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Marsilio Ficino's Music Theory

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Though not well known today, Marsilio Ficino was highly influential during his time. Born in October 1433 he perished 66 years later in the same month of 1499. Ficino made the most of his 66 years on this earth, and he believed that he was playing his part in adding to and documenting the ancient wisdom contained in the works of the ancient theologians. He took elements from these philosophers and combined them to make his own philosophy in the hopes of bringing man closer to the divine truth. His *De Triplici Vita*, or *Three Books of Life* reflect this desire to get closer to God, or the divine.¹ In the books Ficino focuses greatly on music, offering his own eclectic theory. Synthesising medicine, astrology, philosophy, mathematics, and theology, Ficino took great care in sculpting his theory. Though his influence did not extend far past the time he lived in, his music theory deserves some attention. Despite its faults, Ficino's theory actually came surprisingly close to the truth. It is not as difficult as it may seem to find aspects of his theory which have practical applications today.

It is important to have some understanding of what Ficino's theory involved. As he drew inspiration from many sources, most of them being *prisci theologi*, his theory is complex.² Though widely considered to be 'natural magic', his work as a priest, physician, astrologer and musician combined to create what is best described as a "psycho-spiritual therapy."³ His *De Vita Coelitus Comparanda* focuses on medicine and the most effective forms of it, though highly infused with astrology.⁴ Ficino believed in a grand vision where everything was connected, an idea which did not survive in any pure form in the West in the 21st century. Yet with his many talents, it is not surprising that he has such an inclusive theory. He saw everything as having some influence upon everything else, as it was all part of the microcosm and macrocosm, all cycling back into each other.⁵

The Four Temperaments was a medical belief which Ficino could easily fit into his big-picture beliefs.⁶ He thought that while the Temperaments affected the body, the planets affected the temperaments. Thus by seeking out things connected to the planets which have the desired characteristics and by using those things at a time when said planets are in a certain spot in the heavens, one could obtain the influence of those planets and thus correct their temperaments, or adjust them to their needs.⁷ According to Ficino, studious persons have spirits prone to wearing out, giving them a melancholy temperament. This creates a state of mania and lethargy, which is connected to Saturn. Thus, scholars should wish to attract the influence of the benign planets: the Sun, Mercury, Jupiter, and Venus.

However, music, as Ficino believed quite strongly, was the most powerful and effective way to align oneself to the planets, for "certain diseases both physical and mental are said to be miraculously cured by certain harmonies."⁸ He put much faith in this concept, which he believed to be well proven.⁹ Thus most of the advice he gives in the *De Vita Coelitus*

¹ D. P. Walker, *Spiritual and Demonic Magic: From Ficino to Campanella* (Notre Dame Ind.: University of Notre Dame Press, 1975)

² Walker, *Spiritual and Demonic Magic*, 62.

³ Angela Voss, *Marsilio Ficino* (North Atlantic Books, 2006), 3.

⁴ Marsilio Ficino, and Carol V. Kaske, *Three Books on Life* (Binghamton, N.Y.: Medieval & Renaissance Texts & Studies in Conjunction with the Renaissance Society of America, 1989)

⁵ Ficino, and Kaske, *Three Books on Life*.

⁶ Alexander Whyte, *The Four Temperaments* (2nd ed. London: Hodder and Stoughton, 1895)

⁷ Ficino, and Kaske, *Three Books on Life*.

⁸ Marsilio Ficino, *All Things Natural: Ficino on Plato's Timaeus* (Shepherd Walwyn Publishers Ltd, 2010), 58.

⁹ Ficino, *All Things Natural*, 58.

Comparanda focuses on music as a remedy for the spirit.¹⁰

Ficino looked to the Orphic hymns for much of his inspiration regarding music.¹¹ Suspected to be 10,000 years old by those in the Orphic tradition, the majority of the hymns were most likely composed in the sixth century BCE.¹² The Orphic hymns are rather mysterious, as aside from being unable to properly date them, the true author is also unknown. The hymns are attributed to Orpheus, a musician and mystic in Greek myth, though he may not have actually existed. They were written as devotions to the gods used in ancient Greek rituals and are still used by those who follow the Orphic tradition, much like Ficino. He believed that “melody tempers the mind with celestial harmony and pours forth divine oracles in heavenly fashion”, and Orpheus’ hymns contained a process for accomplishing this with great accuracy.¹³

The Orphic hymns praise the powers of the cosmos, and one could sing “Sun hymns, or Jupiter hymns, or Venus Hymns attuned to those planets, and this, being re-enforced by the invocation of their names and powers, was a way of drawing down their influences.”¹⁴ Of course one only wanted the influence of specific planets that were associated with the proper temperaments. By reciting these hymns properly, in the right mindset and at the right time, one could obtain the desired effects from the planet or planets. Making sure to take into account all of those aspects would ensure a better result. As a musician, Ficino accompanied himself on a lyre when singing the Orphic hymns, playing a simple tune which he believed echoed the music of the heavenly spheres.

