical and aesthetic way but the important point is that the emphasis is mostly on the moral judgment.

According to Jones<sup>354</sup>, Aristotle makes a distinction between two pleasures emerging from music; one “only accessible to those who have learned to perform” and another which is “a natural pleasure felt by all listeners regardless of performance experience.”<sup>355</sup> The pleasure accessible to everyone, rooted in animal desires, is, Aristotle says, like the pleasure that we get from sleeping and drinking (*Pol.* 1339a16-17). The other pleasure, Jones argues, is only available to those who have had musical training. According to her it is a “kind of pleasure [...] formed in response to the moral dimension of music – specifically those rhythms and melodies that represent noble characters and actions.”<sup>356</sup> This second pleasure is one which is only available to the man who as a youth engaged in continuous musical practice, has assimilated to the noble characters represented, and understands how to musically perform the same

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opinion on the basis of what he actually says, not on hypotheses as to what he may have said in chapters that are lost or would have said in chapters that were never written)” (Solmsen 1961, 217).

<sup>354</sup> Jones 2012.

<sup>355</sup> *Ibid.*, 169.

<sup>356</sup> Since Jones believes that Aristotle “specially focuses on the attributes of music rather than [on the] verbal poetic content” it is intriguing what sort of *actions* she considers instrumental music is able to represent. (Jones 2012 164, n.9).

*ethos*.”<sup>357</sup> This leads her to conclude that the listener who has been educated in musical performance may experience two different and contradictory pleasures at the same time. On hearing a musical piece that expresses a bad moral character the listener may experience “pleasure from the music *per se*” and, on the other hand, “pleasure or pain in response to the noble or ignoble character status of melodies and rhythms”.<sup>358</sup> This would mean that, for example, an educated man would feel pleasure listening to those “perverted modes and highly strung and corrupted melodies” (τῶν ἀρμονιῶν παρεκβάσεις εἰσὶ καὶ τῶν μελῶν τὰ σύντονα καὶ παρακεχρωσμένα)<sup>359</sup> that Aristotle rejects; but at the same time would feel pain because of the bad characters represented. This seems unlikely because it makes a distinction contrary to Aristotle’s arguments. According to Jones there is a pleasure that is available to every listener; this “pleasure from the music *per se*,” she claims, is indicated when Aristotle states that the educated children should enjoy beautiful music, “and not *merely*”<sup>360</sup> the charm common to all music, which even some animals enjoy, as well as a multitude of slaves and children” (καὶ μὴ μόνον τῷ κοινῷ τῆς μουσικῆς, ὥσπερ καὶ τῶν ἄλλων ἕνια ζώων, ἔτι δὲ καὶ πλῆθος ἀνδραπόδων καὶ παιδίων) (1341a15-17). She concludes that this is an indication that Aristotle considered two pleasures could be felt simultaneously. The common “charm” I think Jones refers can be seen here:

Music is pursued, not only as an alleviation of past toil, but also as providing recreation. And who can say whether, having this use, it may not also have a nobler one? In addition to this *common pleasure*, felt (αἴσθησιν) and shared by all (for the pleasure given by music is natural, and therefore adapted to all ages and characters (1339b42-1340a5).<sup>361</sup>

A little bit earlier Aristotle explains this *common pleasure* provided by music, it is, he says: “amusement and relaxation, like sleep and drinking, which are not worthy in

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<sup>357</sup> Ibid., 174.

<sup>358</sup> Ibid. 176. “Since the uneducated, lower-class man has no training in singing or playing and instrument nor experience in performance, he is unable to recognize, understand or feel moral pleasure in music. Without any training to inform his reaction to a performance, his response and subsequent pleasure reflects the purely auditorial, the non-cognitive ‘natural pleasure’ which music provides”.

<sup>359</sup> *Pol.* 1342a23-2.

<sup>360</sup> Jones’ stress.

<sup>361</sup> οὐ μὴν ἀλλὰ ζητητέον μή ποτε τοῦτο μὲν συμβέβηκε, τιμωτέρα δ’ αὐτῆς ἢ φύσις ἐστὶν ἢ κατὰ τὴν εἰρημένην χρεῖαν, καὶ δεῖ μὴ μόνον τῆς κοινῆς ἡδονῆς μετέχειν ἀπ’ αὐτῆς, ἧς ἔχουσι πάντες αἴσθησιν (ἔχει γὰρ ἡ μουσικὴ τιν’ ἡδονὴν φυσικὴν, διὸ πάσαις ἡλικίαις καὶ πᾶσιν ἤθεσιν ἢ χρῆσις αὐτῆς ἐστὶ προσφιλέης)

