

Music as medicine in 1489 and 1729

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Abstract

This paper compares two early modern authors who both claimed that music was a kind of medicine, effective for treating disorders related to melancholy. Each of these authors, Marsilio Ficino and Richard Browne, wrote a treatise that advertised music's medicinal effects, and generally agreed on such effects. The differences between them become clear, however, when they explain how music generates its effects in an individual. They drew upon widely divergent world systems to explain and argue for those effects. The texts of these two authors are examined against a backdrop of the changing nature of music and medicine throughout early modern Europe. This backdrop places these authors and their ideas in sharp relief. Ficino claims that music acts upon the body of an individual by helping to realign it with the motion of the heavenly bodies, thus allowing their healthy influences to penetrate it. Browne, on the other hand, claims that certain mechanisms in the body work in sympathy with music through the mind-body connection.

Introduction

In 1489, Florentine philosopher and priest Marsilio Ficino (1433-1499) published *De vita libri tres*. It was a collection of three treatises from different parts of the author's life, all bundled under the title "Three Books on Life" with the express goal of teaching scholars how to maintain their health.¹ Scholars like him, he claimed, tended to melancholy, and his treatise prescribed a set of activities that would help counteract this tendency—activities such as playing and listening to music. Such prescriptions were not simply

¹Ficino 1989, p. 109.

for improving one's mood; implicit in the text is the expectation that ridding the scholar of melancholy would lead to a lasting, recognizable improvement in his overall health. About two and a half centuries later, Richard Browne's *Medicina Musica, or a Mechanical Essay on the Effects of Singing, Musick and Dancing* (1729) was published in London, again prescribing music to treat melancholy—or the similar disease of “spleen and vapors.” In this treatise, Browne is convinced that music can cure the dispirited individual, and he provides clear explanations for how the process works.

Ficino is an established figure in the history of science, the first leader of the Platonic Academy in Florence. There he translated previously unknown works of Plato and Neoplatonic authors into Latin. At this time, Florence was a major hub of Renaissance activity, flourishing under the humanist leadership of Cosimo and Lorenzo de' Medici. Ficino received direct patronage from the Medici, and is credited as one of the key proponents of the natural magic tradition and a promoter of the hermetic texts that have so influenced the history of science. Yet as a priest and humanist philosopher, it is surprising that he would write on matters more properly suited to a physician.

Browne, on the other hand, is not such a well-established figure; he was a little-known apothecary from Oakham, about seventy miles north of London. *Medicina Musica* was likely all he published, and little is known about his later life or of the treatise's contemporary reception. His treatise emerged in a post-Newtonian England, where many innovations in traditional scientific practices continued to refine and redefine the prevailing worldview. It was just one of the many texts published in the booming medical marketplace of eighteenth century London, where music also flourished.² Despite Browne's relative anonymity, his treatise is significant for three reasons. First, it is one of the few available examples of an argument for music's medicinal effects. Second, it appears in a time and place important for the history of science. Third, Browne makes no mention of Ficino—neither as an inspiration nor as a reference—which stands in stark contrast to Ficino's heavy reference to his earlier sources. For these reasons, Browne's treatise serves as a complement to Ficino's more well established work.

Each author argues that music should be used as a form of medicine, in particular as a cure of melancholy. The context in which they wrote, however, influenced these two authors in important ways. Ficino claims that music acts upon the body of an individual by helping to realign it with the motion of the heavenly bodies, thus allowing their healthy influences to

²The work of Penelope Gouk has highlighted significant interactions between music, science, and natural magic in England during the period under discussion. See Gouk 1999; Gouk 2004, pp. 94-5.

penetrate it. Browne, on the other hand, claims that certain mechanisms in the body work in sympathy with music through the mind-body connection.

