

Music as therapy: the analogy between music and medicine in Neoplatonism

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In this paper I would like to explore the philosophical connotations of the analogy between music and medicine in the Neoplatonic tradition. This analogy claims that music heals the soul as medicine heals the body. The Pythagorean origin of this comparison is attested by Aristoxenus (Fr. 29, Wehrli):

The Pythagoreans, says Aristoxenus, practiced purification of the body through medicine and purification of the soul through music.

The Neoplatonists revitalized this conception of music, especially after Iamblichus who regarded Plato as a Pythagorean.¹ The Neoplatonic/Pythagorean approach to music combines the therapeutic aspect with the mathematical and cosmic dimensions of music. It is one thing to say that music is a therapeutic tool for philosophy and education; it is a different thing to consider that there is a musical aspect in the objective reality. In this latter case, there is a principle of harmony that acts in a musical way in the universe, producing harmony at the level of multiplicity.²

From the Neoplatonic perspective, Unity is identified with the Good as the First Principle,³ whereas at the physical level, one's own good can be conceived as health and at the level of the soul, it can be identified with one's own most original state or condition.⁴

Harmony and health, being kinds of unification, are therefore manifested at the levels that derive from Unity, where division and fragmentation occur. When we gradually move away from Unity we find a greater need to recover the original state: therefore this kind of recovery can be expressed as restoring one's health.

1. Cf. D.J. O'Meara, *Pythagoras revived, Mathematics and Philosophy in Late Antiquity*, Oxford, Clarendon Press, 1989, pp. 94 and 30 ff. See the same author's: "The Music of Philosophy in Late Antiquity", in *Philosophy and the Sciences in Antiquity*, ed. R.W. Sharples, Aldershot, Ashgate, 2005, on the relation between Platonic and Pythagorean music.

2. On the relation between Unity and multiplicity, cf. Proclus, *El.Theo. Prop. 1; Prop. 21*, etc.; on different levels of harmony: see Proclus, *In Timaeum* II. 294.27.

3. Plotinus, *Enn.* VI.7 (38), 15 ff. Cf. also *Enn.* VI.9

4. *Ibid.* VI.9.1.14: where health is defined as unity.

For Aristoxenos, or the Pythagoreans quoted by him, “purification” has not only an ethical meaning, but also a cosmic and ontological significance. That is, to bring closer again the soul to Unity, while abandoning the affections, sufferings and agitation proper to the sensible world. These affections fragment the soul’s being and do not correspond to its original condition, because they have been attached to its essence at a later state.⁵

Hierocles defines Pythagorean philosophy in this way too, as a purification and recovery (*analêpsis*) of our proper essence:

Philosophy is a purification and perfection of human life: a purification from our irrational, material nature and the mortal form of the body, a perfection by the recovery of our proper happiness, leading to divine likeness (Proem., 1.1 ff., transl. Hermann S. Schibli).⁶

Therapeutic music, from the Pythagoreans and Plato to Posidonius and Galen, has a privileged intermediary position between the physical and the intelligible, which allows it to deal with the irrational and spirited parts of the soul in a direct way. Thus, it is able to lead the irrational by the education and nurturing of the spirited part.⁷

Hierocles goes on to state that, through philosophy

one may acquire truth and virtue, regain one’s purity, succeed in obtaining likeness to god, and, as Plato’s *Timaeus*, that keen teacher of Pythagorean doctrines, says, having become ‘healthy and whole (*hugiês kai holoklêros*), arrive at the form of one’s previous state’ (Proem.2.9).

Hierocles is quoting *Timaeus* 44b-c, where Plato says:

And to be sure if such a person also gets proper nurture to supplement his education, he’ll turn out perfectly whole and healthy, and will have escaped the most grievous of illnesses (*nosos*) (Transl. Zeyl).⁸

5. Cf. Iamblichus’ definition of *katharsis* in his *De Anima*, Stob. I.455.25-456.8. See G. Shaw, *Theurgy and the Soul*, University Park, PA: Pennsylvania State University Press, 1995, p. 37, n.2. Cf. Plato, *Phaedo* 69b-c.