themselves, but are pleasant” (1339a16-18).<sup>362</sup> Most people get involved in music looking for these pleasures, which are not for the sake of anything future,<sup>363</sup> but for the alleviation of past toils. A free educated citizen, and Jones is right about this, can also participate in this pleasure, which is available to everyone; but she is mistaken in asserting that a freeman would find amusement and relaxation in any type of music. The reason is that “the pleasure of the best man is the best, and springs from the noblest sources” (1338a9). Vulgar music is vulgar not only in the sense that it represents bad moral characters but the music *per se* is unworthy of the freeman. Those who have learned what is beautiful and take delight in proper things cannot enjoy the same objects as those who have not been so habituated. It is true that “the pleasure given by music is natural, and therefore adapted to all ages and characters” but it would be a mistake to say, as Jones seems to suggest, that all music could be a source of amusement and relaxation for everyone without distinction.

My interpretation is that those students trained in performance would be better judges than those that have not because, even though they have being trained in only one mode, i.e. Dorian, they would be habituated to feel pleasure in that mode and recognize when a piece is set properly to it. Then, once they grow up, knowing at least the basics of how to perform, they would be better prepared to judge whatever music they hear, for example, how far the pitch of a melody would be from that of the Dorian mode. They would be able to recognize how melodies and rhythms depart from the middle point that the Dorian mode represents to the extremes of tension and relaxation. Knowing how to play would definitely help to understand and better judge technical aspects of music but, more importantly, it would also help to know and judge whether or not the musical piece played is vulgar or noble, and so to feel pleasure or pain accordingly. On one hand we have the right pleasure taken from the words, i.e. the pleasure taken in the characters’ deeds represented. There is where the emotions are directed, to the narrative *in* the poetry within the music. On the other hand there is a pleasure on the pure instrumental part; pleasure shared by everyone, even slaves and

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<sup>362</sup> παιδιᾶς ἔνεκα καὶ ἀναπαύσεως, καθάπερ ὕπνου καὶ μέθης ταῦτα γὰρ καθ’ αὐτὰ μὲν οὐδὲ τῶν σπουδαίων, ἀλλ’ ἡδέα.

<sup>363</sup> “Relaxation, then, is not an end; for it is taken for the sake of activity” (NE 1176b35) “Pleasant amusements (τῶν παιδιῶν δὲ αἱ ἡδέα) [...] we choose them not for the sake of other things [...] most of the people who are deemed happy take refuge in such pastimes (diagogas) 1176b line 12.

some animals. That pleasure emanates from a common part of music which is connected to relaxation and amusement and so not with the intellectual pleasure in the understanding of the musical structures. Young children would then be habituated to the Dorian mode and would react, as Burnyeat states, with “unreasoned evaluative responses”. However, contrary to what Burnyeat says, this type of response would be only to the music *per se* and not to the characters and their actions. Without a reasoned evaluative response the young listener would not be able to experience anger as Aristotle understood it. While the instrumental music should be always a noble one, i.e. the Dorian, the characters and deeds presented could be not so. This is the only way children may love *and* hate rightly because, if the “child’s sense of pleasure”, as Burnyeat proposes, “should be hooked up with just noble things” there is no point in music representing anger or any other emotion involving a rejection of something. I therefore think that there are two different ways in which children are habituated to be good in Aristotle’s educational program. On the one hand, they are habituated to be good by the exercise of reason, which involves understanding the stories narrated by poets and reacting emotionally to those stories. In doing so, young listeners make the judgments required to react emotionally to the characters and deeds within those stories. Emotions involve a cognitive element, beliefs and judgments directed at objects; and we evaluate those objects on the grounds on which we have learned to feel pleasure and pain. On the one hand, if a young listener reacts with anger towards an injustice represented by the poet’s words, it is necessary that he has first grasped at least some understanding of the concept of justice. On the other hand, instrumental music does not require words to cause a reaction; without any narrative content it only provides bodily motions, either noble or vulgar – not emotions – which children learn to like and imitate by continuous exposure. This habituation to the noble movements of the right music is mechanical and does not involve judgments like those required for the arousal of emotions. It is like habituating the body of young children to cold temperatures in order to make them strong (*Pol.* 1336a12-15.) I use the term “mechanical” to refer to the unreflective habituation that the young students would acquire through constant exposure, in one case to cold water, in the other to noble movements in music. Without words or reason (*logos*) the young listener would not *understand* that the Dorian mode is noble but would “learn”, i.e. would be habituated

to like it, by constant repetition. Later, with the progressive development of reason, he will recognize and enjoy the same character of the Dorian mode in others things, activities and people. He would prefer manliness, moderation and stability rather than the extremes of relaxation and excitement offered by the other modes. The Dorian is thus opposed to the Phrygian as calmness is opposed to rashness. The latter is a quality of those who act irrationally and driven by their passions; the first is a sign of someone prudent as *deliberation should be slow* (βουλευέσθαι δὲ βραδέως).<sup>364</sup>