Music's healing powers in Ficino's *De vita*

Ficino had a deep interest in both medicine and music, and was personally motivated to cure the melancholy scholar. It is not clear how much medical training he received, or when he received it. He may have learned either from his father, who was physician to Cosimo the Elder (1389-1464), or at the University of Florence under Niccolo Tignosi of Foligno.³ He was himself a musician, noted for his proficiency on the lyre; Lorenzo de' Medici compared him to Orpheus.⁴ This comparison is significant, not only because Orpheus was the supposed teacher of Pythagoras, whose harmony of the spheres fascinated Ficino, but also because Orpheus was one of the *magi* of the natural magic tradition, whose music had the power to heal.⁵ Ficino also seems to have had an unfavorable natal horoscope. In a letter to his friend Giovanni Cavalcanti, he wrote that "Saturn seems to have impressed the seal of melancholy on me from the beginning."⁶ He would likely have been deeply interested in ways to counteract the effects of melancholy, and eager to communicate any success he had in improving his state.

In Chapter 10 of Book I, Ficino lists all the things that lead to a humoral imbalance of black bile—from roasted, salty meats and old cheese to anger, anxiety, idleness, and solitude. He then lists those diets and habits that are encouraged, such as eating fresh cheese and most fruit (excluding cherries and figs), drinking light wine, and surrounding oneself with pleasant smells. Notable in this list is music, which he links with an ancient lineage:

Hermes Trismegistus, Pythagoras, and Plato tell us to calm and to cheer the dissonant and the sorrowful mind with constant and harmonious lyre and song. Moreover, David, the sacred poet, used to free Saul from madness with psalter and psalms. I, too (if I may now compare the lowliest person with the greatest), frequently prove in myself how much the sweetness of the lyre and song avail against the bitterness of black bile.⁷

³Ficino 1989, p. 18.

⁴See Lorenzo's poem, *Altercazione*. Voss 2000, p. 155.

⁵The practitioner of magic was the so-called *magus*, whose goal was "to learn and to control the connections embedded in the world in order to manipulate them for practical ends." See Principe 2011, pp. 27-9.

⁶Ficino 1989, p. 20.

⁷*Ibid.*, p. 135. Hermes Trismegistus ("the thrice-great") is not the Hermes of Greek mythology, but a legendary Egyptian contemporary of Moses, regarded by Neoplatonists and others as the author of certain works on astrology, magic, and alchemy.

It was a common humanist tactic to invoke the ancients in order to add weight to a claim, and Ficino made full use of it in the *De vita*.⁸ Here, wisdom from both ancient Greek and biblical sources agree that music of the lyre and singing can be used to heal the scholar afflicted with melancholy.

The above passage from *De vita* highlights the importance Ficino placed on ancient texts as a valid source of medical information. The texts he discovered and translated as head of the Platonic Academy exposed him to the healing powers of music, professed by a pantheon of ancient *magi* that included Hermes, Orpheus, Pythagoras, and Plato. These *magi* could cure diseases of the body through song, and bring the soul into a state of harmony. The texts were part of the larger hermetic corpus, which laid the foundation for the natural magic tradition that historians of science now see as a forerunner of early modern experimental science.⁹ Many of these works were authored by Neoplatonists of the second century AD, but Ficino believed them to be much older. The Neoplatonic philosophy contained in these texts posited a cosmological system that linked the terrestrial world to the wider universe, a system in which the heavenly bodies could influence the human body. A central goal of the *De vita* was to describe how to condition one's spirit to become receptive to the beneficial effects of the cosmos.

The causal relationship between the celestial and terrestrial worlds would have been familiar to late medieval astrologers, and hinges on a doctrine of correspondences widely held by natural philosophers in pre-modern Europe. Various components of the universe were viewed to have deeply analogous structures. Objects that are similar or dissimilar were believed to exert influences on each other, whether positively as sympathies or adversely as antipathies. For example, a sympathy was held to exist between gold, the sun, and the human heart. Using these sympathetic influences, a person with a heart condition could maintain good health by wearing a gold amulet close to their heart. The theory went much further than this, however. Such causal influences were used to explain a variety of phenomena, from the onset of a disease to the daily turning of a sunflower toward the sun. For some correspondences more difficult to discern, God might leave in nature certain signs, or signatures, as a clue for the natural

⁸In fact, this tendency to invoke ancient sources might be the dominant aspect of Ficino's methodology, on which Brian Copenhaver has commented: "Ficino made claims that can be called empirical about animals, plants, and minerals not because he derived them from his own sense experience nor because he checked them against his own observations; usually he did neither ... Ficino's source for these claims was almost always an indirect, literary report of an (allegedly) direct observation." (Copenhaver 1990, p. 275) The quoted passage above does indicate, however, that Ficino used his own personal experience to validate the claims of these literary reports.