6. Cf. H. Schibli, *Hierocles of Alexandria*, Oxford, Oxford University Press, 2002, p. 170 for a commentary on this passage. Philosophy, understood in Pythagorean terms is a kind of therapy, recovery and *anamnesis* of a previous harmonious state. Plotinus connects also purification, virtue, wisdom and divine likeness (*Enn.* I.2.3). Wisdom is the health of the soul, cf. Cicero, *Disp. Tusc.* 3.5.

7. Cf. Posidonius Fr. 168 (apud Galen, *De placitis*, V.472-3) and p. 621 of Kidd’s Commentary in *Posidonius*, Vol. II, Cambridge: Cambridge University Press, 1988.

8. Plato, after depicting how the revolutions and movements of the soul were disturbed by the affections (*pathêmata*) at 44a, says that they regain their original serenity and stability by means of education and the contemplation of the harmony

According to this dialogue the essential constitution of the human soul is based on harmonic ratios and that original state can be understood by analogy with the concept of physical health. Philosophy, as defined by Hierocles, shares similar aims with music. For music also possesses a cathartic effect on the soul. And since the divine level is characterized by intelligible Harmony, musical contemplation is a therapy and nourishment for the soul's motions, as the *Timaeus* states (90a – d). In this way, the soul recovers its original perfection in terms of musical proportions, which were disturbed when the soul entered into the material world (*Timaeus* 42e – 44d).⁹

When these two approaches, — the instrumental view of musical therapy and the cosmic-ontological view — are combined, as in Platonism, one realizes that the presence of music at different levels of reality makes possible and effective its therapeutic and corrective power.

The connection between music and medicine in Neoplatonism can be considered according to these two approaches: the first, which we depicted as instrumental, which considers music as a therapeutic tool, where music is part of philosophical education, and the second, which we could call the “metaphysical” approach to the relation between music and medicine, which on the other hand considers the analogy between music, medicine and philosophy as being based on the ontological structure of reality itself.¹⁰

For Proclus, there are different levels of music and medicine. There is a level at which these two arts or sciences can be identified with philosophy: this corresponds to the “science of love,” according to the terminology of Plato's *Symposium* 186a-187a (cf. *In Remp.* I.57). This level, as we are going to see, corresponds to the god Apollo.¹¹

of the universe.

9. Consequently, Pythagorean music renders the soul's natural harmony akin to the divine harmony again.

10. One aspect is corrective, therapeutic music as the corrective or medicinal part of education; the other is normative or positive and shows the reality of harmony in the cosmos as a model or guidance to follow in our lives, through assimilation (*homoiōsis* = likening) to it and awakening the sympathetic connection with the divine and the love for the beautiful.

11. Music is identified with philosophy, according to the *Phaedo* 61a (other levels or kinds of music include: music as love of Unity; inspired music; scientific music; educational music; imitative music, as we shall see). Since Neoplatonism is an

The fact that music and medicine can be identified at a higher level does not mean that medicine or music are the exclusive prerogative of heavenly physicians or musicians. Martha Nussbaum criticizes the Platonic view as “normative” and not concerned with human suffering.¹² However, for the Neoplatonists there is an unbreakable continuity in reality that guarantees the effectiveness of these arts at the human level, which concern suffering or *pathos*.

Nussbaum also claims that in contrast to the Hellenistic schools, in Platonism there is no concern for what happens inside ourselves, with our feelings, needs, pleasures and pains; and that for that reason the Hellenistic thinkers would have used the medical analogy to subvert the Platonic indifference towards these human needs and desires. I would like to show that it is not the case that Platonism and Neoplatonism do not find real value in self-knowledge as therapy. I want to present evidence that the analogy between music and medicine illustrates the fact that for Platonism, self-knowledge through music and the awareness (*synaisthesis*) of the soul’s affections by means of the ethical effect of musical scales or “modes” (*harmoniai, tropoi*) in ourselves, is a way of recovering a connection between the soul (including its passions) and the source of health and life in the universe.

