

MUSIC AND EMOTION: FROM ANCIENT GREECE TO CONTEMPORANEITY

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Abstract. Understanding how music and emotion co-vary has been the focus for many scholars for a long time, starting with the writings of Ancient Greeks to contemporary thought. Philosophers, musicologists, and cognitive scientists alike have been puzzling on the extent to which music can have an influence on how humans feel, think and act morally and ethically. Therefore, the understanding of this relation is of paramount importance as we are immersed in organized-sound contexts every day, and this has a major effect on how listeners think and act in social environments. The current investigation aims at highlighting the development of the music and emotion relationship throughout the stylistic periods of the European space (with a short comparison to Ancient Chinese music) as a preamble for a more nuanced future research on the topic.

Keywords: music, emotion, aesthetics, ethics

1. Ancient Greece

In Ancient Greece the interest in music was twofold: on the one hand, they were curious about the relation between mathematical parameters and acoustic events, as this could explain the harmony of the universe. On the other hand, they were thinking about the interaction between music and the ethical attitudes of the listeners. This was of major immediate importance, relevant for the method of governing the state and assuring that 'proper' emotions were being aroused by music into listeners.

The deep connection between music and the Ancient Greeks can easily be inferred from two facts:

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- ✓ the *holistic approach* (poetry, melody and dance forming a unitary musical event)
- ✓ the interchangeability of the words *singing* and *speaking* in their language.

Music was about movement as it was about singing and speaking. More importantly, in Anderson's understanding Plato considered that certain musical features could highly influence the listener's thoughts and actions (Anderson 1966), such as rhythm and harmony.

1.1. *Plato and Aristotle*

Music had an "ethos" through which it acted upon people's soul, and it did so differently for men and for women. Modes² and rhythms inducing orderliness and delicacy were meant for women, whereas the ones inducing courage were meant for men (Monro 1894). Hence a direct link between musical features and emotions was already in place in Ancient Greece through the writings of Plato and Aristotle.

Besides modes, harmony and rhythm, also timbre had a specific impact on people's moral actions. In the *Republic*, Plato suggests that plucked stringed instruments (*e.g.*, lyra, kithara) are the favourites of the gods due to their capability to elevate and stimulate the soul. On the other hand, the reed-blown pipes considered to incite disorder and have orgiastic effects, therefore being excluded from the idea of a perfect city-state. On a more general note, wind instruments are not accepted by Plato in the ideal city-state as they contradict the idea of a holistic musical event (by not allowing poetry or the singing voice to be included in the performance).

In other words, the harmony of the entire city can be influenced by the type of music being played for its citizens. Modes, harmony, rhythm, and timbre can all have a tremendous effect on how people thought and acted, being capable of arising different types of emotions, such as exaltation or

² One of the seven ways of arranging the notes of a scale according to the relation with the tonic (the gravitational centre of a song), thus structuring the profile of the melody. Depending on the tonic, they are Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian and Locrian.

feelings of bravery, grandiosity, orderliness, or discreteness. Plato even goes as far as saying “our songs are our laws” (799e, 10-11) and proposing a strict manner of choosing the right tunes for the city-state of Athens.

The role of music as a mediator of moral education is also discussed by Aristotle in *Politics*, who thinks that music’s role expands also to being a way of relaxing after work and as a means for leisure. He declares that it is very important to listen to the ‘correct’ music and aim for a virtuous music which should tame powerful and intense emotions. The moral message of the ‘correct’ music has the power of liberating the listener from overwhelming emotions or feelings of excitement, fear, or anxiety. Plato agreed with Aristotle’s view noting that the Dorian mode³ and also the Phrygian mode⁴ induce a certain degree of temperance, firmness of character, and moderation of feeling.

“[Dorian] would fittingly imitate the utterances and the accents of a brave man who is engaged in warfare or in any enforced business, and who, when he has failed, either meeting wounds or death or having fallen into some other mishap, in all these conditions confronts fortune with steadfast endurance and repels her strokes. And [Phrygian] for such a man engaged in works of peace, not enforced but voluntary, either trying to persuade somebody of something and imploring him — whether it be a god, through prayer, or a man, by teaching and admonition — or contrariwise yielding himself to another who is petitioning or teaching him or trying to change his opinions, and in consequence faring according to his wish, and not bearing himself arrogantly, but in all this acting modestly and moderately and acquiescing in the outcome. Leave us these two harmonia — the enforced and the voluntary — that will best imitate the utterances of men failing or succeeding, the temperate, the brave — leave us these.” (*Republic*, 9-11)

Additionally, also rhythms can have comparable effects on the moral profile of a listener. Some may induce stability, other degenerate behaviours, or even freedom of character.

