


## Article

# Music as a Liberal Art: The Poetry of the Universe

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**Abstract:** This article explores the place of music in the classical liberal arts curriculum, which consists of the *trivium* (the arts of language) and the *quadrivium* (the arts of number). Music is part of the quadrivial disciplines and studied as applied arithmetic. However, as argued in this article, it is also a bridge to the discipline of rhetoric, which is part of the *trivium*. The article begins with a brief review of St. Augustine's *De Musica*, the first in a planned (but unrealized) series of dialogs on the value of the classical liberal arts to the emerging Christian culture of Antiquity. It proceeds to a discussion of music and its relation to the contemporary American liberal arts curriculum. Two case studies follow that address the ontological reality of music as a time-bound medium, and attempts to mute this reality in the service of creating a sense of timelessness. Thus subsuming the temporal into the Divine—what Augustine called “a poem of the universe”. The first case study is Dante Alighieri's *Paradiso*, which is a journey through the heavens with each planet representing one of the seven liberal arts as preparatory to the Beatific Vision. The second case study focuses on J.S. Bach's attempts to create a sense of timelessness in the *St. Matthew Passion* by the use of musical forms and musical rhetorical devices that tend to abolish time. The article concludes with suggestions on how teachers can use 20th and 21st-century movements in Western art music as pathways to appreciate music's pivotal role in the Catholic liberal arts tradition.

**Keywords:** music; liberal arts; time; soul; Dante; Bach



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## 1. Introduction

“What has Athens to do with Jerusalem?” What concord is there between the Academy and the Church?” (Tertullian 2022). Tertullian's famous questions signaled a crucially important cultural encounter in late antiquity: the interplay between classical culture and Christianity. As Christianity moved from the margins of Roman civilization to its core, many learned Romans converted to Christianity, forcing a debate among the leading Fathers of the Church on the relation of classical education and biblical learning. St. Augustine of Hippo joined this debate with great interest and energy, synthesizing the two modes of learning, and thereby establishing the foundational principles of a Christian liberal arts education.

Augustine was well-formed in the pre-Christian liberal arts disciplines. Appreciating their value as preparatory for his conversion to Christianity, Augustine assured Christians that their faith and classical culture were not antithetical to each other. In 386 A.D., the same year as his conversion to Christianity, Augustine published *De Ordine*, an “Order of Study”, which is the earliest extant presentation of the medieval curriculum of the seven liberal arts (Augustine 2007; Kenyon 2013, pp. 105–13). As a follow on to *De Ordine*, Augustine planned a series of seven dialogues, one on each of the seven liberal arts rethought and presented from a Christian perspective (Brennan 1988, p. 270; O'Connell 1978, p. 50). This ambitious project stemmed from Augustine's own experience of studying the liberal arts without the proper ordering, aim, and moral disposition required for students to benefit fully from a liberal education. Augustine's own liberal studies, although valuable, had been desultory, self-indulgent and ignoble. As a Christian, he recast liberal learning as a well-ordered, step-wise path to a knowledge of God's divinely ordained pattern in creation.

For Augustine that pattern was ultimately mathematical, which he found in the symmetries of architecture, the rhythmic movements in dance, the arithmetical relations of tones in melody, rhythm and harmony.

Augustine completed two of the seven dialogues: *De musica*, which he began in 387 A.D. as he prepared for baptism, and *On Grammar*. Only *De musica* (391 A.D.) survived. Augustine never realized the entirety of his seven-book plan. It is highly likely that he began this project with music because music in the ancient world was comprehensive in its scope of knowledge. For Augustine and pre-Christian philosophers music opened up onto a range of disciplines, to know music was to know everything. The six books that comprise *De musica* treat only rhythm; Augustine planned six more on melody, which he did not realize. Augustine's treatment of rhythm is anything but narrow in its focus. Rhythm was an opportunity for Augustine to discuss the structure of the human mind (especially memory), pedagogy, God, the human soul, the ordering of the cosmos, number, time, and moral philosophy (Augustine 1947, p. 154; MacInnis 2015, p. 216).

*De musica* does not address musical performance, but rather the mathematical and philosophical aspects of music. True musicians, according to Augustine, are not those who play their instruments well, but who have a keen understanding of the numerical relations that govern their performance. That said, Augustine's interest in music was not limited to music as a speculative science. His discussion of music's emotional power and its influence on his conversion to Christianity is on full display in his *Confessions*. As Brian Brennan has pointed out, Augustine's philosophical speculations on the nature of music were prompted by his experience of hearing Catholic and Eastern psalmody in St. Ambrose's Cathedral in Milan. *De musica*, argued Brennan, is "Augustine's extended intellectual justification for an intensely felt emotional response to music" (Brennan 1988, p. 267).

Music is pivotal in Augustine's project to Christianize classical liberal learning. Augustine understood that music was a source of knowledge of human interiority and of the cosmos. In the following passage from *De musica*, Augustine integrated a gospel teaching with Platonic teaching on the ordering of the human soul and the harmonious ordering of the universe. Augustine wrote:

Let's not, then, be envious of things inferior to ourselves, and let us, Our Lord and God helping, order ourselves between those below us those above us, so we are not troubled by lower and take delight only in higher things. For delight is a kind of weight in the soul. Therefore delight orders the soul. "For where your treasure is, there will your heart be also" [Matthew 6:21]. (Augustine 1947, p. 355)

For Augustine, the rhythmical ordering of "days and months and years and centuries, and other revolutions of the stars" connect earthly matters to those of the heavens. "And their time circuits join together in harmonious succession for a poem of the universe". (Augustine 1947, p. 355).

It is important to keep in mind that Augustine developed his theory of rhythm as a connector of time and eternity in the context of an argument to convince an emerging class of educated converts to Christianity of the value of a classical liberal arts education. *De Ordine* and *De Musica*, were, in effect, Augustine's Christianization of the liberal arts. Amid music's ubiquity in 20th and 21st-century America, it is fitting to inquire into the current status of the high position that Augustine's and his classical predecessors' granted to music.

Accordingly, the next section of this article rehearses the observations of the preeminent philosopher and classicist, Allan Bloom, on music and its effects on liberal education in the modern academy. Bloom's discussion of music recalls the importance of the Ancients' view of music in the education of the young. Section 3 develops this tradition and argues that one of the important aspects of music as a liberal arts discipline is its role as a bridge between the two main parts of a classical education. These two are the arts of language (the *trivium*) and the arts of number (the *quadrivium*). Music is both a means of expression, in effect, a mode of rhetoric (a discipline of the *trivium*) and an application of arithmetic (a discipline of the *quadrivium*).