The Pythagoreans understood knowledge as part of a purificatory spiritual path, with the capacity of transforming the inner life of the soul. For this reason the Ancients used to say, when Pythagoras visited a city, that “he has not come to teach but to heal,” according to Claudius Aelianus (*Varia Historia*, IV. 17). Pythagorean arts and sciences are therefore understood in the wider context of their cathartic value.

In his *Commentary* to the *First Alcibiades* (195-196), after stating that the soul is like a musical instrument, the lyre invented by Hermes, Proclus goes on to explain what he calls the Hermetic (Hermaic) disciplines in education, which comprise gymnastics, music, the mathematical sciences and dialectics:

The mathematical sciences and dialectics awake and elevate our reason; for the eye of the soul, which is asleep and obstructed,

exegetical school of thought, we need to take into account that Proclus establishes these correspondences according to different Platonic dialogues, for example the *Phaedo*, the *Republic*, *Timaeus*, *First Alcibiades*, *Cratylus*, the *Symposium*, etc.

12. M. Nussbaum, *Therapy of Desire*, Princeton NJ: Princeton University Press, 1994, p. 19-20.

because of many other occupations, under the influence of them is re-ignited and returns towards itself and to self-knowledge. With these sciences our *logos* is nourished and through them ascends towards the Intellect, as Socrates says here (Proclus, *In Alc.* 195-196, my transl. based on Segonds).

According to the educational programme of Plato's *Republic*, music concerns the education of the irrational part of the soul and has a cathartic power over its affections while the care of the body corresponds to gymnastics and dance.¹³ At this level, it is clear that one can consider music as a tool for philosophical education and from this point of view the therapeutic role assigned to music in Platonism should be understood in the wider context of therapeutic philosophy. However, music does not belong only to this basic level of education (according to *Republic* books II-III). As Proclus says, there are higher levels of music, such as music as a mathematical science (studied in book VII of the *Republic*, being a science of the *quadrivium*); music as an inspired art and music at the level of the Intelligible, which is a unitive kind of knowledge called "science of love" by Proclus, as we have mentioned above.

Eryximachus, in Plato's *Symposium*, mentions that the principle of Love manifests itself in different disciplines; this kind of love is similar to the Orphic cosmic power of "Eros," who can also be considered as the bond with which the Demiurge binds the elements (*Timaeus* 31c).¹⁴ For Eryximachus (*Symp.* 186a), medicine, the art of Asclepius, is the "science of erotics in regard to the body" and produces love, understood as harmony between the opposite elements. After this (187a), he defines music in similar terms, as "the science of erotics in regard to harmony and rhythm", harmonizing high-pitched and low-pitched sounds and fast and

13. Gymnastics and dance, understood as the harmonious and rhythmic refinement of the body, correspond to the activities of the soul (*energeiai*), while the musical education of the soul corresponds to its potencies (*dynameis*) and both contribute to the harmonic development and formation of the character, putting the soul in sympathy with the good and the beautiful (cf. Proclus, *In Remp.* I.56.10). This is related to the Neoplatonic triad "*ousia* (being) - *dynamis* (potency) - *energeia* (operation or actualization)". On this triad see *The Cambridge History of Later Greek and Early Medieval Philosophy*, A.H. Armstrong ed., Cambridge, Cambridge University Press, 1967, p. 459.

14. This bond can be identified with the World-Soul and its harmony, as a manifestation/creation of the harmony of the Intelligible, which in turn is a manifestation of the transcendent Unity. Cf. Proclus, *In Tim.* II.54.10-16 and *Chald. Oracles*, Fr. 39; commented by Lewy p. 126 n. 235 and Frs. 42 y 44.

slow rhythms.¹⁵

Thus, the human kinds of medicine and music are connected with the higher levels, and this fact does not alienate them; on the contrary this connection makes possible the healing of the affections of the human body and soul by means of remedies, musical scales and sounds that awake the cosmic sympathy and bond with the divine causes.¹⁶

The reconciliation between the physical world and the Intelligible is proper to Neoplatonism after Iamblichus, especially according to the revival of Pythagoreanism and because of the importance given to Plato's *Timaeus* that presents a more positive view of the physical reality.¹⁷ Also in this dialogue, mathematical and musical proportion serves as an intermediary bond between the physical and the intelligible.