³ The second of the seven Greek modes of the major scale.

⁴ The third of the seven Greek modes of the major scale.

It can be observed that if Plato's writings about the relation between music and emotions are rather normative (how it should be in the ideal city-state), Aristotle's are rather descriptive (how it is). Even so, they both stress the importance of music education for the 'cultivation of the soul' or the tampering of excessive feelings and orientation towards purified thoughts and moral actions in accordance with the virtues of a community.

1.2. *The Harmony of the Spheres*

One important aspect in how the Greeks explained the relation between music and emotions is the relation between the greater cosmic setting and the smaller human order. The heavenly system was copied on Earth through the use of a duodecimal numerical system (Pont 2004). This mathematical cosmology provided an understanding of the relation between the higher order and the human order, a system translated in music and political laws.

The 'analogy of the macrocosm and the microcosm' is also known as 'the harmony of the spheres' (Pont 2004) meaning a sort of earthly imitation of the celestial proportions. This idea draws from the longstanding belief that the cosmos was ordered according to the music scale which was, in turn, based on the monochord⁵. Plato developed an analogy between music and politics using the monochord and numerical proportions. For example, the tritone⁶ (the most avoided dissonance in the Western musical canon, also known as 'diabolus in musica') is compared with the tension between a tyrant and a good man (*Republic*, 587e).

To better understand the deep interconnectivity between music and politics, hence the moral/ethical profile of a community, it is worth thinking of the word *syntagma* which can mean both a political system and a musical system (Rudhyar 1982, 14). The interconnectivity of music and the city life went as far as being considered that "architecture is frozen music" and some scholars even proposing that the musical proportions were encoded in the buildings of the city-states (Pont 2004).

⁵ An ancient musical instrument, with one string (chord).

⁶ Augmented fourth or diminished fifth (for ex. C – #F in C major).

The harmony of the spheres is a musico-political explanation of the prevalent proportions found in the microcosm – the individual, the mesocosm – the city, and the macrocosm – the universe. Music, through its specific features (modes, rhythms, harmonies, timbre) was a catalyser between these three levels of existence, being able to tap directly in the moral behaviour of individuals and communities through ‘likeness’ and ‘sympathetic vibrations’.

1.3. How music affects the ethos

Plato was very explicit when describing the influence music had on feelings and emotions. For example, ‘evil rhythm’ and dissonances (‘disharmonies’) were associated with bad temper and the reverse one with happier dispositions. Moreover, Plato linked the valence of music’s influence on the moral disposition of the listener with the degree of exposure to a certain song. For example, a longer exposure has a negative effect while the opposite a positive effect (for the same music):

“Now when a man abandons himself to music to play upon him and pour into his soul as it were through the funnel of his ears those sweet, soft, and dirge-like harmonia... and gives his entire time to the warbling and blandishments of song, the first result is that the principle of high spirit, if he had it, is softened like iron and is made useful instead of useless and brittle. But when he continues the practice without remission and is spellbound, the effect begins to be that he melts and liquefies till he completely dissolves away his spirit, cuts out as it were the very sinews of his soul and makes of himself a *feeble warrior*.” (*Republic*, 410a-b)

Therefore, Plato’s ideas about music and its effect on moral actions were concentrated on specific features of the music itself (modes, harmony, rhythm, timbre) and context (sex of the listener, degree of exposure). Even more importantly, Plato even tried to explain the mechanism through which music acts on peoples’ ‘ethos’.

Firstly, when discussing the mechanism through which music was thought to influence emotions in Ancient Greece, the text itself attached to the music was considered irrelevant: the meaning of the words followed the sounds of the music, not the other way around. The text of the music was merely supporting an already existing agenda of the emotions transmitted by the combination of modes, rhythms, and harmonies.