⁹Gouk 1999; Henry 2008; Dear 2009; Principe 2011.

philosopher. To continue the example, the fact that the sunflower both looks like the sun, and turns toward it, may be a clue that it can be used to cure diseases of the heart. The celestial influences that Ficino's system required worked through the hidden qualities of the human body, known by Hermes, Pythagoras, and Plato. It was the task of Ficino and his followers in natural magic to find these qualities and exploit them.

This doctrine of correspondences supported a premodern tendency to interpret the universe symbolically. If God had built analogous structures into the celestial bodies and the organs of the body, then facts about one could be learned by studying the other. These two sets of entities (celestial bodies and organs) represent perhaps the most important analogous structures for medical theorists such as Ficino, encapsulated in the distinction between the macrocosm and microcosm. Evidence that these two worlds were inextricably linked was found in the hermetic fragment known as the *Emerald Tablet*, attributed to Hermes Trismegistus, considered by many in the early modern period to be the founder of alchemy.¹⁰ The macrocosm represented "that which is above"—the heavenly bodies in their perfect celestial motions. The microcosm, "that which is below," was a more flexible concept, and could refer to the entire terrestrial world, the human body, the subterranean world, the alchemist's flask, or even the Philosophers' Stone itself, and seems to have depended on the specific analogies that an author was investigating.¹¹ In each of these manifestations of the split between macrocosm and microcosm, what is crucial is the sympathetic relation that was believed to exist between such seemingly independent entities. This was the link that Ficino urged the melancholy scholar to exploit through music.

Ficino may have found further support for correspondences in the writings of Plato he helped translate, some of which contain clear expositions of the connection between the celestial and terrestrial worlds. In the *Timaeus*, Plato claimed that the god, or demiurge, formed the imperfect universe out of pristine models from the heavens. Ficino could interpret this within a Christian framework, thanks in part to medieval Neoplatonists who merged Plato's demiurge with the Christian God. A sympathy between a celestial body and a bodily organ, then, could be understood to exist on this basis: they were stamped from similar models, and therefore worked in similar ways.

Music's position in this harmonious universe is also referenced in a passage from the *Timaeus*, where Plato explains the reasons that the demiurge gave human beings the senses of sight and hearing. The similarity between

¹⁰Principe 2013, p. 32.

¹¹Applebaum 2000, pp. 377-8.

this passage and themes in the *De vita* suggests that Ficino either read it himself, or was influenced by it through an intermediate source:¹²

[The] god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding ... Likewise, the same account goes for sound and hearing ... all such composition (*mousikē*) as lends itself to making audible musical sound (*phōnē*) is given in order to express harmony, and so serves this purpose well. And harmony, whose movements are akin to the orbits within our souls, is a gift of the Muses, if our dealings with them are guided by understanding, not for irrational pleasure ... but to serve as an ally in the fight to bring order to any orbit in our souls that has become unharmonized, and make it concordant with itself.¹³

This notion of bringing order to an unharmonized orbit in the soul is precisely the role Ficino has in mind for music, as expressed in the *De vita*. This view is not found anywhere in Browne's *Medicina Musica*. Unlike Ficino, Browne is uninterested in the analogous structures of the macrocosm and microcosm.

The above discussion provides context for Ficino's claim that one's spirit can become receptive to celestial benefits. His cosmos is a Platonic one, composed at first of inert, formless matter. It is given order and beauty through divine creative energy, which also gives matter its form and motion. His goal is to draw upon this divine energy through an artful manipulation of nature in order to cure disease, prolong life, increase intelligence, and generally promote good health. This is not Browne's goal, who instead uses music to invigorate the body's animal spirits in order to cure the patient of melancholy. Before examining Browne's treatise, the next section summarizes important developments in medicine and music in the period between Ficino and Browne.

Early modern developments in medicine and music

The scientific developments of the sixteenth and seventeenth century influenced theories of how medicine effects an individual. Traditional approaches were inadequate to explain the many new discoveries about the

¹²That source may have been Gemisthos Pletho, a Byzantine Platonist who brought works of Plato to Florence and promoted a form of ritual singing that worked by "molding and stamping our own imagination" to make it "tractable and obedient to that which is divine in us" (See Voss 2000, p. 160).