The Neoplatonic point of view that joins the therapeutic with the mathematical aspects according to an objective reality, considers that analogy (and also mythological/religious symbolism) is not only a conventional way of connecting concepts or words. For Proclus, to say that there is an analogy between music and medicine does not mean that we are just comparing two disciplines. "Analogy" is a cosmic relationship or living "proportion" (*analogia*) that manifests itself in medicine and in music. This "proportion" connects the soul with the gods and their providential care towards different parts of reality. Proclus says:

This world has been created according to *analogia*, for that reason

15. This science derives from a heavenly love and a heavenly Muse. There are different levels of love, a noble or heavenly love derived from *Ouranía* (a heavenly Muse) and a popular kind of love derived from *Polymnia*. After this, Plato quotes Heraclitus' notion of the concord of diverging tensions, which is also a cosmic conception of concord, that Eryximachus continues explaining at 188a, where he mentions the harmony that tempers the oppositions in the cycle of the four seasons of the year.

16. Sympathy is a musical notion (when two musical strings sound together) and in Neoplatonism, cosmic sympathy is what brings closer to us the transcendent or more comprehensive levels of reality. On the continuity of the life in the universe see Proclus, *In Remp.* I. 288.11-1. See Plotinus on musical and cosmic "sympathy": *Enn.* IV.4.41.

17. Another aspect of the later Neoplatonists is their interest in theurgy, which is more appropriate for emphasising a monistic view of the world and the soul and the rejection of Plotinus' conception of the "undescended part of the soul". This is important for our topic, because if the soul has completely descended, as Iamblichus and Proclus claim, there is certainly a need for therapy that concerns all the levels of the human nature. Cf. G. Shaw, *op.cit.* 1995 p.11.

all things are joined by an indissoluble friendship, consequently all things have proceeded according to analogy in a concordant manner (*In Remp.* I. 289.4).

We can see that we are passing from an instrumental conception of music as therapy to a realistic conception of analogy.¹⁸ According to this analogical/symbolic conception, music and medicine are Apollonian arts and they heal because they recover the connection to Apollo as the divine physician and divine musician. We shall deal with this aspect later on.

In relation to the first approach (instrumental) we can include therapeutic music in the wider context of the analogy between medicine and philosophy. There are several well-known enunciations of this analogy. Chrysippus, quoted by Galen, expressed it in the following way:

It is not true that whereas there is an art, called medicine, concerned with the diseased body, there is no art concerned with the diseased soul, or that the latter [art] is necessarily inferior to the former in theory and therapeutic treatment of particular cases (*Plac. Hipp. Plat.* 5.2.22-4 SVF III.471 De Lacy 298.28).¹⁹

After this, the word analogy (*analogia*) is explicitly explained in the text, in terms similar to Plato's own clarification in *Gorgias* 465b-c, where he says that he is using the language of the geometers, in the context of the analogy between the care of the body and the care of the soul.²⁰ The mention of geometry places the medical analogy in a philosophical tradition that values the mathematical sciences.

Cicero presents the same analogy:

There is surely a medical art of the soul — philosophy. And its aid

18. This approach has three logical steps: 1) medicine : philosophy::body::soul; 2) music is a therapeutic part of philosophy especially dealing with the catharsis of the soul; 3) therefore there is also a relation medicine : music::body::soul.

19. He continues: "Therefore, just as the physician of the body must be 'inside', as people are wont to say, the affections that befall the body and the proper cure for each, so it falls to the physician of the soul to be 'inside' both of these (things) in the best possible way and one could understand that this is the case, since the analogy (*analogias*) with these things was drawn from the beginning. For the parallel appropriateness with respect to these terms will also make clear to us, I believe, the similarity (*homoiotêta*) of cures (*therapiôn*) and in addition the analogy that the two kinds of medicine have with each other."