Sections 4 and 5 examine how a poet (Dante Alighieri) and a composer (J. S. Bach) attempt to realize Augustine's arresting idea of a poem of the universe—the interlacing of time and eternity. Both do so by annihilating time in media that are time-bound; Dante in *Paradiso*, and Bach in the *St. Matthew Passion*. The introduction of Dante's *Commedia* in an article about music seems incongruous until we recognize that music not only saturates *Paradiso*, but also provides an organizing principle of the cantica preceding it, *Purgatorio*. There is no music in *Inferno*. It bursts forth immediately in *Purgatorio* when Dante declares that he “will sing” (*canterò*) of the middle kingdom between hell and heaven and thereby invokes the muse, Calliope, who presides over eloquence and epic poetry because of the ecstatic harmony of her voice. She was also the mother of Orpheus, whose music charmed all living things. Nearly every canto in *Purgatorio* references a chant or a hymn. This structural design based on music culminates in *Paradiso*, wherein music occupies pride of place among the planetary heavens. In Section 4's discussion of *Paradiso*, we see how Dante negotiated the challenge of creating a sense of the timelessness of eternity using musico-poetic devices.

The article concludes with a brief discussion on how the retrieval of music as a pivotal liberal arts discipline fits into current debates on Catholic liberal education and suggestions on how teachers can address the place of music in their curricula.

## 2. Music and the State of Souls in Modern America

Music's contribution to a life well-lived, which was so central to Augustine and his pre-Christian teachers, is hardly taken seriously in contemporary Western society. Music is constantly available and present to contemporary Westerners. “Music is everywhere”, writes music critic Ben Ratliff in *Every Song Ever*. “It has gained on us as our waking life turns into one long broadcast, for better and for worse—often for worse” (Ratliff 2017, p. 5).

In *The Closing of the American Mind*, published in 1987, Allan Bloom noted the ubiquity of music among his students at the University of Chicago. Bloom's book was an unexpected best seller. Symposia, news articles, and assaults on Bloom abounded. His thesis was simple, provocative, and hard to miss; it was the subtitle of the book: *How Higher Education Has Failed Democracy and Impoverished the Souls of Today's Students*.

For many scholars and general readers the most controversial chapter in *The Closing of the American Mind* was titled simply, “Music”. Little else unnerved popular sensibilities more than Bloom's screed against the refusal, in some quarters, to acknowledge the deleterious effects of Rock music on students' intellectual and moral development. “Though students do not have books”, wrote Bloom, “they most emphatically do have music. Nothing is more singular about this generation than its addiction to music. This is the age of music and the states of soul that accompany it”. The young “live for music”. It is their “passion” and all other human goods are trivial in comparison to music. “When they are in school and with their families, they are longing to plug themselves back into their music. Nothing surrounding them—school, family, church—has anything to do with their musical world” (Bloom 1987, p. 68).

Bloom's purpose in highlighting the effect of music on the young was the recovery of a long-standing link between music and the soul, which had fallen into disfavor, if not outright scorn in the 20th century. Social scientists committed to the positivistic first principles of their disciplines were indifferent or dismissive to music's power on the soul. At the other extreme from the positivists, heirs of the romantic cult of feeling embraced it because it legitimized and encouraged premature, unbounded sexual desire. In Bloom's words, “Rock music has one appeal only, a barbaric appeal, to sexual desire—not love, not eros, but sexual desire undeveloped and untutored” (Bloom 1987, p. 73).

As one would expect, Bloom's frontal attack on rock music drew sharp words of rebuttal from many quarters, both academic and popular. Many dismissed him as a cranky old scold. Among the more nuanced of Bloom's critics was Frank Zappa (1940–1993). His commentary on Bloom's thesis in a 1987 number of *New Perspectives Quarterly* thoughtfully addressed Bloom's quarrel with the state of music in the late 20th century. Zappa redirected

most of Bloom's critique of music to support his long-held views on the corrupting effects of the commercial music industry on musical experimentation. However, on the central question of music and its soul-shaping powers Zappa was thoroughly dismissive of Bloom's argument: "This is a puff pastry version of the belief that music is the work of The Devil: that the nasty ol' Devil plays his fiddle and people dance around and we don't want to see them twitching like that" (Zappa 1988, p. 26).

Zappa missed Bloom's main concern, which was not so much with the behavioral effects of rock music; that is whether it promoted sexual promiscuity, violence or drug use. Rather Bloom's central thesis was that rock music, along with the rise of the music video industry in the 1980s, seriously impaired students' imaginations, and thereby made it difficult for them "to have a passionate relationship to the art and thought that are the substance of liberal education" (Bloom 1987, p. 79, my emphasis).

Bloom's point is similar to one made by C. S. Lewis in his little gem of a book, *The Abolition of Man*, on the need for careful and attentive education of young people's imaginations and affections, an education that must precede and ready the intellect for higher learning. Following Aristotle (384–322 B.C.), Lewis wrote, "the aim of education is to make the pupil like and dislike what he ought" (Lewis 2009, pp. 7–8). Aristotle's teacher Plato (428–348 B.C.) directed the young to have the right responses to reality. The young need to feel delight and desire for those things that are delightful and pleasurable, and aversion and dislike for those things that are loathsome and abhorrent. Bloom and Lewis are of one mind in that well-formed youths ought to have eyes that really see and ears that really hear. They must learn to judge rightly from their earliest years that which is ill-made in the works of man and nature, and praising that which is good and beautiful, drawing it into their souls for nourishment, so that they mature into persons with hearts and minds well-disposed to the proper development of mind. This formation of the soul must be made fertile ground for the faculty of reason. Such that properly bred, they will stretch out welcoming hands to things of genuine value, recognizing them because of the affinity they themselves bear to them. (Lewis 2009, p. 8).

Lewis is channeling Socrates, who said, "he who has received this true education of the inner being will most shrewdly perceive omissions or faults in art and nature, and with a true taste, while he praises and rejoices over and receives into his soul the good, and becomes noble and good, he will justly blame and hate the bad, now in the days of his youth, even before he is able to know the reason why; and when reason comes he will recognize and salute the friend with whom his education has made him long familiar" (Plato 1973, p. 90).

### 3. Retrieving Augustine and the Classical Tradition: The Centrality of Music to the Liberal Arts

Bloom and Lewis remind their readers of an ancient belief and practice: the education of desire and a proper state of soul is a prerequisite to receiving in full the benefits of a liberal arts education. Their premise is that as persons grow toward maturity they learn to take seriously their responsibility for liking and disliking, not merely as matters of taste but as conditions for fulfilling their true ends as fully human beings. A liberal education proceeding from this premise is therefore not merely for the accumulation of knowledge, or worse the heaping up of information. Rather it is a systematic program—an *encyclios paideia*, aimed at training youths to pursue an ideal conception of the human being (Kimball 2010, p. 2). Emphatically, this ideal involves the whole person, and not the intellect alone. For educators of Antiquity and the European Middle Ages music was central to this totalizing aim.