Secondly, the cultivation of a preferred human disposition by the development of peoples' characters through music's influence was explained as a cognitive appraisal and as a physiological response:

“Once the Pythagoreans established the notion of consonant musical proportion to their own satisfaction, the matter of human response to these intervals had to be addressed. Plato's *Timaeus* does so by arguing that the human soul is patterned on the World Soul and is therefore ordered in these same proportions. Similarly, the three parts of the soul, and even the physical proportions of the human body itself, all participate in these ratios. The consonant intervals, then are pleasant to the ear because of their similarity to these same proportions within the listener. This argument accounts for the effects of music on the soul or on the emotions: by a sort of sympathetic vibration the sounds resonate with and therefore emphasize similar aspects of the soul. Appreciation of beauty or ugliness in music may therefore be seen as a physiological response as well as a conscious judgment by the intellect.” (Moyer 2019, 18)

Thirdly, 'likenesses' between an individual's psychological profile and musical cues meaning a correspondence between sound organisation and temperament is one of the ways in which music acts on humans. In other words, the power of music to correct excessive, intense feelings and undesired emotions relies in its similitude with the internal disposition of the individual. And as the human soul is an imitation, proportional entity following the proportions of the soul of the universe, then some people will innately be able to recognise 'good music' (the ones following the 'correct' proportions of the celestial system), whereas others will need to be trained into proper aesthetic taste.

Lastly, we have seen that Plato speculates that the way in which music can act upon listeners resides in the 'likeness' between music, the human soul and body and the universe. Therefore, the manner in which the Greek modes, rhythms, harmonies and timbre penetrate the emotional side of the citizens is through a 'likeness' which generates a 'sympathetic vibration'. The "sympathetic vibration" as an explanation for how music can influence emotions is, however, a rather proportional correspondence between music and the human soul and body, not an actual vibration. These concepts are rather translations of the harmonious, numerical proportions between musical parameters and human/cosmic features.

1.4. Comparisons between Ancient Greece and Ancient China

Music's influence on human moral dispositions was also noted in Ancient China through the writings of Yue Ji (Record of Music, from the Li Ji⁷) and the Yue Shu (Book of Music, from the Shi Ji):

"Men have powers of the body and powers of the mind, but they cannot remain stable with regard to grief, pleasure, joy, and anger. They are moved by external causes. Thus originates the appearance of the various affections. Therefore, if feeble, trivial, and rushed music prevails, people will be sad. If harmonious, peaceful, varied but simple music prevails, people will be gratified and happy. If vigorous, violent, and forceful music prevails, which arouses people to move their limbs and animates their blood circulation, they will be steadfast and resolute. If straightforward, steady, peaceful, and stately music prevails, people will be dignified and pious. If broad, serene, orderly, and flowing music prevails, people will be compassionate. If licentious, evil, hasty, and superficial music prevails, people will be dissolute." (Kaufmann 1976)

⁷ This is the oldest Chinese treatise on music, presenting Confucian ideas on how music, self-education, self-control and the awareness of natural rhythms co-vary. Human personality is presented as a musical development linking types of music with virtues. It is believed that the treatise had numerous authors and that it was written no later than the middle of the Western Han dynasty (206 B.C. – 24 A.D.).

Similar to the Ancient Greek thought the Chinese writings are also emphasising the connection between music's harmony and harmony from the Earth (*di*) and the Heaven (*tian*). However, musical features were no longer pointing to the regular proportions between the macrocosm, mesocosm and microcosm, but were actual association with natural phenomena (such as rain, wind, the seasons, etc.).

The more practical approach to understanding how music can influence the moral disposition of people is also evident from the way the Ancient Chinese writings are explaining this relationship. They point to a direct link between ethos and the physical body:

“Music is what activates the blood flow and the meridian, circulates the energy, and harmonizes the appropriate ethos. Hence the Gong mode interacts with the spleen [meridian], and sincerity is harmoniously strengthened. The Shang mode interacts with the lung [meridian], and righteousness is harmoniously strengthened. The Jue mode interacts with the liver [meridian], and humaneness is harmoniously strengthened. The Zhi mode interacts with the heart [meridian], and propriety is harmoniously strengthened. The Yu mode interacts with the kidney [meridian], and wisdom is harmoniously strengthened. Hence, music reinforces the right ethos on the inside, while it differentiates between the respectable and the indecent on the outside.” (SSJ 5, 698)

Therefore, the ethical power of music on the listener is done by activating the blood circulation, suggesting a tripartite relation between ethos, body, and music.

1.5. Concluding remarks

The Ancient Greeks, through the writings of Plato and Aristotle, built the ‘ethos’ theory explaining the connection between the microcosm (the individual), the mesocosm (the community) and the macrocosm (the universe), also known as the harmony of the spheres. They believed that a numerical proportion between these three levels of organisation exists, and that music was capable of capturing it in its internal structure.

Musical features (modes, harmonies, rhythm, and timbres) and context (sex of the listener, degrees of exposure, etc.) were thought to directly impact the workings of the souls and influence its moral dispositions. The character of the individual and the well-being of the community could be 'corrected' through the power of music and exposure to 'proper' music'.