20. "I want to speak to you as the geometers do [...] saying that as cosmetic is to gymnastic, so is cookery to medicine; or rather thus: as cosmetic is to gymnastic, so is sophistry to the legislative art; and as cookery to medicine, so is rhetoric to justice" (trans. Nichols). *Gorgias*, the rhetorician, has presented as well the analogy between rhetoric and medicine. C.f DK.82 B 11.14

need not be sought, as in bodily diseases, from outside ourselves. We must endeavour with all our resources and strength to become capable of doctoring ourselves (*Tusculan Disputations*, 3.6).

This text shows another aspect of the comparison, i.e. the need of self-knowledge. In the context of Pythagorean and Platonic therapy, music is able to evoke the connection with the mathematical principles in a living way, because it moves the soul from within according to numeric ratios.²¹ For this reason it is a privileged tool for therapeutic philosophy. Thus, mathematics and self-knowledge are connected.²² Through music, the soul can identify itself again with its original inner nature, which is musical or harmonic. The musical modal scales, each with a particular *êthos*, can present in an universal way different “characters” (*êthê*) because the mathematical structure of the tetrachords is intrinsically related to the ethical and emotional effects of the *harmoniai* in which the melodies are composed. They produce an inner “mimesis” or identification, but at the same time they are able to make a contribution to “knowledge” of ethical characters (because of their universal or archetypal way of presenting modes of living).

We can quote an example of how music works as medicine and musical scales as remedies:

We shall prescribe for some persons a regimen of rhythms and scales (modes) and exercises of such and such a sort, and for others another sort, as Plato taught us. We shall rear the dull and heavy and spiritless in high pitched melodies and rhythms with fast subdivisions [*“nomos orthios”* and its rhythm: 6/8 + 12/8 or 9/8] according to scales (modes) that move the soul forcibly but with dignity and in exercises of the same kind; and we shall rear those who are too highspirited and who rush about too madly in the opposite kind,’ (Galen, *De placitis Hippocratis et Platonis* V.6.20, 2 ff.; transl. P. De Lacey, Galen, *On the Doctrines of Hippocrates and Plato*, Akademie Verlag, 2005, modified).

This can be understood in the context of the identification of musical modes with different pitches: the high-pitched modes are considered exciting and the low-pitched enervating, the mode which is in the middle of the musical space of the “Great Perfect System”, the Dorian mode, is temperate and similar to the season

21. Music is able to penetrate into the innermost part of the soul. Cf. Plato’s *Republic*, III.401c-d.

22. In order to assimilate the mathematical aspect of the universe to our inner reality we need to understand the manifestation of the principles of number in our own nature and this is where music has a role in the care of the soul.

of spring. According to Aristides Quintilianus there are three basic musical *êthê*: the hesychastic (*hêsychastikos*) that produces peace in the soul, the diastatic (*diastatikos* = exalting, expanding) that arouses the spirit and the systaltic (*systaltikos* = contracting) that creates gloom (Arist. Quint. *De Mus.* I.12.39; [=12.30.9-15] [cf. I.19.20 = 40.15]).²³

The Dorian mode is the archetype of a balanced ethical character, as Plato says in the *Laches* 188d.²⁴

Musical modes (*tropoi*) present paradigms of ethical behavior and make possible a mimesis of a good model (appropriate for a particular situation, mood = *tropos*), bringing closer to the human sphere the normative ideals of Platonism.²⁵ Iamblichus ascribes this kind of musical therapy to Pythagoras:

He [Pythagoras] thought that the training of people begins with the senses, when we see beautiful shapes and forms and hear beautiful rhythms and melodies. So the first stage of his system of education was music: songs and rhythms from which came healing of human temperaments and passions (*pathê*) The original harmony of the soul's powers was restored, and Pythagoras devised remission, and complete recovery, from diseases affecting both body and soul. It is especially remarkable that he orchestrated for his pupils what they call 'arrangements' and 'treatments'. He made, with supernatural