¹³*Timaeus* 47 b-d, translated in Cohen, Curd, and Reeve 2005, pp. 631-2.

human body taking place within the medical universities. These approaches were based heavily on the theory of humors and its "cure by contraries" (*contraria contrariis*), which included methods such as bloodletting. Humoral theory—with origins dating back to Empedocles' doctrine of the four elements—was developed in the Hippocratic treatise *Of the Nature of Man*, systematized by Galen in the second century AD, and used extensively by late medieval physicians. It was especially challenged by the new and more frequent dissections, which revealed a different internal structure than what Galen had described.

To match these anatomical discoveries within the universities, new ideas from outside also presented a challenge to the Galenic system of medicine. One of the largest shocks to traditional medicine came from Theophrastus von Hohenheim, also known as Paracelsus (1493-1541). He rejected the theory of humors, and formulated a theory of medicine based on his work in alchemy. Chemical medicines had been encouraged earlier by Jean of Rupeccissa (1310-c. 1362),¹⁴ but Paracelsus's developments were exceptional. He argued that the body's processes are chemical, and the organs are like chemical factories (what he called *archei*). When these fail to work properly, there is a buildup of toxic impurities in the body, which can only be expelled by means of potent, even poisonous mineral-based medicines (often containing mercury or arsenic) that were similar in chemical constituents to the very impurities in the body. Paracelsus's claims amounted to a veritable attack on the tradition of humoral pathology, as illness was no longer seen as an imbalance of humors but rather as chemical in origin. The method was not the *contraria contrariis* of Galenic medicine but rather a new *similia similibus*, a homeopathic theory of similars that treated a disease with the same agents doing the harm.

Paracelsus still envisioned a vitalistic world in which the stars could influence our health for good or ill. He was known to favor local remedies—German plants being naturally suited, he thought, to cure the common ills and pains of German people¹⁵—and held fantastical ideas about witches and sorcery. Paracelsus makes a passing remark about music's medicinal effects. In an early treatise, *De religione perpetua*, Paracelsus wrote that "music is a cure for those troubled by melancholy and morbid imagination [*Fantasey*]... on the same account music drives away the spirits used by witches, by malefactors, and in sorcery."¹⁶ On the one hand, this is not so

¹⁴Principe 2011, p. 82.

¹⁵This concept was common in Paracelsus's time. Guaiacum bark from the South America was a favorite treatment of syphilis, and its efficacy supported the claim that it was a New World disease—the assumption being that God placed the remedies of a disease near its source. See Bynum 2008, pp. 35-7; Applebaum 2000, p. 493.

¹⁶Reproduced in Horden 2000, p. 152.

surprising, given his leanings toward natural magic and the sympathetic effects of the heavens on our terrestrial health. On the other, it does not fit considering Paracelsus's contempt for both ancient wisdom and humoral pathology, which were two essential components of Ficino's system. Either way, Paracelsus's legacy made less room for music as a form of medicine.

The Flemish Joan Baptista Van Helmont (1579-1644) took up many Paracelsian ideas, especially those on the chemical basis of the human body and of medicines. His contributions to the iatrochemical tradition were taken up by Franciscus Sylvius (1614-1672) in Amsterdam and Leiden and Thomas Willis (1621-1675) in Oxford and London. As much as Paracelsus's thought and its further development by Van Helmont and others represent a departure from humoral theory and traditional medicine, it is important to note that both Paracelsus and Van Helmont still wrote of and defended sympathetic magic and cures.¹⁷ The chemical basis of their medicine had such potential that later theorists worked to remove elements of natural magic from Paracelsianism and take from it what they pleased. This is clear from the gradual adoption of Paracelsian chemical methods into the medical universities of Europe, starting with the appointment of Johannes Hartmann (1568-1631) as professor of chemical medicine (*chemiatria*) at the University of Marburg in 1609.¹⁸ Whereas Paracelsus makes a slight nod to the medicinal powers of music, it becomes much less common for physicians to make any mention of music once celestial influences are no longer taken seriously. Two subsequent physicians who did not continue the natural magic tradition, but represent significant advancements in early modern medical theory, are Thomas Sydenham (1624-89) and Hermann Boerhaave (1668-1738). Both of these later physicians helped to remove celestial influences from medicine and make it a more systematic, generalized discipline.