The main reason why Ficino thought these hymns to be so effective in helping people lies in what he calls the *spiritus*.¹⁵ Because as a Catholic he could not openly accept astrological determination including the mind and the soul, he deals with the spirit as the highest level on which man can be influenced.¹⁶ By Ficino’s definition, the spirit is a vapour which is created when the heart boils blood. This vapour rises to the head, where it is centred, and from there it disperses through the entire body, acting as the glue holding the body and soul together.¹⁷ Music, in “imitating or reproducing the laws of the cosmos in sound, may reveal the truer nature of the soul to itself: namely, that it partakes of the soul of the world.”¹⁸ Human souls are fashioned from the same substance as the universal soul, with its inherent harmonic structure.¹⁹ The soul operates through the spirit, and musical sound shares the same quality as the soul-motion. Celestial sound, which is moving air, combines with the spirit in the ear. Because sound is the same element as the spirit it has a more direct effect, and the air is set deep inside the ear, untouched by normal aerial disturbances. Moreover, the ear is closest to the brain, where the

¹⁰ Walker, *Spiritual and Demonic Magic*, 5.

¹¹ Voss, *Marsilio Ficino*, 6-7.

¹² James Hastings, *Encyclopædia of Religion and Ethics: Hymns-Libert*, Vol. 2 (London: T. & T. Clark, 1915).

¹³ Ficino, *All Things Natural*, 58.

¹⁴ Frances Amelia Yates, *Giordano Bruno and the Hermetic Tradition* (Chicago: Univ. of Chicago Press, 1964), 78.

¹⁵ His theory of the spirit, as well as Orphic magic, is related to Thomas Aquinas’ talisman magic. ‘It is used for the same reasons, to draw down chosen stellar influences, its medium or channel is again the spiritus’ Yates, *Giordano Bruno and the Hermetic Tradition*, 78.

¹⁶ He later wrote a book disputing astrology due to pressure from the church and the mysterious deaths of his friends, though it was clear that he did not truly believe what he was writing.

¹⁷ In the Aristotelian tradition, which Ficino draws from, “soul” is the animating force that distinguishes alive from dead. Thus within the context of the human body, the soul is a spiritual power that has the function of animating the body.

¹⁸ Michael J. B. Allen, *Marsilio Ficino His Theology, His Philosophy, His Legacy* (Leiden: Brill, 2002), 231.

¹⁹ Plato, *Timaeus*.

spirit is centred. Through these sympathetic vibrations the human soul will be restored to its natural congruence with the cosmos.

Ficino put great emphasis on the need to harmonise properly, creating a perfect tune that resonated with both the world soul and the spiritus. Drawing from as many sources as he could, Ficino worked with difficulty on the concept of “planetarily effective music.”²⁰ In the end he touches upon a more mathematical principle as he tries to explain the process of tuning. He adopted the idea that music had an inherent numerical nature, with harmonic proportions which reflected the geometric proportions of the heavens.²¹ This is relatively true, as musical intervals are mathematical ratios in the form of sound. In fact, musical scores could be re-written as mathematical ratios.²²

Within each mathematical ratio he thought there to be a tone which harmonises with a specific planet. Ficino combined Plato’s harmonic proportions with the Pythagorean scale, which states that the 1/frequency ratio determines the length of strings needed to produce a certain vibration as well as the relationship between the frequencies of the notes. The theory is based off a stack of intervals called the perfect fifths which is tuned to the ration 3:2, being the next simplest ratio after 2:1.²³ For example, when tuning around the note D, six other notes are produced by moving six times a ratio 3:2 up the scale, the remaining notes are made by moving the same ratio down. By using this scale to expand upon Plato’s astrological ratios, Ficino found a suitable explanation for how to properly tune a song to the planets and why it worked.²⁴

Though his purposes were more astrological in nature than mathematical or scientific, Ficino’s theories are not altogether irrational. Much of the theory he created had roots in true mathematics. Though he was perhaps incorrect in connecting it to the heavens, the actual basis of his theory was correct. Even the perfectly celestial attuned octave would not create a perfectly attuned hymn. Each individual note had to work together in perfect harmony as well, creating a perfectly well rounded harmony on all levels. The tuning process which he used was perhaps the closest to any actual theories used today. Though others had theories with merit, by combining elements from several of them, Ficino came closer to an actual complete practical theory.