Let me now focus on a more sophisticated pleasure only available to freemen. Beyond the relaxation, amusement and pleasure we get from music, it is suggested in the form of a question that music may also contribute to leisure and practical wisdom: πρὸς διαγωγὴν τι συμβάλλεται καὶ πρὸς φρόνησιν.<sup>365</sup> The choice of “practical wisdom” for the translation of φρόνησις is not completely clear. In *Nicomachean Ethics* φρόνησις is contrasted with σοφία, this latter term referring to the intellectual virtue of theoretical wisdom which deals with universal truths. Thus, the virtue of φρόνησις refers to practical wisdom; it deals with particular cases and serves us to deliberate how to act in the right way. There are, however, some instances where φρόνησις seems to refer to theoretical wisdom, as is the case in some passages of the *Eudemian Ethics* (1215a34, b2 and 1216a19-20). If this were the case, the positions of Depew and Destrée mentioned above would gain more plausibility, namely that Aristotle has in mind the intellectual development of the students of music. Nevertheless, the term φρόνησις appears at least thirteen times in *Politics* and at no time does it refer to intellectual development in terms of theoretical wisdom. In fact, at 1277b25 it is said that it is the virtue which is particular to the ruler; and that is practical, not theoretical wisdom. But still, what does it mean to say that music contributes to practical wisdom and what implications does this have for our study?

David Depew thinks that among the functions Aristotle ascribes to music, *the pastime in leisure (diagôgê en têi scholeî)*<sup>366</sup> is the only one that transcends mere entertainment

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<sup>364</sup> NE 1142b5.

<sup>365</sup> *Pol.* 1339a25-6.

<sup>366</sup> *Diagôgê* (διαγωγή) can be broadly understood as a way of life (HA 534A11, 589A17); sometimes as an activity that involves amusements (παύσασθαι) chosen for their own sake (1176b12) and others as differentiated from those amusements (1127b). Friends are said to bring a pleasant passing (diagôgê) to

and relaxation. There must be something else behind mere unreflective habituation; and so he thinks that catharsis and character building are possible “by introducing reflection and learning”.<sup>367</sup> As Aristotle points out, music may contribute to wisdom (*phronêsis* 1339a26) and learning (*mathêsis* 1339a37). If this is accepted, then Depew concludes: “unless music engages rationality, the distinctive human function (*ergon*), on both the producing and receiving end, cannot be fully endlike according to Aristotle’s general principles.”<sup>368</sup> In other words, “it is in the non-musical part in which tragic catharsis resides; [it] rest[s] on the learning involved in actively following the plot to its resolution [...]; thus tragedy affords a kind of learning [...]; it sharpens and exercises practical wisdom [and] that is just what is required of the endlike leisure processes of *Pol.* VIII.”<sup>369</sup> Depew’s interpretation is tempting, especially because it supports the idea that music in *Politics* involves words. However, I think that it is possible to argue that instrumental music *also* contributes to leisure, practical wisdom and learning. As said above, the calmness and moderation that the Dorian mode creates can lead one to adopt such calmness and moderation in others aspects of life. The exercise of practical wisdom is certainly improved if decisions are made with calmness. This does not mean that we should always act slowly – that would be absurd – but we should always act with as much calmness as the particular situation permits. In other words, if young children were used to the moderate temper that the Dorian mode represents they would incorporate by habituation the same character. On the contrary, if they were habituated to the Phrygian mode they would learn to react with excitement without taking enough time to evaluate different situations, thus allowing their emotions and irrational impulses to take precedence over reason.

Now, instrumental music not only contributes to *phronêsis* but also to *the pastime in leisure (diagôgê en têi scholeî)*. Leisure plays an important role in Aristotle’s *Politics*

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our life (1171b13). It is opposed to what is necessary (*Met.* 981b18; 982b23) and it is said that God is always in this state of *diagôgê* (1072b 14).

<sup>367</sup> Depew 1991, 368.