Sydenham, known as the English Hippocrates, advocated the use of the so-called Jesuit bark from the cinchona tree of South America to treat malaria. His experience with this effective remedy, which seemed to work equally well in all patients, resulted in a significant shift in his concept of disease and how to best treat it:

Nature, in the production of disease, is uniform and consistent,
so much so, that for the same disease in different persons the

¹⁷For example, Van Helmont's 1621 treatise *De magnetica vulnerum ... curatione* (On the Magnetic Healing of Wounds) was concerned with the infamous weapon salve, and used a Paracelsian prescription involving the application of mold from the skull of a hanged person to the offending blade. See Applebaum 2000, p. 290.

¹⁸In France, for example, the lengthy debates between the conservative faculty at the University of Paris and the pro-Paracelsian faculty at Montpellier culminated in a victory for the Paracelsians, after Louis XIV was cured of an illness during a military campaign by a *vin émetique*. See Principe 2011, pp. 85, 98.

symptoms are for the most part the same; and the selfsame phenomena that you would observe in the sickness of a Socrates you would observe in the sickness of a simpleton.¹⁹

With such a view of the uniformity of disease, and of the application of medicine, there is no place for Ficino's personalized causes of illness; his natal horoscope would neither affect his chances of contracting malaria, nor aid in its cure. This view of medicine not only compromises much of the argument of the *De vita*, but medical astrology as a whole. Sydenham's work with Jesuit bark represents yet another example of the shifting conceptions of disease and medical treatment in early modern medicine. This shift, away from treating the individual, served to further displace music's role.

Even more than Sydenham, Boerhaave had a profound effect on the eighteenth century understanding of medicine. This *communis Europae praeceptor* (teacher of all Europe²⁰) worked from the University of Leiden to synthesize the various iatrochemical and iatromechanical theories from the late seventeenth century into a coherent system. He wrote several textbooks on subjects such as chemistry, *materia medica*, medicine, anatomy, and venereal disease. There was little room for music in Boerhaave's system, which developed from so many of the chemical and mechanical traditions that had already removed the influence of natural magic and shed light on many occult qualities. As the Neoplatonic cosmological system no longer held sway in the field of medicine, Ficino's entire basis for how music effects the individual was compromised.

Alongside these important developments in theories of medicine, there were several large changes in the practice and teaching of music throughout the period between Ficino and Browne. New instruments—louder, larger, and more complex in their construction—proliferated across Europe, and composers sought out new ways to bring these instruments together in ensembles. Professional musicians, formerly employed in royal courts, were more frequently performing in public venues.²¹ New genres emerged, with Claudio Monteverdi's groundbreaking opera *L'Orfeo* premiering in Mantua in 1607. Perhaps the largest effect on music during the early modern period came out of the religious turmoil of the sixteenth century.

Both the Reformation and Counter-Reformation significantly affected both the composition and performance of music. Protestants and Catholics alike struggled to redefine mankind's proper relationship to God, and the

¹⁹Sydenham 1848, p. 15.

²⁰One might compare this to the title *Praeceptor Germaniae* given to Philipp Melanchthon (1497-1560).

²¹For example, during the Interregnum in England, the King's Music was disbanded; the royal musicians were forced to look elsewhere for work, and some began performing in public theaters. See Gouk 1999, pp. 30-1.

role of church music was significantly changed in the process. Although a full account of the influence of the Reformation and Counter-Reformation on early modern conceptions of music is beyond the scope of this paper, two examples are worth mentioning briefly: Martin Luther's own words on the role of music, and the position of the Council of Trent (1545-1563). Although they do not explicitly deal with music's value as a medicine, both of these examples attribute powers to music that are recognizable from the *De vita*, and argue (in their own way) that music can uplift and invigorate the individual. It is then not so surprising to see, in Browne's treatise, an affirmation of music's power to influence the human body and soul, even if his explanations of its power are drastically different.