Bloom described the late 20th century as "the age of music and the states of soul that accompany it" (Bloom 1987, p. 68). Bloom's description of this age is bleak: students arrive at university with stunted inner lives, which render them unprepared for thinking well and valuing the life of the mind. "The age of music and the states of soul that accompany it" applies equally well to the teachings of Pythagoras (c. 570–c. 495 B.C.), Plato, and Aristotle

as a normative principle for the education of the young. For them music was central to a well-formed soul, such that the soul, or one's inner life, would be well-disposed to the ultimate ends of a liberal education—the education of a free man in a democracy. However, even more important; while even the *politeia*—the ideal city state would pass away, the soul was timeless, immortal, and the location of one's authentic identity and selfhood. So, the stakes are high. One formed it well not merely for an ephemeral temporal existence, but for eternity.

For Plato and Aristotle and many in the pre-Christian and Christian traditions after them, evidence of the soul's immortality is inherent in the soul's activity. In this tradition, music was the formator of this activity—it is “the philosophizing of the soul”, as Josef Pieper has written (Pieper 1990, pp. 37–38). To deny this immortality is to negate one's proper humanity, a flagrant affront to the Creator; it is also a rejection of the end (*telos*) of one's humanity, the enjoyment of the pleasure and gratification of the eternally true, good, and beautiful.

Plato's teacher, Socrates, said: “Musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul, on which they mightily fasten, imparting grace, and making the soul of him who is rightly educated graceful, or of him who is ill-educated ungraceful” (Plato 1973, p. 90). Aristotle had a wider appreciation for the benefits of music than did Socrates. “Music”, wrote Aristotle, “ought to be used not as conferring one benefit only but many; for example, for education and cathartic purposes, and an intellectual pastime, as relaxation, and for relief after tension”. Nevertheless, Aristotle is mindful of the extraordinary power of music on the soul. In his words, “There is a certain affinity between us and music's harmonies and rhythms; so that many experts say that the soul is a harmony, other that it has harmony” (Aristotle 1999, p. 188).

As we saw in St. Augustine's thinking of liberal education, the line of thinking laid down by Plato and Aristotle gave music pride of place in the seven arts of a liberal arts education—the *artes liberales*, later codified in Roman and Christian education. Besides Augustine, the pedagogy of Ancient Greece was received with reverence and commitments to its faithful transmission by Vitruvius (c. 80 or 70 B.C.–after c. 15 B.C.), Martianus Capella (c. A.D. 410–420), Boethius (c. 477–524 A.D.), Cassiodorus (c. A.D. 485–c. 585), Isidore of Seville (c. A.D. 560–636), among others, each of whom wrote handbooks and treatises systematizing education into a program of seven areas of study (Kimball 2010, p. 10; McLuhan 2009, p. 32). The seven were academic disciplines mostly recognizable as antecedents to a 21st-century liberal arts curriculum. A major difference is that in late Antiquity through the European high middle age, they were not studied at arms-length by mind alone, as is increasingly the case in 21st-century American universities. Rather, taken together they were, *a via-a bios* or way of life, implicating the entire person in the process of developing and learning.

The *artes liberales* were grouped into the *trivium*—grammar, rhetoric, and dialectics; and the *quadrivium*—arithmetic, music, geometry, and astronomy. The *trivium* is the threefold pathway toward the mastery of the language arts. First was grammar, which focused on letters and the alphabet, and ultimately their symbolic and semiotic functions. The study of grammar moved next from letter to syllables, correct pronunciation, etymology, parts of speech and the rules of syntax. The culmination of the study of grammar was an hermeneutical expertise—reading accurately, providing illuminating interpretations of texts and language, and analyses of the virtues and vices of speech. Grammar included poetry, history, fiction, in short, all forms of the written and spoken word. In Marshall McLuhan's words: “the pursuit of psychological order in the midst of material and political chaos is of the essence of *grammatica* (grammar)” (McLuhan 2009, p. xi).

Rhetoric, the art of persuasion, followed seamlessly from the study of grammar. It is organized around five foundational topics: arrangement, delivery, invention, style, and memory. Its aim was to instruct, move, and delight one's audience. The figure of Marcus Tullius Cicero dominated the study of rhetoric. It is a discipline that is crucially important

to democracies and republics inasmuch as argument and persuasion animated their civic life. Although music has its own position in the quadrivium, it is also a significant role in an education in rhetoric. Quintilian (c. 35–c. 100 A.D.) included music in his twelve-volume course on rhetoric, celebrating music's power to evoke the divine and its centrality to oratory. Anticipating Augustine, Quintilian wrote: "music is united with the knowledge of divine things . . . If this position be granted, music will be necessary also for the orator". His students thereby learned to imitate the inflections of music, in effect musicalizing speech. "Music", wrote Quintilian, "by means of the tone and modulation of the voice, expresses sublime thoughts with grandeur, pleasant ones with sweetness, and ordinary ones with calmness, and sympathizes in its whole art with the feelings attendant on what is expressed. In oratory, accordingly, the raising, lowering, or other inflection of the voice tends to move the feelings of the bearers" (Quintilian 2022). This rhetorical role of music is central to the discussion of J. S. Bach's *St. Matthew Passion* later in this article.

The third subject of the trivium is dialectic, which includes the study of logic. Dialectic referred most often to the manner in which Socrates engaged his interlocutors. It required correct reasoning and by implication the identification of incorrect reasoning. The dialogues of Plato were the model of an education in dialectics. It is the art of inventing or discovering all the arguments for or against any position. For Plato dialectical exchanges were subordinate to the discovery of truth. However, they could also be, as it was for Cicero, used to persuade in the pursuit of political power. During the European high middle ages dialectics was also a means for ordering and arranging what is known in a given area of inquiry (McLuhan 2009, p. 32).

The disciplines of the trivium focus on thinking well, and command of language for clear, logical, and persuasive expression. These skills served the ancient dictum: "know thyself". If the trivium is ultimately about self-knowledge and self-discovery, then the quadrivium is about knowing where you are in the universe, in the realm of time and space. The quadrivium is mastery of the arts of quantity and number. They direct students to the world beyond the self, to the realm of matter existing in time and space. Matter's most significant characteristic is extension, which is best studied through the arts of number: arithmetic, music, geometry, and astronomy (Miriam 2002, p. 8). The organization of the quadrivium is attributed to Archytas of Tarentum in southern Italy. He was a Greek mathematician, musical theorist, political leader and philosopher, active in the first half of the fourth century B.C. (Huffman 2005).