23. See Barker, *Greek Musical Writings II : Harmonic and Acoustic Theory*, Cambridge, 1989, p. 432. On Ptolemy's explanation of the relation between modes and seasons, etc., see *ibid.* p. 386. Cf. Cleonides, 206.3-18. Diodorus Siculus, I.16. mentions a Lyre of three strings proper to Hermes, that can be related to the conception of the year divided in three seasons (I.11.5). Macrobius (Sat. 1.19) says that the lyre of Mercury had four strings that corresponded to the four seasons. The seasons and their proper characters correspond to the different kinds of *êthos*. There are three basic kinds: Dorian, middle (is hesychastic = does not induce any disordered affect and delights the soul peacefully; it's moderate and calms the mind); Phrygian, high (diastolic = expanding and dilating the heart, lively, joyful, jubilant, effect); Lydian, low (systolic = contracting, enervating effect of the song, induces sadness, fear, languor and similar feminine effects) in Chafe, *Monteverdi's tonal language*, New York: Schirmer Books, 1992, p. 237.

24. "I take the speaker and his speech together, and observe how they sort and harmonize with each other. Such a man is exactly what I understand by "musical," —he has tuned himself with the fairest harmony, not that of a lyre or other entertaining instrument, but has made a true concord of his own life between his words and his deeds, not in the Ionian, no, nor in the Phrygian nor in the Lydian, but simply in the Dorian mode, which is the sole Hellenic harmony" (transl. Lamb).

25. Boethius translated in his *De Musica* the Greek word "*tropos*" into the Latin "*modus*". "*Tropos*" expressed in a more precise way both at the same time the mathematical aspect of measure, structure and the concept of "style", i.e. the melodic style based on different intervallic structures.

skill, blends of diatonic and chromatic and enharmonic melodies, which easily transformed into their opposites the maladies of the soul [...] using the appropriate melodies like mixtures of curative drugs. (*De Vit. Pythag.* XV 64, p. 35, 16-36, 7, transl. G. Clark)²⁶

Iamblichus mentions blends of musical genera (in the ancient technical sense) and compares them to some kind of “*pharmaka*,” an idea that is consistent with the notion of music as an Apollonian art.²⁷ The Apollonian character of this kind of music is confirmed by the reference to the Paeanic hymns and the preference for the lyre in another passage of Iamblichus’ *Life of Pythagoras* on music therapy (chapter 25).²⁸

26. Cf. O’Meara, “Hearing the harmony of the spheres in Late Antiquity” in *A Platonic Pythagoras, Platonism and Pythagoreanism in the Imperial Age*, ed. M. Bonazzi, C. Lévy, and C. Steel (eds), Turnhout, Brepols, 2007, p. 151 ff. O’Meara quotes this passage in the context of an explanation of Pythagoras’ ability to hear the harmony of the spheres. On the music/medicine analogy see also Aristides Qunitilianus, *De Mus.*, II.14, 80.10 ff. and II. 16, 85.21 ff. Iamblichus distinguishes the music used by Pythagoras for curing his students, which is an imitation, from the celestial music, which is the model that Pythagoras was able to access by a special gift: “He no longer used musical instruments or songs to create order in himself: through some unutterable, almost inconceivable likeness to the gods, his hearing and his mind were intent upon the celestial harmonies of the cosmos. It seemed as if he alone could hear and understand the universal harmony and music of the spheres and of the stars which move within them, uttering a song more complete and satisfying than any human melody, composed of subtly varied sounds of motion (*rhoizêmátôn*) and speeds and sizes and positions, organized in a logical and harmonious relation to each other, and achieving a melodious circuit of subtle and exceptional beauty” (*De Vit. Pyth.* XV 65, p. 36, 15-37, 2; transl. Clark).

27. Proclus following Plato’s *Cratylus*, presents Apollo as the god who presides over medicine, divination, archery and music (cf. *In Crat.* 174.34). Music therapy has also a Hermetic character, because Hermes is the god that prevents the transformation of Odysseus into an animal under the spell of Circe, and provides him with an antidote that helps him to remember his original Fatherland. Music is in the same sense understood as an antidote against oblivion in the Pythagorean tradition, and it is able to bring the soul back to health and virtue, establishing it in a divine music which corresponds to the original dwelling of the soul in the Intelligible realm, as Plato explained in the *Timaeus*. Proclus following Plato’s *Cratylus*, presents Apollo as the god who presides over medicine, divination, archery and music (cf. *In Crat.* 174.34).