Lastly, the Greek philosophical thought followed a more speculative and proportional approach, whereas the Ancient Chinese thought was more practical, using natural phenomena and physiological effects on the body to explain the link between music and its power over the ethos. It can also be noted the cross-cultural attention to the ethical implications of music listening which suggests the great extent to which the relation between music and moral behaviour has received the attention of philosophers.

2. Middle Ages and Renaissance

Current thought in musicology would separate music written in Ancient Greece from Medieval thought by emphasising the appearance of rhythm and pitch with predominantly monophonic⁸, vocal works. Going forward, Renaissance compositional techniques proposed polyphonic⁹ music, both instrumental and vocal. However, these observations become even richer when considered in a socio-ethical discussion which is presented below.

2.1. Middle Ages

In the Middle Ages (approx. 500-1500 A.D.), the path from the direct sensation to rational truth was to be made by following the four-fold path comprised of arithmetic, music, geometry and astronomy, in the view of Boethius (died 524/525). This way, Boethius used the quadrivium to reconcile the philosophy of Plato and Aristotle and include it in the existing Roman educational system represented by Vitruvius and Cicero (Panti 2018).

The "likenesses and ethos theory discussed in Ancient Greece about the music – emotions dyad also inspired Boethius who developed the

⁸ A single line of melody.

⁹ Multiple melodies being played simultaneously.

notion of *musica humana*" (Alperson 1994). This way, he was pointing to a similarity between musical features and the internal workings of the human soul. His five volumes *De musica* written for the King of Franks, Clovis, became the most important writings on music summarizing Greek thought which prevailed in the Middle Ages and the Renaissance. In these writings, Boethius proposes that the ratios and numbers hidden in music have the power to link together the material with the immaterial in humans – body and soul. It follows that the sound of music can influence the judgement of the conscious mind, having effects on how humans act. In this way, Boethius emphasizes the feature characteristic to music only (from the disciplines making up the quadrivium), namely the power to influence morality. Humans are seen as "harmonic beings" and, hence, music can affect the relation between the mind and the body. The right, harmonious ratios can cure the mind and the body, while distorted ratios can result in bodily alterations and psychological disharmonies. In this manner, Boethius, following the teachings of the Greek philosophers and in accordance with teachings of Nichomachus and Ptolemy, reinforces a link between aesthetics, ethics, and politics.

Music was still regarded mainly as a sub-chapter of natural sciences, namely of mathematics, following Aristotle's belief that the good and beautiful cannot be disconnected from the science of numbers. Its properties, as presented by Augustine (354-430 A.D) in his "De Musica", can support an understanding of the perfection of creation. However, Augustine and Boethius diverged in the hidden aesthetic of the harmonic ratios, especially when it comes to beauty found in numbers. For Augustine, beautiful music is expressed by rhythm, an indication of the right numerical ratios. The examples connecting beauty with numbers and music he offers in his *On music* are plentiful, a view also found in Ptolemy who thought that the perceived real beauty in music is to be found in the correct mathematical patterns of the harmonic ratios. Boethius was more supportive of Aristotle's considerations on the origin of beauty in music. In his *Metaphysics*, book 13, Aristotle states the difference between the good and the beautiful: the first is relational, whereas the second is static. Music can be good, as it always implies a relation linking mind and body by using harmonic ratios. Moreover, the beautiful cannot be found in music, as this presupposes a unity achieved

when the ethical aim has been reached. There is only one type of beautiful music, and this is “the music of the Platonic soul of the world” (Panti 2018). It is made up by a perfect harmony of the animated principle that rules the universe, as Boethius remarks:

“What Plato rightfully said can likewise be understood: the soul of the universe was joined together according to musical concord. For when we hear what is properly and harmoniously united in sound in conjunction with that which is harmoniously coupled and joined together within us and are attracted to it, then we recognize that we ourselves are put together in its likeness, for likeness attracts, whereas unlikeness disgusts and repels.” (Inst. mus. I, 1, 179.20-180.10; *transl.* Bower-Palisca 1989, 2)¹⁰

It follows that ‘material’ music can never be beautiful as it can never reach a motionless state and it is this exact relational aspect which transforms it into a tool for manipulating moral/ethical acts. Music can be good or bad, according to the harmonic ratios used in its structure, but it cannot reach a unity necessary for achieving the ethical scope and true beauty. Interestingly, Boethius is adamant regarding how the relational aspect of music influences moral thoughts and acts. He proposes that reaction to music is not only restricted to its internal ratios, but also to the character, age, and attitude of the listener: people “who are rougher delight in the rather uncultivated modes”, and those “who are more gentle delight in more moderate modes” (Inst. Mus. I, 2, 180-182).