An idea which is only just recently being proven and perfected, and even put into use is that of the set theory. It is strikingly similar to the one Ficino developed. There are several branches of the theory today. The traditional set theory focuses on the makeup of musical objects, such as a major chord. It incorporates the notion of defining sets of pitches or a “pitch class,” and organizing music around those sets and the various manipulations.²⁵ Set Theory allows one to “define and manipulate ordered collections”, which are then used to “identify melodic ideas or motives.”²⁶ This is similar to Ficino stating that just as a doctor perfectly mixes medicines using the correct mathematical formula, the greatest musicians could “mix [notes of varying pitch] in such proportion that from the many a single form arises which results not only in vocal power but also in heavenly power.”²⁷ What he was saying was that a truly skilled musician knew how to properly mix notes of different pitches, doing so by looking at the pitches alone and how they

²⁰ Walker, *Spiritual and Demonic Magic*, 15.

²¹ Ficino, *All Things Natural*.

²² Alfred S. Posamentier, *The Fabulous Fibonacci Number*, (New York: Prometheus Books, 2007).

²³ J. Murray Barbour, *Tuning and Temperament: A Historical Survey* (Mineola, N.Y.: Dover Publications, 2004).

²⁴ It was in using these ratios that he was able to tune his lyre to the celestial harmonies as well, thus amplifying the effect of his Orphic singing.

²⁵ Don Michael Randel, *The Harvard Dictionary of Music* (Harvard University Press, 2003), 776.

²⁶ Randel, *The Harvard Dictionary of Music*, 776.

²⁷ Ficino, *All Things Natural*, 58.

interacted with each other. Similarly, composers use set theory analyses to organize the pitches within their works

The goal of Pitch Class set theory is just what Ficino's theory was meant for-to help musicians learn how to group notes together independently of any structure and to understand the reason why certain notes sound good together.²⁸ As set theory uses similar math which forms the basis of Ficino's theory and for much the same goal, it essentially gives his theory some validation. He developed a way to arrange musical pieces by focusing on pitch sets.

While traditional set theory alone reflects Ficino's belief that the ratios of the chords themselves, of how the vibrations of the strings created the notes was important, there is also a branch of set theory which solves the aforementioned problem-putting the right notes together. Called "transformational theory," this branch furthers the parallels between set theory and Ficino's musical theory. It focuses less on the specific chords themselves and more on the relationship between them. Transformational theorists do not see one chord as following the next but as the two blending together, an idea which Ficino would no doubt be eager to add to his collection. It demonstrated how to effectively put into use the ideas from PC theory.²⁹

Since PC showed that it was possible to look at notes in another way other than scales and octaves, transformational theory goes beyond even pitch content. Like Ficino searched for the perfect harmonies, it explores how harmonies are created by looking at how the notes interact.³⁰ They are not just separate notes on a page creating one song, but are each and all part of one. Every note is connected, blending together to make a melody. Considering Ficino's acceptance of the idea of the world soul, of everything being connected through the microcosm and the macrocosm, it seems like set theory fits in perfectly with his own. Or perhaps it even took some inspiration from him. Either way, the connection cannot be denied or overlooked, especially when considering the practical applications.

One of the practical applications of achieving the perfect harmony was that it would have maximum efficiency in healing. As health was Ficino's primary concern when developing his theory of music, this was of course of great importance to him.³¹ It may seem strange to think that music could heal the body, but Ficino was not wrong about what a powerful effect it has. For centuries people of all professions have written about the power that music has over ones mood because they recognised that music has a strong effect on the body and mind.³² By the 19th century physicians began to officially research the physiological effects of music on the body, and the more research that was done the more evidence was gathered in favour of the long-time belief that music was therapeutic.³³ Today music therapy is becoming widely practiced and highly accredited.³⁴

By definition music therapy is a "clinical and evidence-based use of music interventions to

²⁸ Though his ultimate goal was to become in tune with the heavens, the mathematics he uses and basic goal were the same.

²⁹ Short for Pitch Class

³⁰ David Lewin, *Generalized Musical Intervals and Transformations* (Oxford University Press, 2010).

³¹ Walker, *Spiritual and Demonic Magic*, 5.

³² Grocke, Grocke and Wigram, *Receptive Methods in Music Therapy*, 13.

³³ Denise Erdonmez Grocke, Denise Grocke and Tony Wigram, *Receptive Methods in Music Therapy: Techniques and Clinical Applications for Music Therapy Clinicians, Educators and Students* (London: Jessica Kingsley Publishers, 2007), 13, 15.