As the letter is the foundation of the trivium, so number is the foundation of the quadrivium. Arithmetic, the first discipline of the quadrivium, is not so much interested in calculating—addition, subtraction, multiplication and division, but rather its interest lay in understanding time. Think of a number line extending in space, or an analogue clock ticking away as its hands point to the numbers on its face. Just as grammar studied the symbolic and semiotic implications of the letters of the alphabet, so arithmetic studied individual, discrete numbers and their implications. For example, the first natural number is 1. It is the smallest natural number with implications for unity, as in the one and many; the unity and diversity of reality. It also implicates identity, insofar as any other number multiplied by the number 1 remains itself. In grammar when letters combine into syllables and words, meaning emerges. So too when numbers are set in relation one to another, new meaning emerges, giving rise to the theory of ratio, which indicates how many times one number contains another. For instance, if there are eight apples and six oranges in a bowl of fruit, then the ratio of apples to oranges is eight to six (that is, 8:6, which is equivalent to the ratio 4:3). Similarly, the ratio of oranges to apples is 6:8 (or 3:4) and the ratio of apples to the total amount of fruit is 8:14 (or 4:7).

Music, the second quadrivial art, is to some degree the incarnation of arithmetic. It is number in sonic motion. Its motions, in turn, move the soul and, move the body as in dance. Just as the individual, discrete number is the building block of arithmetic sound is the key stone of music. The human ear can hear a vibration as sound when it vibrates between about 15 times per second and 23,000 times per second (Gann 2019, p. 20). Music

uses a particular kind of sound, which is an acoustical event heard as distinct from the ordinary sounds of the physical world. This acoustical experience is a tone. Just as every number is present in every other number through the concept of ratio. Each unique tone contains within it every other note, which is known as the overtone or harmonic series—a somewhat hidden world of ratios. The realization of arithmetical ratios in music occurs primarily through melody, harmony, rhythm, and timbre or tone color.

The overtone series occurs naturally in all non-synthetic tone production. When a person sings or an instrumentalist creates a tone, an infinite harmonic series is brought into being. Within the vibrations of a single tone there are many other smaller, quieter vibrations occurring in an ordered relation to it. The note sounded is called the fundamental; it is the first in the series of overtones. In Figure 1 below the note played is the A sounding at 110 vibrations per second or 110 Hertz (Hz)—the unit of measurement representing the amount of times a sound vibrates in a second. This is the A that lies two octaves below middle C, and in this example called the first harmonic. An octave is an interval of eight notes.

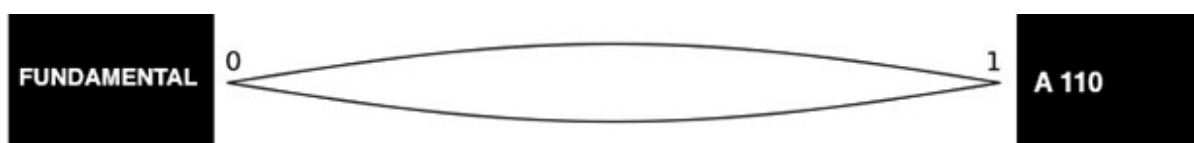


Figure 1. The Fundamental Tone.

The first overtone of A 110 Hz is also called A vibrating at 220 Hz, an octave above the fundamental or first harmonic. Figure 2 below visualizes the first overtone sounding within the fundamental note. It is sounding at a 2:1 ratio. There are 2 vibrations for each 1 of the fundamental. The point at the middle of the string, which generates the overtone is called a node.

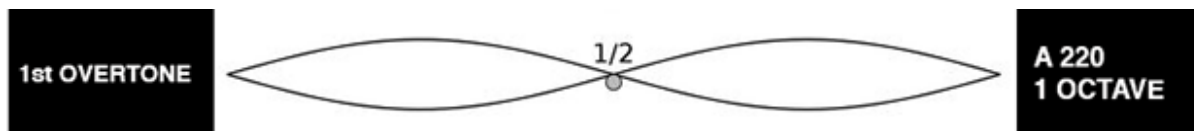


Figure 2. The First Overtone.

The second overtone of A 110 HZ is the note E vibrating at 330 Hz, an octave and five notes above the fundamental. The ratio for this overtone as depicted in Figure 3 is a 3:1 ratio.



Figure 3. The Second Overtone.

This overtone series continues theoretically towards infinity. As the series progress, other notes of smaller interval are also present in the fundamental, even though they are nearly or fully inaudible to human ears ([The Overtone Series 2022](#)). It is this phenomenon of a multiplicity of tones in one sounding that is the foundation for Arvo Pärt's (b. 1935) *tintinnabuli* style of musical composition. At its core lies a fascination with one note: "I have discovered", said Pärt, "that it is enough when a single note is beautifully played. This one note . . . comforts me" ([Aquila 1992](#), p. 113).

Beside the arithmetic qualities of music, associated with intervallic ratios, number is also basic to rhythm, as Augustine's *De musica* developed a great length. Rhythm is the arrangement of notes according to their relative duration and relative accentuation. The

pattern of duration and accents generates a pulse or beat that is literally measured out in measures. Usually measures group beats into a regular or irregular pattern of notes or tones of various value, so a whole note gets four beats, a half note two, a quarter note one, etc. A measure is infinitely divisible, although there is a threshold as in the overtone series beyond which a listener cannot perceive the divisions.

Rhythm is the element in music which moves us from the world of time and space considered in number to an inward experience. As Plato quoting Socrates put it, “it finds its way into the inward places of the soul, on which it mightily fastens” (Plato 1973, p. 90). In this sense, rhythm as a constitutive element of music, connects the quadrivium and its exploration of the world external to the self through the arts of number to one’s interior world, which is the main object of the trivium. Music’s linking function between the quadrivium and the trivium through rhythm is the second instance of its central position in liberal education.

In words reminiscent of Augustine’s discussion of rhythm in *De musica*, Roger Scruton gave elegant expression to the inward experience of rhythm: “the experience of rhythm is something more than an experience of metrical structure. To hear rhythm is to hear a kind of animation. Beats do not follow one another; they bring each other into being, respond to one another and breathe with a common life”. Rhythm, continued Scruton is not an experience of arithmetically organized sound (material objects whose essence is extension. It is rather, “an organization of mental objects, and one that we know intimately from our own inner experience: the experience of life conscious of itself as life . . . connected to processes that we know in ourselves” (Scruton 1997, pp. 35–36).