Therefore, music itself is insufficient for predicting and understanding the moral attitudes of its listeners. Music is relational, therefore highly contextualized. Boethius does not discuss the socio-political environment as a feature intervening in this process but restricts his ideas to the individual psychological frame of mind. The balance of the mind and the body can be achieved when the right character meets the right harmonic ratios, a view also presented by Plato in his *Republica*. Cecilia Panti (2018) notes that “ratios involved in musical consonances and harmonic patterns as having a specific effect in moving the human soul

¹⁰ To be consulted the edition translated by Bower-Palisca 1989, 2.

to emotions, actions, and the good or bad dispositions of the mind, namely to psychological and physical affections that music can both evoke and heal". This is an important observation for the current investigation as it links music, its internal structure, external features, emotions, and moral acts in one paragraph, this being the main research topic pursued here. The fascinating co-variance of aesthetics and ethics in the realm of music has been qualitatively investigated for a long time, but never in a setting bringing together both statistically reproducible results which used both qualitative and quantitative data.

2.2. Renaissance

The major difference between music composed in the Middle Ages and music composed in Renaissance was the advent of the word in the latter stylistic period, an innovation deriving from the humanistic movement (Lowinsky 1954). In this regard, Virgil and Horace were the muses for the Renaissance composer who was well acquainted to the Ancient Greek writings on music. Vincenzo Galilei (1520-1591), the father of the renowned physicist, was an avid supporter of the primacy of words to music and proposed the immediate abandonment of counterpoint¹¹ (a compositional technique attaining a fantastic richness through the compositions of Giovanni Pierluigi da Palestrina) and of the polyphonic¹² style. This very quickly gave birth to the opera (around 1600 through the works of Claudio Monteverdi) in which the supremacy of the text was paramount, and the harmonic support was provided by the instrumental accompaniment. In this way, the Greek ideal of music as a holistic experience (through the inclusion of words, dance and theatre) was re-enacted in the Renaissance

¹¹ Counterpoint is a compositional technique in which two or more voices are juxtaposed, interdependent only harmonically (not rhythmically or by the melodic contour); the term derives from Latin meaning *punctus contra punctum*; a medieval composer was mainly focused on developing mostly rhythmic counterpoint, as opposed to the Renaissance composer who was interested with melodic (horizontal) relationships between the voices.

¹² A broader musical term referring to the use of at least two melodic lines being developed simultaneously.

composers determined to abolish the counterpoint technique which was reigning for more than 500 years.

The relation between music, emotions, politics and ethics described by the Ancient Greeks, in the writings of Pythagoras, Plato, Aristotle, etc. were very present in the minds of the Renaissance composers who were trying to revive them with a modern touch. For the first time in history, though, music was becoming subjective and started moving from exclusively religious themes to peoples' relation to God, death, sin and suffering. The entire canon of medieval compositional techniques, including the *cantus firmus*¹³ and the Gregorian chant, was being rejected and a new humanistic aesthetics was taking its place. The unparalleled enlargement of the tonal system (through the development of new modes such as the Aeolian, Ionian, etc. and the fabrication of new musical instruments covering a larger register than ever before), the introduction of chromaticism, harmonic modulation, quartertones, etc. favoured a stronger emotional reaction in the Renaissance music listeners. People started being focused in creating new bonds with the natural world, the inner workings of the human soul, especially through the words attached to music which offered an immediate meaning. The powerful relationship between music and poetry was even more intense in Renaissance music, as opposed to Greek music, through the enlargement of the tonal system (both instrumentally and harmonically) and its higher richness (chromaticism, quarter tones, modulations). Notably, it is during the Renaissance that due to the rapid development of the *instrumentarium*, instrumental music is starting to bifurcate from vocal music, an event which will have important consequences for compositional techniques of the Baroque period.