³⁴ Grocke, Grocke and Wigram, *Receptive Methods in Music Therapy*, 13.

accomplish individualized goals within a therapeutic relationship.”³⁵ Through the use of music, the therapy addresses not only emotional needs, but also cognitive, social, and even physical. The professional assess the client and upon determining what their problems and needs are, they provide the appropriate treatment. Much like Ficino’s prescription of specific types of music, in music therapy the patients “[benefit] by listening and attending to the music” designed specifically around their needs. It helps in physical rehabilitation, facilitating movement, and increasing motivation and focus. More and more professionals are turning to music therapy.

Another recent discovery has brought some validity to Ficino’s theory, this time in the field of science. Though astrology is highly disregarded in the modern day due to its magical and thus unscientific nature, Ficino’s thoughts on the matter may not have been entirely wrong. At the very least, he was on the right track, and there is science which today has proven something which then he thought to be magic. Ficino’s conviction that there was music of the spheres now has somewhat of a scientific backing. Although not exactly what he had envisioned, a celestial harmony-or at least, some form of planetary sounds-may possible after all.

Ficino’s music theory is centred on the concept of the planets having their own “tune”, hence why he made sure to develop a proper process of harmonizing with them. Not too long ago it was proven that he was not so far off course in his assumption, as “it turns out that space can make music... if you know how to listen.”³⁶ A few years ago NASA released recordings of the “*Sounds of Space*.” It all started with the Plasma Wave Science instrument on Voyager 1. While waiting for the space craft to actually leave the heliosphere and reach the realm of the stars, the principle investigator for the Plasma Wave Science instrument received data from the Voyager.³⁷ The sounds that it had recorded were conclusive evidence that the Voyager had left the heliosphere.

Strictly speaking, the plasma wave instrument does not detect sound. Instead it senses electromagnetic disturbances and charged particle fluxes. Charged particles either bouncing off planets from the sun or produced by the planets themselves travel in space around the planets. Radio waves, also reflected or produced, can become trapped by the planets magnetic field. No human ear could hear these waves, but because they occur at audio frequencies, they can be converted into sound.

Each planet’s magnetic field is different in strength, resulting in different amounts of charged particles, which in turn means that there are differences in frequency. These differences in “pitch and frequency tell us about the density of gas surrounding the spacecraft,” which means that there is a discernible difference between each planets’ “sound.”³⁸ The idea is ultimately a scientific version of what was then a magical belief. These sounds may not be exactly what Ficino was talking about, but it does prove that at least one portion of his astrology now has some scientific explanation, if not validation.

During the 15th century Ficino’s theory did not need evidence to validate it. He received great recognition and was even the head of a Platonic academy started by Cosimo de Medici. Ficino wrote commentaries on many of the classical writes such as Plato, was the first to translate

³⁵ "American Music Therapy Association." *What Is Music Therapy*, Accessed April 25, 2015.

<http://www.musictherapy.org/about/musictherapy/>.

³⁶ "The Sounds of Interstellar Space - NASA Science." *The Sounds of Interstellar Space - NASA Science*, Accessed April 25, 2015. http://science.nasa.gov/science-news/science-at-nasa/2013/01nov_ismsounds/.

³⁷ The suns magnetic field, which encompasses the sun and planets. This bubble separates “home” from interstellar space.

³⁸ "The Sounds of Interstellar Space - NASA Science." *The Sounds of Interstellar Space - NASA Science*

Plato's complete writings into Latin, and also translated the *Corpus Hermeticum* into Latin.³⁹ Even though Ficino may seem to have been forgotten by many and is no longer known as well as he was then, nor respected as much, he is still relevant. By compiling his comprehensive philosophy, he stumbled upon several concepts which were only just being discovered during his time. When other philosophers, mathematicians, musicians, and scientists were focusing on specific theories, Ficino was looking at a far more dynamic vision, drawing as much information for his theory from as many fields as he could.

Even with the more religious or occult aspects to it, Ficino's theory of music still has much to offer. It gives an interesting and very in depth look at music and the way it works as well as its applications. Though he only had the very basics of the concepts aside from his more in depth view of the numerical value of music, Ficino deserves to be recognised for his incredibly progressive music theory. He managed to grasp these theories, expand on them properly, and combine them in a way that makes sense when taking into account their uses. He was ahead of his own time and deserves more recognition for having the ability to develop such a practical theory of music.

³⁹ Thomas Moore, *The Planets Within: The Astrological Psychology of Marsilio Ficino* (Great Barrington: SteinerBooks, 1990).

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