Thus far, we have discussed two quadrivial arts, arithmetic and music as the arts of number concerned with time. Geometry and astronomy complete the quadrivium. Geometry, is the theory of space. The geometrical analogue to number is the figure, shapes such as the triangle, square, and circle. The geometrical analogue to ratio is the distance and space between figures. As music is the application of arithmetic—number in motion, so astronomy, the fourth quadrivial dripline, studies shapes or bodies in motion. Astronomy’s aim is to show students where they stand in the cosmos, directing their gaze upward to a Creator God who orchestrates perfectly the movements of the planets and the stars. In this way it teaches the limits of human knowledge and its powers compared with the immensity of God’s knowledge and power.

At the end of a liberal arts education, students should be able to know who they are and their place in the cosmos. They should also be able to see the integration between and among the seven liberal arts. As Marshall McLuhan noted concerning the trivium, it is difficult to set hard and fast boundaries between the grammar, rhetoric and dialectics—the arts of language. Each depends on the other in innumerable way, such that their interests constantly overlap (McLuhan 2009, p. xi). Something similar could be said of the interconnection of the quadrivial arts, especially music and geometry.

Pythagoras captures the connection between music and geometry in one of his pithy aphorisms: “There is geometry in the humming of the strings. There is music in the spacing of the spheres”. This line of thinking led Pythagoras to postulate a “music of the spheres” (Van Basten 2016, p. 29). If earthly materials, such as strings and pieces of wood or metal sound when set in motion, then heavenly spheres must also sound. Inasmuch as the planets and stars are in constant motion, then they must produce unceasing sound. Pythagoras concluded that each of the planets, through its orbital movement, produces a particular note according to its distance from a stationery center, which for him was the Earth. Just as differing the length of a string adjusts its pitch when the string vibrates, so these varying distances produce different tones: the “music of spheres”.

The exalted position of music in a liberal arts education rested on the belief in music’s power over the soul. To order the soul aright it had to be attuned to the music of the spheres. Saint Augustine, among other early Fathers of the Church carried forward this thinking into the European Middle Ages, asserting that rightly ordered souls could hear the music of the spheres as they passed from their earthly lives to eternity, at which point



the secrets of the cosmos were suddenly unveiled (Augustine 1947). The following two sections discuss how two great monuments of Western Christianity, Dante's *Commedia* and J.S. Bach's *St. Matthew Passion*, attempt to merge temporal and eternal realities through the media of poetry and music.

#### 4. Time and Its Nullification: Dante's *Paradiso*

Dante Alighieri (c. 1265–1321) gave poetic expression to the liberal arts in *Paradiso*, the third *cantica* of his *Commedia*. One way to read *Paradiso* profitably is to read it as an *encyclios paideia*—circle of knowledge. *Paradiso* is a telling of Dante's interplanetary journey as a pilgrim accompanied first by Beatrice and then by St. Bernard of Clairvaux. It is comprised of nine moving heavens, which Dante the pilgrim hears as the music of the spheres: (*Quando la rota che tu sempiterni/desiderato, a sé mi fece atteso/con l'armonia che temperi e discerni,/parvemi tanto allor del cielo acceso.*—"When the vast wheel you have made eternal by desire/held me intent to hear the harmony/You tune in all parts") (Alighieri 2007, pp. 6–7). The first seven heavens of the nine moving heavens are identified with the planets: the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn. They are followed by the Heaven of Fixed Stars (Faith, Hope, and Love) and the Primum Mobile. In the *Convivio* Dante associated each of the seven liberal arts with a planet according to qualities he imputed to that particular planet. The associations are as follows (Table 1).

**Table 1.** The Correspondence of the Planets and the Liberal Arts in Dante Alighieri's *Convivio* (Alighieri 1987, pp. 61–65.).

The Moon	Grammar
Mercury	Dialectics
Venus	Rhetoric
The Sun	Arithmetic
Mars	Music
Jupiter	Geometry
Saturn	Astronomy

What may seem puzzling at first is Dante's association of music with Mars, the planet typically associated with war. Dante combines the two, music and war, on the grounds that music "consists entirely of relations", sometimes harmonious and other times discordant. Recall the overtone series in which the fundamental tone contains within it an infinite amount of tones, some consonant, such as the octave and the perfect fifth, and others that are dissonant, such as the minor second and major seventh. Consequently there is a sort of simultaneous attraction and strife within the heaven of Mars suggestive of the sometimes peaceful and sometimes discordant relations within a polity (Alighieri 1987, pp. 63–64).

Dante sees another quality in Mars related to its "most beautiful relative position" as the midpoint of the nine moving heavens. From this position Mars, like music "attracts to itself human spirits, which are as it were chiefly vapors from the heart, so that they almost cease from all labor; so is the whole soul when it hears it, and the power of all of those spirits flies as it were to the spirit of sense which receives the sound" (Alighieri 1987, pp. 63–64).

Dante's intertwining of music, human relations, and his ascent through the heavens toward the contemplation of the Holy Trinity has much in common with how Augustine wove these elements together in *De musica*. The predominant theme of *De musica* is the soul's rising from the terrestrial world of action to the celestial world of contemplation. In summing up his discussion of music, Augustine turned toward a consideration of the political or civic virtues of prudence, justice, fortitude, and temperance. In the pre-Christian classical tradition these virtues made possible a polity wherein human beings lived in order, friendship, and peace. Ever mindful of the inextinguishable Christian concern for the human community—the *societas humana*, Augustine and Dante never lose sight of the

gospel analogue to these virtues, summed up in Christ's command to love one's neighbor as inseparable from beatitude and contemplative unity with the Trinity. The harmony and discord of music symbolize the tension involved in realizing this gospel imperative (Augustine 1947, pp. 372–75; O'Connell 1978, p. 86).

As Dante the pilgrim flies upward from the heaven of the Sun (arithmetic) to the heaven of Mars (music) in Canto XIV of *Paradiso*, the first image he sees is a cross of blazing light. Dante the poet describes the event by way of a musical simile, joining sight and hearing in an experience of synesthesia.

*E come giga e arpa, in tempra tesa  
di molte corde, fa dolce tintinno  
a tal da cui la nota non è intesa,  
così da' lumi che li m'apparinno  
s'accogliea per la croce una melode  
che mi rapiva, senza intender l'inno.*  
And as a tempered harp of many a string  
Or a guitar sounds sweetly, tinkingly,  
For him who—almost—hears the music ring,  
So from the lights that there appeared to me  
a melody welled up throughout the cross  
which, though I couldn't understand the hymn,  
Swept me away . . . (Alighieri 2007, pp. 150–51)

The heaven of Mars is expansive, encompassing the last section of *Paradiso's* Canto XIV, Canti XV, XVI, XVII, and the first half of Canto XVIII. In these Canti the language of music abounds. In glossing the meaning of Canto XVII, Giuseppe Mazzotta points to the link between music and time: "I enjoy very much the implicit connection between time and music, music becoming the metaphor that makes audible time itself. Time is constitutive of music, of course, but it's really an acoustic translation of the silent arrow of time here" (Mazzotta 2014, p. 217).