3. Music and Emotion in the Baroque

The ability of music to autonomously generate emotions, which assumes that listeners' emotional responses are solely contingent on its internal features, was the dominant thinking during the Baroque period when

¹³ The initial melody used for counterpoint development in the Middle Ages.

important musical treatises were published explaining how this compositional technique worked. "Der vollkommene Capellmeister" (1739 – "The Perfect Chapelmaster") by Johann Mattheson is a catalogue presenting the theory of musical aesthetics, widely accepted by late Baroque theorists and composers, which incorporated the proposition that music is capable of arousing a diversity of specific emotions among the listeners. He explains that sadness is caused by small intervals, while joy is caused by large intervals; anger can be stimulated by a coarse harmony combined with a lively melody; stubbornness is induced by the contrapuntal arrangement of highly autonomous (stubborn) melodies. Carl Philipp Emanuel Bach (1714-1788) and the Mannheim school were exponents of this doctrine. Interestingly, Mattheson refers to the philosophy of dualism of René Descartes (1596-1650) when describing the relationship between emotions and music, stating that a distinction is needed between the "sound forces" that influence listeners and their minds.

The very beginning of the 17th century saw the advent of opera with the establishment of Camerata Fiorentina changing the expectation in regard to the purpose of music, moving from the principle of creation and of shaping the ethical profile of citizens to the imitation of nature. This music (with lyrics) marked the shift of power from church to court and it was the precursor of the idea that musical tones could form a direct relation with certain feelings through the principles of rhetoric. Descartes' *Passions of the Soul* (1649) which described six "primitive" passions (wonder, love, hate, desire, joy, and sadness) became the source of inspiration for music theorists of the era such as Johann Mattheson (1681-1764). *The Passions* contained the mainstream philosophy of the time concerning emotions, also known as affections or passions, and interpreted them as "perceptions... of the soul", having a physical consequence on the body, such as "some movement of the spirits in the blood" (*The Passions of the Soul*, Article 27). It is interesting to note that this is a view shared by Mattheson, who declares that it is essential for music to evoke emotion in the listener, in a restrained manner, in order to be considered "virtuous". Attenuated emotions and virtue are considered equivalent terms by the author, who goes on to describe the role of the musician as a healer of sick and strong emotions considered to be harmful to moral actions. The composer's aim is to master the

moral aspects hidden in his music by stimulating a passion for virtuous music and a dislike for “bad” songs. Mattheson thus emphasizes the critical role of the composer in shaping the moral profile of a society. His music may incite aggression or, conversely, highlight desirable behaviours consistent with the group’s existing ethical code of conduct. To this end, rhetoric was used in musical composition as a method of appealing to different emotional responses in listeners.

The aesthetic purpose of Baroque music was to generate stylistic unity by instilling a unitary affect. Here, affect is interpreted as a cognitive process, as opposed to the spontaneous emotional creativity emblematic of the Romantic period. Since the 17th century, the aesthetic necessity of most (if not all) Baroque composers consists in materializing in their compositions the representation of these affects, regardless of their nationality. In this stylistic period, composers were expected to evoke idealized emotional states in the listener, such as those identified by Descartes as the primitive “passions”: wonder, sadness, joy, anger, etc. This was reflected by the intrinsic properties of the musical work – rhythm, harmonic structure, tonality, melodic line, shapes, instrumental colour and so on – and the listener was expected to rationalize all these aspects into the form of the meaning of music.

The *Theory of Affects* was therefore the basic compositional technique of Baroque music. Styles, forms and compositional techniques of this stylistic period’s music were therefore always the result of this concept of affects. Thus, Descartes’ work had the most decisive influence on the art of baroque music. His belief was that he had discovered a rational, scientific explanation for the physical expression of the passions and the objective, non-relational nature of emotion.

The attempt to attach emotions to specific types of music was already discussed by the ancient Greeks, especially Plato (428-348 B.C.), who believed that the types of music experienced by listeners should be limited to those that promote intellectual attitudes and moral and which do not cause aggressive or unstable moods. The ancient Greeks believed that music held an intrinsic, ethical force, or ethos, which was linked to the affects. This point of view was reconstituted at the end of the Renaissance in Florence, when the Florentine Camerata proposed to revive the ancient Greek tradition of musical drama, so as to increase the

expressiveness and therefore the emotional character of music, which was already disappearing due to contrapuntal compositions of Giovanni Pierluigi da Palestrina (1525-1594).

At the beginning of the 18th century, Johann Neidhardt, in his work "Beste und leichteste Temperatur des Monochordi" (1709), proclaimed that "the aim of music is to make all affections felt by the simple tones and rhythms of the notes, as the best orator" (as cited by Mattheson 1981). This musical thinking persisted as the aesthetic philosophy of composers, musicians, and music critics for the rest of the century.