Luther's own passion for music and recognition of its powers were exceptional. He composed a number of hymns that have survived, and played both the lute and the flute. In his preface to *Symphoniae jucundae* (a collection of Latin motets published in 1538 by Luther's close friend and printer, Georg Rhau), he professes his high regard for music and its power to influence the human spirit:

Next to the word of God, music deserves the highest praise. She is a mistress and governess of those human emotions—to pass over the animals—which as masters govern men or more often overwhelm them. No greater commendation than this can be found—at least not by us. For whether you wish to comfort the sad, to terrify the happy, to encourage the despairing, to humble the proud, to calm the passionate, or to appease those full of hate—and who could number all these masters of the human heart, namely, the emotions, inclinations, and affections that impel men to evil or good?—what more effective means than music could you find?²²

To match his belief in the power and efficacy of music, Luther proposed changes to the way music was used in Mass to maximize its effect on the parishioners. In a liturgical prescription from 1523, he proposed a more participatory, active approach to music.²³ Thus Luther saw music as an essential part of his religious reforms, and clearly attested to its power over the individual.

²²Weiss and Taruskin 1984, p. 103.

²³In this prescription, Luther writes: "I also wish that we had as many songs as possible in the vernacular which the people could sing during Mass... For who doubts that originally all the people sang these which now only the choir sings or responds to while the bishop is consecrating the Host? The bishops may have these congregational hymns sung either after the Latin chants, or use the Latin on one Sunday and the vernacular on the next, until the time comes that the whole Mass is sung in the vernacular." Reproduced in *ibid.*, p. 103.

Music had always played a central role in the church, and its reform was part of the later proceedings of the Council of Trent. A decree from 10 September 1562 states the official position of the church, emphasizing the power of music to affect the morality of the listener:

The whole plan of singing in musical modes should be constituted not to give empty pleasure to the ear, but in such a way that the words may be clearly understood by all, and thus the hearts of the listeners be drawn to the desire of heavenly harmonies, in the contemplation of the joys of the blessed. They shall also banish from church all music that contains, whether in the singing or in the organ playing, things that are lascivious or impure.²⁴

The two most important elements in this passage are about the composition's text: it must be clearly heard and understood, and its topics must inspire contemplation of the blessed. These are all in service of the ultimate goal of music, to promote the "desire of heavenly harmonies." Implicit in these requirements is the idea that music has a powerful moral element. Understood this way, the church's position is quite similar to Luther's. These examples, from the highest authorities in Europe at the time, provide textual evidence that the high regard for music's power had remained largely the same since Ficino, even though many aspects of musical practice (instruments, ensembles, genres) continued to change significantly.

Between the time of Ficino and Browne, the European theory of medicine went through many significant developments, as shown in the examples of Paracelsus, Van Helmont, Sydenham, and Boerhaave. Similarly, the religious reforms of the sixteenth century attest to the high importance placed on music, at a time when many elements of musical practice continued to evolve. Against this backdrop of the changing nature of music and medicine, Browne's treatise can be seen in all its distinction from Ficino's *De vita*.

Post-Newtonian developments in Browne

Richard Browne's *Medicina Musica* is one of just a few eighteenth century texts that specifically treat the role of music in medicine.²⁵ Given the changes in medicine mentioned earlier, it is not surprising to find the role of music diminished by this time. Nevertheless, the existence of Browne's treatise

²⁴Reproduced in Weiss and Taruskin 1984, p. 137.

²⁵A text often cited is Richard Brocklesby's *Reflections on Antient and Modern Musick, with the Application to the Cure of Diseases* (1749). Unlike Browne, who was an apothecary, Brocklesby was an established physician in London and a Fellow of the Royal Society.

establishes that music could be seen to serve as medicine in 1729. The fact that Browne chooses the title of a "Mechanical Essay" suggests that such a theory would need to be couched in terms familiar to the medical worldview of the time.

There were at least two prominent movements in English medicine when Browne's treatise appeared. First, "Newtonian medicine" came to prominence at the end of the seventeenth century, and was considered a mathematical and mechanical grounding for medicine. Second, Boerhaave's influence on the continent was equally felt in England, and his textbooks on the synthesis of seventeenth century iatromechanical and iatrochemical theories were adopted by English medical universities. Browne took full advantage of what Penelope Gouk has called the new "medical marketplace" of Georgian London, a bustling city of some six hundred thousand people by the early eighteenth century.²⁶ In this marketplace, according to Gouk, music had established a niche for itself as one way to cure nervous diseases and mental disorders.