The arrow metaphor is apt in its representation of the irrepressible forward movement of time. Dante the poet also uses the arrow metaphor as one of many instances in which he attempts to nullify time in *Paradiso*—a realm of timelessness. For example, in *Paradiso* Canto II he uses the rhetorical device, known as *hysteron proteron* (placing first what the reader might expect to come last), to reverse the order of an arrow's flight in order to communicate the pilgrim's experience of a breathtakingly swift ascent to the heaven of the moon. This device is well placed at this moment as the moon is the heaven of grammar, which here overlaps with the concerns of rhetoric. Dante's deployed the *hysteron proteron* in an attempt to resolve the fundamental problem of *Paradiso*: how to represent timelessness using poetry and narrative, which like music, are bound to time (Barolini 1992, p. 166).

*Beatrice in suso, e io in lei guardava;  
e forse in tanto in quanto un quadrel posa  
e vola e da la noce si dischiava,*  
Beatrice gazed upward, and I gazed at her,  
and in the instant of an arrow's flight—  
sunk in the target, whistling off the nock. (Alighieri 2007, pp. 14–15)

In the heaven of Mars, Dante's main focus is on time, which develops into an exploration of historical time and its meaning for self-understanding. Like music, humans are time-bound, they belong inevitably in history, yet they desire the infinite, a realm in which "time's scissors" do not destroy oneself, one's creations, and degrade political communities. The pilgrim Dante's conversation partner in the heaven of Mars is his paternal ancestor Cacciaguida, who says to his son:

*Ben se' tu manto che tosto raccorce:  
sì che, se non s'appon di dì in die,*

*lo tempo va dintorno con le force.*

You are a mantle that soon shrinks away;  
time's scissors shear you all around the hem  
unless we patch in new cloth day by day. (Alighieri 2007, pp. 166–67)

The subject of historical time emerges in the heaven of Mars by way of a celebration of family lineage. Dante presents historical time here as genealogy. Cacciaguida, who fought in the Crusades of the 12th century was knighted for his service by Emperor Conrad III (1093/1094–1152 A.D.). At first Dante glories in the nobility of his lineage, but quickly reflects on its evanescence—the reality of “time’s scissors”. Cacciaguida had begun his conversation with a tribute to a putative golden age of Florence, the city from which Dante now lives in exile. Dante the poet deploys another rhetorical device here in the heaven of Mars, the *laudatio*, praise of a bygone era to berate the corruptions of the present. In effect, the *laudatio* sets up an Augustinian division between the City of God, eternity outside of time and history (which is the bygone days of Florence) and the earthly city, time (which is the Florence that exiled Dante.) In so doing Dante brings to the foreground the problematic of *Paradiso*—the representation of time and timelessness. It also recalls the musical metaphors of harmony and discord. The degradation of Florence over time was cause and effect of the move from peaceful, concordant human relations to factionalism and its attendant discord.

The decay of human relations was felt deeply by Dante in his exile from Florence, and his family, the imaginary encounter with his ancestor Cacciaguida is full of the pathos of separation. Here, again Dante the poet deploys the arrow metaphor in connection with his exilic state.

*Tu lascerai ogne cosa diletta  
più caramente; e questo è quello strale  
che l'arco de lo essilio pria saetta.*

*Tu proverai sì come sa di sale  
lo pane altrui, e come è duro calle  
lo scendere e 'l salir per l'altrui scale.*

You'll leave behind you everything you love  
most dearly: this will be the arrow shot  
first from the bow of exile. You shall prove  
How someone else's bread can taste of salt  
and how it is a hard and bitter walk,  
climbing and coming down another's stairs. (Alighieri 2007, pp. 182–83)

The reference to bread, as Mazzotta keenly observed, signals its sacramental character, which Dante intensifies in the next *terzarima*'s use of the word, *compagna* (company): *la compagna...con la qual tu cadrai in questa valle*/the company who share your fall. *Compagna* means “a sharing of bread with others”. Bread, especially with its Eucharist resonance, is symbolic of a polity whose citizens live harmoniously. As we shall see in the next section, the Eucharist is central to J.S. Bach's *St. Matthew Passion* as the quintessence of the unity of the earthy city and the City of God, the temporal and the eternal.

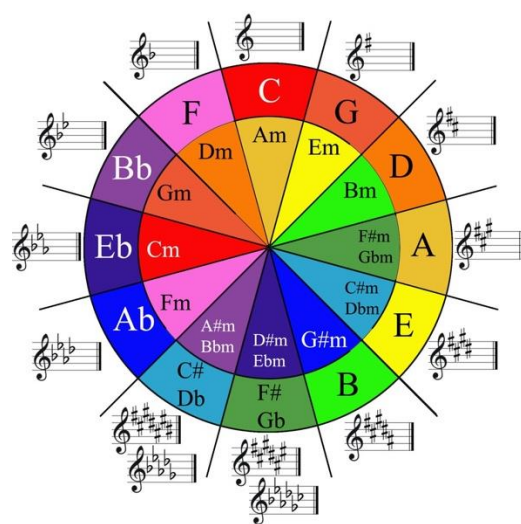
## 5. Time and Timelessness in Bach's *St. Matthew Passion*: The Soul's Union with God

J. S. Bach's *St. Matthew Passion* is a towering musical accomplishment, and, like Dante's *Commedia* a monument of Western culture. It is a work of magnificent beauty, compositional and poetic genius, and piercing emotional power. It also exemplifies the privileged place Augustine and his classical predecessors assigned to music in the liberal arts tradition, inasmuch as it spans and links the *quadrivium* and the *trivium*, the arts of number and the arts of language. It uses the expressive power of Bach's reformulation of the harmonic series (an aspect of music's place in the *quadrivium*) for rhetorical purposes (a discipline of the *trivium*).