Therefore, it was during the Baroque that a direct connexion between musical parameters and felt emotions was investigated, following the relation between the seven modes (Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian and Locrian) described by the Ancient Greeks as connected to the moral behaviour of individuals.

4. Music and Emotion in the Eighteenth Century

The advent of the relation between music and emotion as a philosophical matter started in the 18th century with the First Viennese School comprised mainly by Haydn, Mozart, and Beethoven. It was the first time when instrumental music was devoid of any immediate meaning, narrative or descriptive text (Kivy 2006). Music was no longer about something in the way that operatic music was.

For example, we know that Monteverdi's opera *L'Orfeo* is about the Greek legend's descent to Hades and his failed attempt to recover Eurydice, his dead bride. Here music and lyrics provide a cohesive narrative informing the audience about what types of feelings are 'required' for a satisfactory listening and experience. We feel sadness for poor Orfeo who lost his bride, sorrow for the death of Eurydice, tension, and impatience about his descent into Hades and probably disappointment about the outcome. But what can be said about Mozart's *Piano Concerto no. 20 in D minor*? An average listener exposed to the minor-major duality of the Western canon of classical music might say that he feels sadness. However, a listener from the Far East might simply remain emotionally neutral, considering that he had limited exposure to Westernised music.

Additionally, a music connoisseur might know that this music was composed after Mozart's mother death, an event which had a large impact on him. So, he could feel sorrow, sadness, etc. because he can couple the minor tonality of the piece with the event that triggered its composition. He can build an overarching story informing him about the 'required' emotions. But, of course, the story about Mozart's mother death is an information which is not found in the music itself, therefore it cannot directly contribute to the emotional state it induces in the listener. Moreover, the major – minor tonality as an agenda for the happy – sad affective states generated in music listeners is culturally bound. In conclusion, we are a little puzzled on the emotional state this music can generate in the listener in the absence of lyrics, explanations or other culturally relevant information.

This generated a large influx of discussion on what content is music left with, in the absence of a conceptual or representational stance. Some scholars concluded that affect (an umbrella term used for both emotion and mood, (Konečni 2013) is the only reasonable candidate which led to an increased interest on how music and affect are related. Some philosophers, such as Hume and Kant, underlined the importance of music in analytic philosophy, but did not allocate much attention to the subject (Kant even compared music to wallpaper).

However, the classical style (generally thought to have been active between 1730 and 1820) soon began to impose a certain expected emotional response to its sophisticated use of structure and expressiveness, even if never to a full extent because of its lack of immediate understanding. For example, symphonies, sonatas, string quartets, trios, solo concertos were all following a given set of composition rules which created a permeable interface between music and the expected emotional attitude in the listener.

The sonata form, which was extensively used in other classical structures (first movement of a symphony, for example), was built using three main sections: exposition, development, and recapitulation. The first section (Exposition) presupposes the presentation of two contrasting ideas (theme 1 and theme 2) which are further expanded and explored in the second section (Development). The last section of the sonata form (Recapitulation) is restating the initial subject matters, but this time they are no longer antagonistic, but in agreement (meaning they are in the

same tonality). In this way, the sonata form became a guide to composers to plan their works, for interpreters to understand the syntax and meaning of a composition, and for listeners to comprehend the significance and emotional baggage of musical occurrences.

This was a trend which continued in the 19th century when Hegel suggested that the purpose of music was to symbolize feeling in the process of revealing the Spirit through the arts. Opposing Hegel's opinion who saw music inferior to poetry, Schopenhauer, in *The World as Will and Representation* (1819), considered it an ideal, making music distinguished among all the other arts. In his view, music is the essence of the Will itself, downgrading the rest of the arts as being mere copies of the Will. This had a major influence on the work of both Richard Wagner and Friedrich Nietzsche and on the entire Romantic era when musical expression became central to composers and music theorists.

Notably, the split view between the importance of self-expression advocated by Romantic thought and Kant's formalist view of music was transported into musicological realms (the music of Richard Wagner *versus* the music of Johannes Brahms) and analytic philosophy debates. Here, Peter Kivy's cognitivist approach (2006) came against Jenefer Robinson's expressionist account (2005).

Moving this debate in analytic philosophy to a scientific approach in music aesthetics was first done by psychologists at the end of the 19th century with the work of Edmund Gurney (1880) who covers the role of music in society, discussion on individual musical parameters, compositional techniques, etc. in his ground-breaking publication (*The Power of Sound*). Rollo Myers declares that "it is something of a paradox that what is possibly one of the most original and important treatises on musical aesthetics ever written should seemingly have won so little recognition" (1972, 36). What Gurney tried to achieve was to tie the "general elements of musical structure, and the nature, sources and varieties of musical affect". His conclusion was that what is relevant for musical expressiveness is not the understanding of large-scale structure (such as identifying the specific elements of a sonata form, for example), but the small-scale elements, the awareness of the immediate musical occurrences in melodic profiles.