<sup>368</sup> *Ibid.*

<sup>369</sup> *Ibid.* 369. Supporting his position we read in *De sensu* 437a11-15: “It is hearing that contributes most to the growth of intelligence. For rational discourse is a cause of instruction in virtue (*φρόνησιν*) of its being audible, which it is, not directly, but indirectly; since it is composed of words, and each word is a thought-symbol”.



because without it, happiness, the final aim of the political activity, is not possible.<sup>370</sup> In that context Aristotle says that “there are branches of learning and education which we must study merely with a view on a pastime in leisure, and these are to be valued for their own sake”.<sup>371</sup> We have seen that music, instrumental or not, is useful for moral purposes and so we may ask if that use makes it something that we do not value for its own sake. What seems most probable to me is that the moral effect would certainly be a desired one but in its absence the free enjoyment of music would still be worthy for its own sake.

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<sup>370</sup> But leisure of itself gives pleasure and happiness and enjoyment of life (τὸ δὲ σχολάζειν ἔχειν αὐτὸ δοκεῖ τὴν ἡδονὴν καὶ τὴν εὐδαιμονίαν καὶ τὸ ζῆν μακαρίως) 1338a1-3.

<sup>371</sup> ὥστε φανερόν ὅτι δεῖ καὶ πρὸς τὴν ἐν τῇ διαγωγῇ σχολὴν μανθάνειν ἅττα καὶ παιδεύεσθαι 1338a9-11.

## 4. Conclusions

In the history of philosophy of music the study of Aristotle's position on the topic pales in comparison with other figures such as Pythagoras, Plato or Aristoxenus. Certainly, there is less material available in his works than in the work of the other authors mentioned, and from what we have it seems – only at first glance – that he did not offer any substantial nor original contributions.

This, however, is not true. Aristotle's account of music marks a departure from a dogmatic mathematisation of the phenomenon. Numbers and their different combinations in ratios were not the foundational structure of the universe: there was no Music of the Spheres, nor an invisible "Counter-Earth". For the construction of such a fable their advocates had to pull a rabbit out of the hat and create out of nothing the existence of a hypothetical celestial body in order to count ten of them and thus keep their theory – or *mathematical dogma*– coherent. It is true that Aristotle still subordinated the science of harmony to arithmetic, but with him music also becomes a natural phenomenon, especially because he considered sound and acoustics to be constitutive elements in his analysis of the musical experience. For Aristotle, music is based on the science of harmony and so on mathematics, but it had also a physical side in the natural world, making it available to human sense perception. Rather than a supernatural construction supporting the whole Cosmos, for Aristotle music was a human art.

In the human sphere, Aristotle denied that the soul could be defined as harmony but this did not lead him to disagree with the idea that music had a strong power over it. Following his master, and indirectly an older tradition of Damon and Pythagoras, Aristotle was a vivid defender of a musical *paideia*. However, contrary to Plato – who only allowed two types of music in his ideal city – Aristotle was more tolerant and understood that music that may seem inappropriate for the education of infants could have another function in a different context. Thus, in social terms, Aristotle had a

prudential approach to music, less strict and more inclusive than that of his master. It was prudential because he considered what type of music was suitable for different ages and characters at different times and situations.

One of the most important contexts in which Aristotle thought music was important was education. There, the young children need to be habituated to love and hate properly, i.e. directing their love and hate to the right objects. At that age, their rational faculties are not fully developed, thus it is their irrational side that needs to be nurtured. Music was therefore thought as a key tool to guide the emotions.

Music has been pointed to as the “language of the emotions”; an idea that is accepted and spread as a popular opinion. It seems that there is no discussion on whether we can or not react emotionally towards a piece of instrumental music. However, what has been continuously claimed about Aristotle is something different: that there was a sort of musical contagion of emotions. A piece of music imitating the acoustic properties of someone experiencing anger – something that Aristotle thought totally possible, we have seen – would thus arouse the same emotions in the listener. This position finds support in readings of book VIII of *Politics* that follow Susemihl’s emendation at 1340a13: instrumental music, without words, has the power to transfer the emotions expressed to the listener. However, once Aristotle’s account with respect to emotions is studied there appear to be inconsistencies with this position that are difficult to solve. If angry music arouses anger in the listener, what is the object of that anger? This problem of an emotional contagion through music is of big importance in modern discussions of philosophy of music. The problem has not, however, been transferred to the philosophy of Aristotle. Scholarship devoted to ancient music tends to accept the “musical emotions” in Aristotle and all its implications without considering what Aristotle says about emotions. Once the Aristotelian account of emotions is considered, then it is unavoidable that inconsistencies are found. For Aristotle, emotions are based on appraisals of something: cognitive processes with intentionality where there is something predicated about something. Emotions are not the result of a “blind contagion”.