The discussion that follows here focuses on Augustine’s culminating idea in *De musica* by which he unifies music, rhythm, time, and eternity in a “the poem of the Universe”. In this unity “terrestrial things are subject to celestial, and their time circuits join together in harmonious succession” (Augustine 1947, p. 355). Music, and particularly rhythm, for Augustine has the capacity to rejoin what had been severed. In the words of Robert O’Connell in his discussion of *De musica*, “the experience of time [for Augustine] indicates that the soul is ‘distended’”, fallen from the *otium*, the restful contemplation of eternal truth, into the busy *negotium* of temporal activity” (O’Connell 1978, p. 72). In this sense Dante’s entire *Commedia*, which *Paradiso* brings to a glorious end, is also a “poem of the universe”, an effort at reversing the soul’s fall into the realm of time from the realm of timelessness. Eric Auerbach drew attention to this theme in the *Commedia*. With echoes of St. Augustine, he concluded his well-known reading of *Commedia*, noting that Dante saw the passing temporal world of earthly existence as “merely figural, potential, and requiring fulfillment” in the timeless, immutable City of God (Auerbach 1953, p. 73).

To be sure, music cannot escape the reality of linear temporality. Victor Zuckerkandl put it this way: “music figures as the temporal art par excellence” (Zuckerkandl 1973, p. 151). However, as Karol Berger wrote in his extraordinarily insightful and illuminating book, *Bach’s Circle, Mozart’s Arrow*, music “can suggest timelessness by bending the linear flow of time from past to future into a circular shape” (Berger 2007, p. 106). Bach achieved this circularity in innumerable ways through musical forms such as the fugue, canon, and compositional cycles like his *Well-Tempered Clavier*. Bach’s innovative use of the mean-tempered musical system grounds this circularity in the physical reality of sound. The natural direction of the overtone series discussed earlier is linear, extending upward in ever smaller intervals that eventually become inaudible to the human ear. Bach did not invent mean-tempered tuning but he made full use of its new, expressive power by taking a linear physical reality and reshaping it into a circle.

Mean-tempered tuning slightly adjusts the pure intervals of the overtone series to lengthen or shorten the space between tones. In the 16th century most European composers adopted a tuning system that re-sized some or all of the twelve fifth intervals in the circle of fifths so that they accommodated pure octaves and produced major thirds of a prescribed length (See Figure 4).



**Figure 4.** The Circle of Fifths.

Mean-temperament is especially important for keyboard instruments because typically each of its keys sounds only the pitch assigned to it. The wide adoption of mean temperament allowed fixed-pitch instruments, such as harpsichords and other keyboard instrument to play reasonably well “in tune”, and allowed for the transposition between keys without having to change the relationship between notes. Bach’s *Well-Tempered Clavier*, consisting of

pieces for keyboard composed in all 24 major and minor keys, took full advantage of this tuning system (Donahue 2005, p. 19). Moreover, as Berger wrote: “Among the advantages offered by a ‘good temperament’ is not only that it makes all twenty-four keys acceptable to the ear but also that it allows closing the potentially infinite series by bending infinity into a circle: whether ascending by semitone or by fifths, in twelve steps one is bound to end up where one had begun” (Berger 2007, p. 100). Thus by way of bending linearity into circularity Bach attempted to annihilate the linearity of time.

The establishment of stable keys also gave each key a unique character and expressive potential, which Bach used to great effect in the *St. Matthew Passion* (premiered in 1727 in Leipzig). The *St. Matthew Passion* belongs to a long tradition of music composed to prepare Christians for the celebration of Easter. Indeed, the need to express a wide range of emotions in the passion of Christ, led Bach to advance significantly the expressive power of well-tempered tuning. Even for J.S. Bach, whose music nearly always aspired to “God’s Time”, as Berger described it, the *St. Matthew Passion* surpassed everything that Bach had written for the Lutheran Church. One archbishop called it “the fifth Gospel” to signify its great theological influence (Berger 2007, p. 113).

Bach expanded both the form of the work and the performing forces beyond anything previously known in this genre. He deployed two choirs (each with its own orchestra), a choir of boys, two complete (and separate) sets of vocal soloists, and continuo. *The Great Passion*, as the Bach family called it, is four hours long. It consists of every style and compositional device available to Bach. The repetition of the Passion Chorale, heard five times each with a different text and was one means that Bach used to unify the vast structure of the *Passion*, while simultaneously providing a medium for expressing his own faith and signifying the five wounds of Christ.

Bach invested great importance in this work, extending even to the visual experience of the score. Bach used a ruler and compass (combing linearity and circularity in print) in drafting the score, with a special red ink for the recitatives of the Evangelist, distinguishing them from the divine message of the libretto (Geiringer 1966).

Bach set the *Passion* to a libretto written by Christian Friedrich Henrici (1700–1764). Writing under the pen name Picander, he provided the libretti for many of the cantatas which Bach composed in Leipzig. Picander’s *Passion* libretto consists of Biblical narrative and recitative, and Picander’s original poetry commenting on the Biblical action. The *St. Matthew Passion* divides into two sections. The first part is an account of Jesus’s last hours with his disciples, up to his arrest, betrayal, and abandonment. The second part begins with Caiaphas’s interrogation of Jesus and ends with Jesus’s entombment. Two separate choruses and their accompanying orchestras provide dramatic spatial effects, which can only be appreciated in a live performance. Even the most sensitive recordings fail to capture this important special aspect of the *Passion*. Different characters, factions, and story elements have their own physical location within the performing space.

The physical staging of the *Passion* corresponds to three mountains: Mount Zion in Jerusalem, the Mount of Olives to the east of Jerusalem city, and Golgotha to its west. In the Christian tradition, the summit of Golgotha where Christ was crucified lies at the center of the world and connects God’s time with earthly time—the highest exemplar of Augustine’s “poem of the universe”. The first chorus contains all the speaking parts (except the two false witnesses), the “Daughter of Zion” (the voice of Christian faith, represented by various soloists and the chorus), and the disciples. The second chorus contains only speaking parts: the two false witnesses; “The Faithful” (the larger Christian community as represented by soloists or the chorus), and the high priests. Taken together, both choruses represent the choruses for high priests, elders and people, and any movement, such as the chorales that represents the community of all Christians.

As its most obvious musical feature, Bach’s use of a double chorus and its meaning occupy a central place in more than three centuries of musical and theological commentary on the *St. Matthew Passion*. One interpretive tradition emphasizes its theological significance in line with its origins in the Lutheran Church, which in turn developed out of devotional

practices of the Middle Ages, such as the Stations of the Cross and the practice of meditation or mental prayer (Maddox 2017, pp. 333–49; Schellhous 1985, pp. 295–326.) Nikolaus Harnoncourt, a leader in performing music that is faithful to the standards and instruments of the time it was composed and performed, thought that the need for double choir was obvious given the dialogic character of Picander’s libretto. For Harnoncourt “Picander’s text is a meditative dialogue between the daughter of Zion, the personification of Jerusalem regarded by Christians as a symbol of the church”—that is the daughter of Zion—“and the faithful” (Harnoncourt 1997, pp. 77–78).