The next step in the scientific method for elucidating long-standing debates in analytic philosophy in general and musical aesthetics in particular

was done by physicists, physicians and engineers who tried to simplify the experience of music to that of acoustics. The research done by Hermann Helmholtz (1862) and of William Pole (1879) was the precursor of a new discipline branch investigating music and emotions called cognitive science. This caught the interest of analytic philosophers of music too, giving rise to a hybrid, multidisciplinary approach in the understanding of how music elicits emotions. For example, in my dissertation (Ulmeanu 2020) I argue that because music is such a complex system engaging multiple processing mechanisms of the brain and present in such a high variety of forms in all our daily lives, this calls for understanding it from multiple points of view concomitantly. Therefore, I proposed Marr's three levels of understanding which ask: "what is the goal of the system, what is it for?" (2020, 19); "what is the appropriate algorithm to achieve that goal, which rules are used?" (2020, 19); "how is the algorithm implemented?" (2020, 19). The author goes on to suggest that this methodology would further clarify the "co-evolution of individual cognitive mechanisms and society-based interactions" (2020, 69).

5. Music and Emotion in the Twentieth Century

In this period, the individual and the group context become extra-artistic sources for the affective states generated by music in the view of Christopher Williams (1993). The author calls the process of music development in the last century as similar to Darwinism, reaching pluralism through purism. The centre of gravity in the relationship between music and emotions is moved to the cultural and ideological context in which it appears. As a result, musicological analyses should place great emphasis on the socio-political environment of which the musical work is a part, a fact all the more relevant for the tumultuous 20th century.

For example, this compromise in understanding the instrumental (pure) music – emotion relation achieved by the classical composition of the Eighteenth Century was lost in the Twentieth Century through the works of Avant-guard composers such as Pierre Boulez. He used the sonata form only for its very methodical and organized destruction through a few compositional strategies such as: the removal of external

reference points by intentionally ignoring classical gravitational centres (pitch and measure, for example), dissociating the interdependence of musical parameters, and equal attention to the complexity of motif cells and rhythmic cells. All these techniques indicate the rupture with classical methods of composition by using the very traditional elements that become the agents of their own destruction. The composition thus created gives the impression of disorder, of irrationality, of a continuous hysteria, in total opposition to the classical sonata. The contrast generated by the scientism of the composition technique (Boulez was also a mathematician) and the resulting sonority imbued in absurdity is a Boulezian specificity often encountered in his works. It can be argued that this apparent total rejection of the classical past is in fact an extreme form of Viennese classicism itself which was based on precisely this contrast of ideas in the sonata form. Beethoven seems to have influenced the young Boulez through the revolutionary vein conceived in the composition of *Hammerklavier* (1818).

Deliege and Paddison (2016) also highlight the high degree of fragmentation of the cultural context and the need to identify and explain these processes in a twofold way: on the one hand, by identifying the legacy of the musical material that underpinned this variety of musical styles (from the works of Schonberg, Webern, Berg, Stravinsky, Varese, Cage, Carter, Feldman, Boulez, Stockhausen, Nono, Berio, Pousseur, Kagel, Xenakis, Ligeti, Birtwistle, Ferneyhough, Finnissy, Lachenmann, Rihm etc.) and on the other hand, by the connection between compositional techniques of the last century and technological innovations and ideological diversity. The same authors claims that however autonomous musical structures may seem, they share their content, constituent elements and systematicity with society considered as a whole, considering the study of the points of confluence between them as vital.

Additionally, the connection between music and society was described by Max Weber (1968) as coming from the period of bureaucratization of the Roman Catholic Church responsible for many musical conventions related to musical notation, harmony, choir, ensembles, instrument construction, etc. The same author notes in his writings the impact of culture (of music, for example) on society and the reverse relationship, in line with the views of Theodor Adorno, who stated that “a sociology

of music should be inspired by the social structures that influence music and life musical" (2002, 145).

In conclusion, the music – emotion discussion becomes even more stringent in contemporary thought, calling for a reconsideration of their interaction. Understanding how they influence each other is of paramount importance as we are immersed in organized-sound contexts every day, and this has a major effect on how we think and act in social environments.

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