28. Iamblichus mentions again the analogy between music and medicine in chapter 25 (110), where he says: “Pythagoras also believed that music, if properly used, greatly contributed to health. For he was inclined to use it in no careless way, but as a purification. Indeed, he restricted this word to signify music used as medicine. About the vernal season he used a melody in this manner. In the middle was placed a person who played on the lyre, and seated around him in a circle were those able to sing. Then the lyre player in the centre struck up, and the singers raised certain paeans, through which they were evidently overjoyed

Proclus also explains the connection between music and medicine by referring these disciplines to a common divine principle, namely the god Apollo. In this context, we return to the ontological/cosmic aspect of the analogy between music and medicine, which transcends its instrumental features. This aspect is better expressed through symbolism, because it depends on a non-discursive, divine, reality (these symbols include the Sun, the Golden Lyre of Apollo, the Arrow of Abaris, the Caduceus, the serpent Python, etc.).

In his Commentary on Plato's *Cratylus* (*In Crat.* 97.15 ff. (103) Pasq. = Section 174.34), Proclus presents Apollo as the god who presides over medicine, divination, archery and music. The Apollonian cause manifested in the Sun "[which] provides all things with the power of unification" (98.1).

Proclus describes the analogy between these disciplines in the following terms:

The power of medicine eliminates the disparate aspect of illnesses, and bestows the gift of unitary health. For health is symmetry and accords with nature, whereas what is variegated is unnatural. And again, the power of prophecy, in revealing the simplicity of truth, destroys the variety of falsehood. And that of archery, as it destroys everything errant and beastly, and gives control to discipline and refinement, cleaves to unity and dissolves the disordered nature which is carried into multiplicity. And as for music, through rhythm and harmony it instills a bond, friendship, and unity in the universe, and everything opposite to these it removes (99.8 ff. Pasq. transl. Duvick).

It is important to notice that Proclus uses the word "errant" (*plêmmes*), which means out of tune, discordant, erring, faulty. This word is connected in the Platonic tradition to the discordant and disorderly (*plêmmes kai atakton*) motion that occurred before

that their manners became elegant and orderly. This music instead of medicine was also used at certain other times. Certain melodies were devised as remedies against the passions of the soul, as also against despondency and lamentation, which were invented by Pythagoras specifically for this. Further he employed other melodies against anger and rage and all other aberrations of the soul. Another kind of modulation was invented against desires. He likewise used dancing, which was accompanied by the lyre, instead of the pipe, which he conceived to have an influence towards insolence, being theatrical, and by no means liberal (freeing from the passions). For the purpose of correcting the soul, he also used select verses of Homer and Hesiod." (After this Iamblichus continues with the example of a Tauromenian young man inflamed by a Phrygian song and how Pythagoras asked him to change the character of the melody for a spondaic one).

the Demiurge brought the cosmos into order, according to Plato's *Timaeus* 30a.²⁹

It is interesting to connect the notion of Apollonian archery with the killing of the serpent Python. The fixation of the serpent with an arrow or spear represents the foundation of a cosmos fixed on paradigms of harmony; in the same way that tuning a lyre represents fixing the potentialities of the instrument into a fixed system of tuning and paradigmatic modal scales. This is symbolized with the serpent, which corresponds to the errant potencies and affections and on the other hand to the continuity of life and the receptivity of the principles.³⁰ The Apollonian and Hermetic symbolism represented the element of divine order with the axial notion of verticality. This symbolism is noticeable in the symbol of the divine monochord or the strings of the golden lyre of Apollo, his golden arrow (and Abaris'), the caduceus of Hermes and the rod of Asclepius.

Pythagorean music results from the harmony of *peras* and *apeiron*, and combines an element of potency, *dynamis*, identified with life and procession in Neoplatonism, which is represented in the sequence of intervals of octave, and the determination and circular return achieved thanks to the interval of fifth. The harmonic ratio of this interval is 3/2, composed by an odd and an even number.³¹ The fifth is the generating interval of the scale and its related to the Pentad as a cohesive principle, which recovers unity.³² Number five is also a symbol of "marriage," the union

29. Cf. Phillips, *Order from disorder, Proclus Doctrine of Evil and its Roots in Ancient Platonism*, Leiden; Boston: Brill, 2007, p. 95-96 and Proclus, *In Tim.* I.325, 30-328.9; 328.1-9; 367, 30-368,11.