Browne's treatise can be considered scientific for two reasons. First, he emphasizes the experimental verifiability of the effects that music have on health. Second, he appeals to Newton's laws of motion as the basis for the body's inner mechanisms.²⁷ Browne claims that nerve action, understood as the flow of animal spirits, is the vehicle through which music can affect the body's operation. The theory of nerve action goes back to the enormously influential work of Thomas Willis (the discoverer of the eponymous "circle of Willis" that supplies blood to the brain) and was published in his *Cerebri anatome nervorumque descriptio* (1664). It is this theory of nerve action that has entirely displaced the causal agency of the heavens used by Ficino to explain the mechanism by which music affects the individual. Thanks to the work of Willis, Boerhaave, and Newton, Browne had no use for Orpheus and the *magi*.

The first three chapters of *Medicina Musica* cover the physical effects of singing, listening to music, and dancing, respectively; the fourth and last chapter is titled "Of the Spleen and Vapours, or Hypochondriack and Hysterick Affections." The first chapter ("Of Singing") begins with six propositions, along with proofs. He then uses these propositions to build his arguments in the rest of the chapter: "By the Help of these Propositions I shall endeavour to demonstrate by what Mechanism human Bodies enjoy the pleasing Effects of Singing; and at the same time shew in what Cases it may be prejudicial."²⁸ By using the proposition-proof format in the first part of

²⁶Gouk 2004, pp. 94-5.

²⁷Ibid., p. 92.

²⁸Browne 1729, p. 14.

his treatise and conceiving of the work as a "Mechanical Essay," Browne expected his work to be taken seriously as a contribution to the scientific literature of the time.

According to Browne, music can be used as medicine because of a certain connection that exists within the individual. Consider his Proposition I: "There is a Sympathy betwixt the Soul and Animal Spirits."²⁹ It is interesting that Browne uses the term *sympathy* here. Unlike Ficino's sympathies, however, this exists inside the human body, rather than between the body and the heavens. He claims that this may be proven "by Observation; for do we not daily see how the Passions of the Mind affect the Body?" This sympathy is two-way: "as the Mind affects the Body, so does the Body the Mind; for when a Man is free from Diseases, he possesses a joyful Serenity of Mind, but when he labours under any severe Distemper he is sometimes impatient and furious, sometimes dejected and melancholy, according to the different Nature of the Disease."³⁰ Browne then explains how, through this mind-body connection, music lifts the melancholy individual out of his unfortunate state: "The Spirits also, that were before drooping, by Sympathy per Prop. I, will be actuated and enlivened, and the Solids brac'd up to their proper Standard; and in short, the Body that was before like a lifeless Log, or a Piece of inanimated Clay, will now be render'd brisk and alive, and Sensation and Motion acquire their utmost Perfection."³¹ The mechanism starts with the music in the air, which then physically moves the animal spirits through the body. These moving spirits then influence the mind and chase out the gloomy ideas that caused the melancholy.³²

Browne's explanation is mechanical, and once music enters a body, the process by which it cures melancholy takes place fully within that body. Nowhere in his treatise does Browne allude to celestial influences, ancient texts, or a Platonic world system. The macrocosm and microcosm, so crucial to Ficino, is not present here. For Browne, just as for Ficino, the proof of music's effects lies in personal observation; his treatise merely provides a physical explanation for what is observed. In the two centuries separating their work, a new set of explanatory principles were developed to argue for music's medicinal effects, and Browne made full use of such principles. Arguments for music's medicinal effects persist even today, but they now draw on world systems that would be unrecognizable to Ficino and Browne alike.

²⁹Browne 1729, p. 7.

³⁰Ibid., p. 8.

³¹Ibid., pp. 15-6.

³²"By this means those dark gloomy Ideas, to which our Thoughts had been too long attentive, will be chac'd away, and a joyful Serenity of Mind ensue." *ibid.*, p. 15.

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