While those working on ancient music do not consider Aristotle's account on emotions, those who devote themselves to the topic do not consider the case of "musical emotions". Almost all the cognitive constructions of a systematic Aristotelian position about the emotions studied here – that are made primarily on the basis of *Rhetoric* and *De Anima* – do not discuss "musical emotions", and those who are aware that there is something Aristotle says about music, do not discuss the details of the text in *Politics*. They say that there is no such a thing as musical emotions or that music is always accompanied by words.

The acknowledgment of the existence of the problem is in itself one of the main conclusions of this thesis. All the cognitive readings of Aristotle's account of emotions should deal with the objections that arise from the possibility of a musical contagion of emotions. If it is accepted that we become angry just by listening to "angry music" then all cognitive constructions are at risk. The idea, repeated through ages, is that music enters into listeners as into a black box, the only visible result being the outcome: an emotional reaction that imitates the emotion expressed in the music. This mysterious effect contradicts all Aristotle says about emotions.

The second conclusion has to do with the solution that has been offered. Instrumental music is able to arouse feelings of pleasure and pain and also to create *dispositions* in the listeners but not emotions proper as defined in *De anima* or *Rhetoric*. According to Aristotle, when we listen to music different physical properties of its sound affect the body, particularly the region of the heart, which is the center of sense perception and where the internal physical aspect of the emotions takes places, e.g. boiling blood around the heart in the case of anger. Even a small change in that region can predispose someone to react emotionally. This movement in the body corresponds to the movement of the music; there is a polarity between motion and rest or excitement and calm which is based on the physical properties of the acoustic phenomena. High and low pitch are in this sense equal to more or less motion. This effect in the listener – contrary to what happens with emotions – is not the result of a judgment of any type but only of sense perception. Music may produce pleasure or pain in terms of sense perception and in that sense our reaction has intentionality: we feel pain/pleasure *on*

*account of the music.* We can also judge the beauty or correctness of a particular piece and experience an emotion. However, none of this is problematic for Aristotle. The problem emerges only when it is suggested that the listener experiences the same emotion as the music expresses as a result of a sort of contagion.

What does occur is a change in the *disposition* of the listener. There is an alteration in the state of excitement or rest which is accomplished by the physical impact of the sound on the body, thus preparing the way for the arousal of a particular emotion. This emotion, however, appears only when there is a judgment about an object. In this model, some sort of music, for instance one expressive of anger, moves the heart in excitement generating a similar bodily condition to that present when one experiences the emotion. However, such condition is only one aspect of emotions for Aristotle: it refers to the material conditions, i.e. the bodily state. It is an objectless state because there is nothing to be angry about and in this sense the state lacks the form, by which I mean the other hylomorphic element needed for the existence of emotions which I have interpreted as the judgment.

Music therefore has the power to prepare the listener and put him in a state of readiness to respond emotionally once he is exposed to a particular object. The disposition is objectless and precedes emotion. This was the case in the Greek theater and is also what we experience now in movies. Imagine we take all the images and dialogues away and only present to an audience the incidental music from the soundtrack. The audience may react with pleasure or pain and have an aesthetic experience, but they will not be moved to fully-fledged emotions unless some content fills the empty space. Music, then, serves to adorn and season the story but is powerless to tell the story by itself.

This interpretation, although reconstructed from different contexts in the Aristotelian corpus, remains, I think, true to the letter and spirit of Aristotle's texts. It offers at least a plausible solution to the apparent inconsistency between what he says about music in *Politics* and what he says about emotions in *Rhetoric*. Inconsistency is certainly a possibility. Maybe Aristotle would respond that he did not think about the problem

presented here. Nonetheless, from what we have seen, it seems that from what he *did* say, a solution, which allows us to preserve the consistency of Aristotle's theory, is available.

The problem cannot be denied, either by those studying what Aristotle said about music or by those working on his account of emotions. I hope I have offered an overview of the problem; the main passages and issues that need to be considered for the debate. My solution attempts to rectify a historical misconception about what Aristotle said about music. As a result, at least a footnote in the chapter of the history of philosophy of music needs to be added. I hope that I have made that small contribution.

For further studies in the philosophy of music, especially those concerned with the relationship between music and emotions, my interpretation of Aristotle's position on the topic may be helpful. The essential connection between mind and body that Aristotle offers helps us to understand the emotions and all the mental processes involved in a comprehensive way. The inclusion of the body in the study of relationships between music and emotions is rare in modern scholarship in the field of philosophy of music. A comprehensive modern account should follow Aristotle's path and consider matter and form, not only in the study of music but also in the study of other human activities, especially arts, where both creative process and reception involve strong participation of emotions. Only taking into account mind and body together, as Aristotle said, will we gain a complete understanding of human emotions and, with it, a more clear answer to the still mysterious and always fascinating "spell" of music.

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