30. Cf. the image of the Apollonian serpent, representing a cosmic monochord, in the Frontispiece of Gafori's *Practica Musicae* (1496). On the one hand, for the Neoplatonists, the serpent represents the power of life, the unbreakable connection and continuity of the universal life (the divine *apeiron*), but on the other hand it represents the direction towards infinity related to the indeterminacy of matter, that needs to be fixed and directed thanks to the divine Providence of the World-Soul, or in the case of the human soul thanks to the "solar" orientation of the guidance of the Hermetic genius. This was represented in the Middle Ages with David tuning his triangular harp.

31. Another important interval/proportion corresponds to the octave + fifth = 3/1; connected to the notion of Neoplatonic return and also with the divine Triad.

32. It is interesting to notice that the Hermetic and Apollonian music of the Pythagoreans (and the importance of the lyre and string instruments) is understood in connection to the relationship between sound and ether as a cohesive principle and source of the harmony of the physical elements. Music in Ancient Greece and

between the male and female. In this context, the female aspect of the musical octaves shows the aim towards which the loving soul aspires and the infinite embrace of divine Wisdom, while the fifths represent the method, the circular activity of the intelligence towards its centre.³³

We can also bring to mind in this context, the connection between the number five and health in Pythagoreanism, according to the symbol of the Pentagram, or five-pointed figure where the letters of the Greek word HYGIEIA were inscribed. (Cf. Lucian, *Pro lapsu inter salutandum*, 5).

CONCLUSION

We have discussed two different approaches to the analogy between music and medicine: the first approach includes music as a therapeutic tool in the context of philosophy understood as medicine. The second approach considers the analogy as expressing the ontological structure of reality itself. Music, from this point of view, is the science of mathematical movement that studies proportion and the relations between quantities (cf. Proclus, *In Euclid*. Prol.I.12. 36). Music and harmony are kinds of unification and together with geometry they are the causes of the connection of all things, making possible all analogies, including the analogy that joins philosophy and medicine.

Neoplatonism combines both approaches: music as a tool and music as a cosmic principle according to which analogy is not only a way of comparing things or an expression of language, but a real and acting power in the cosmos. The Neoplatonists are following an accepted Pythagorean tradition that considers the study of mathematics as central to all philosophical activity and music as a key to understanding the universe. The cosmic/metaphysical

also in India is related to ether (*akasha*) as primordial substance; therefore this kind of music has a "sattvic" effect on the soul, it develops the quality (*guna*) of *sattva*, which is cohesive and anagogic, leading to heaven as a source of harmony.

33. This can be understood in the context of Goethe's famous verse: "The Eternal-Feminine draws us upwards". While descending intervals of fifth can represent the divine grace, as in the beginning of Beethoven's *Ninth*. Beethoven expressed the Orphic notion of the harmony of the Apollonian and the Dionysian, where the ethereal and Apollonian music reaches the immanent Dionysian manifestation and dance, thus making possible the revelation of the harmonious light in the cosmos and also the aspiration of finding the source of that revelation and luminous grace (expressed in musical sounds) above the canopy of the heavens.

approach to music transcends the instrumental and results-driven notion of musical therapy and may help to understand musical “catharsis” in terms of the recovery of the primordial harmony of the soul in non-dualistic terms. In this sense, instead of thinking in terms of attaining harmony as a “result” or “possession”, we can understand music as a work of disinterested love and knowledge that prepares us for the reception of inner Silence and harmony as an intuition or re-enactment of Unity, which liberates the soul from its multiple sense perceptions, passions and possessions, re-awakening the presence of that divine Unity within the soul.

This Pythagorean/Platonic theoretical framework and the relevant texts helped us better understand the inner connection between medicine, music, mathematics and philosophy and the analogy between medicine and music.