Picander’s libretto also provided Bach with the impetus for realizing the rhetorical power of music. Bach inherited and mastered a tradition of German music theory known as *musica poetica* by which musical structures were analyzed in rhetorical terms. By this method, composers’ figures of musical rhetoric were used analogously to spoken rhetoric, to express particular ideas (Bartel 1997).

Peter Herreweghe heard the *St. Matthew Passion* as the culmination of *musica poetica* in Western music. Bach was well-schooled in the art of spoken rhetoric. Among his many other activities, he taught Latin and grammar to supplement his income from composing and performing. Herreweghe developed a one-to-one correspondence between Picander’s text and Bach’s setting of it, translating rhetorical devices into musical gestures. The first step in this translation was an inspection of the text that guided Bach’s composition. Then, in Herreweghe’s words,

Step two, *elaboratio*: once the elements are defined, the musical work molds itself according to the pattern of classical oration. *Exordium*, the introduction. *Narratio*, the orator sets forth the facts of the problem. *Propositio*: he states his thesis. *Confutatio*: he gives the counter-arguments to his thesis. *Confirmatio*: he restates his thesis in reinforced form—recapitulation. *Peroratio*: he concludes. (Greenberg 1998, pp. 440–41)

“If Bach’s music seems so obvious and logical to the average listener”, Herreweghe concluded, “it is because its organization coincides with the articulation of spoken discourse, and therefore with our way of thinking” (Greenberg 1998, p. 441).

The rhetorical structure of the *Great Passion* signifies the passage of music as a quadrivial art to an art of the trivium. Bach also uses *musica poetica* to nullify time and create the sense of eternal timelessness. For Berger, there is no greater demonstration of this attempt at nullifying time than the choral opening of the *Passion*, which establishes the atmosphere of the eternal as the context for the *Passion* narrative (Berger 2007, p. 102).

Following an orchestral introduction that is somber and funereal in character, the two choruses and the boys’ choir enter. This moment is the only time we hear the full choral strength of the performing forces. The choruses converse with each other, singing

Come, ye daughters, help me lament,  
Behold! Whom? The Bridegroom.  
Behold him! How? Like a lamb.  
Behold! What? Behold his patience.  
Behold! Where? Behold our guilt.  
Behold Him, out of love and graciousness,  
Himself carrying the wood of the cross. (Bach 1727)

Against this dialogue the boys’ choir sings a chorale:

O guiltless Lamb of God,  
Slaughtered on the stem of the cross,  
Always found patient,  
Although thou wast despised.  
All sin hast thou borne,  
Else we must have despaired.

o Jesu ! Have mercy upon us, O Jesus. (Bach 1727)

In this opening Bach has created a rich and complex texture. Exclamatory interjections further complicate the texture adding elements of shock and immediacy as the second chorus questions the first: “Wen? Wie? Was? Wohin?” (“Whom? How? What? Where?”). Rutland Boughton heard these injected queries as a means by which Bach interwove the past and the present. The Christ of the *Great Passion* is not merely an historical figures, but “the Christ who bears his cross then and there with the Leipzigers themselves” (Boughton 2010, p. 125). As Lothar Steiger and Renate Steiger emphasize this connection between the story of the passion and the present reality of its contemporary listeners is a key purpose of the two-chorus, dialogical structure of the *St. Matthew Passion* (Melamed 2004, pp. 49–65).

Strophic form is another compositional device that suggests circularity and resistance to the linearity of time. Strophic form sets all verses or stanzas of the text to the same music. The chorales in the *Passion* approximate the strophic form by using the same hymn tunes at several different points in the *Passion*, although each is harmonized differently. So the repeating chorales based on Paul Gerhardt’s “O Sacred Head, Now Wounded” present different stanzas of the hymn at different moments in the *Passion*. Similarly, the *Passion* chorales based on Johann Heermann’s “O dearest Jesus, what law hast thou broken” set different verses of that hymn.

Besides Bach’s use of musical and poetic forms to suggest temporal circularity and the interconnection between time and timelessness, the theological traditions informing the *St. Matthew Passion* remind listeners constantly of the eternal significance of the temporal suffering and death of Jesus Christ. Theological analyses of the *St. Matthew Passion* abound. Robin Leaver, for one, has published extensively on Bach as both “theological musician” and “musical theologian” (Leaver 2000).

The Church historian, Jaroslav Pelikan, has shown how Bach powerfully conveyed the transcendent significance of Christ’s crucifixion against attempts by some Enlightenment rationalists to reduce the event to Jesus’s failed attempt to establish a worldly kingdom and deliver the Jews from Roman bondage. For instance, Hermann Samuel Reimar (1694–1768), a contemporary of Bach’s, rejected the supernatural origins of Christianity and inaugurated the historical Jesus movement. He interpreted Jesus’s cry from the cross, “My God, my God, why have you abandoned me”, as a tragic lament that God, better understood as fortune, had frustrated his temporal imperial ambitions.

By way of complete contrast, notes Pelikan, Christ’s cry of abandonment from the cross in the *St. Matthew Passion* is freighted with eternal significance. The death of Christ was not the result of human malice and misfortune, but of divine love. In the *Passion*, Bach follows the declamation, “Let Him be crucified”, sung by both choruses, with the soprano aria, “In love my savior now is dying”.

Out of love my Savior is willing to die,  
Though he knows nothing of any sin,  
So that eternal ruin  
And the punishment of judgment  
May not rest upon my soul. (Bach 1727)

For Pelikan this aria summarizes the entire burden of the *St. Matthew Passion*: “The Savior Jesus Christ suffered and died because of his love for humanity, in order by his innocent death to satisfy the justice of God, which had been violated by human sin and guilt and to make it possible for the mercy of God to forgive sin and guilt without further violating divine justice” (Pelikan 1986, pp. 89–91).

Pelikan points out that this argument predates Lutheran theology and finds its source in the Catholic middle ages, particularly in the theology of the St. Anselm of Canterbury (c. 1033–1109) and in the medieval form of meditation. For example, Pelikan notes that the Chorale, “O Haupt voll Blut und Wunden” (“O Head full of blood and wounds”), sung immediately following the Evangelist’s recitative, “And they spat upon him and took the reed and struck him upon the head”, was a German version of the Medieval Hymn,

“*Herzliebster Jesu, was hast du verbrochen*” (“Ah, holy Jesus, how hast Thou offended”). *Herzliebster Jesu*, notes Pelikan, was “a versification of a medieval meditation” (Pelikan 1986, p. 101). Indeed, for Pelikan, the entire *St. Matthew Passion* is a “meditation on human redemption” (Pelikan 1986, p. 89).

As Rosalie Athol Schellhous explains, meditation in Bach’s time was a formal method of prayer, whose aim was an ascent to God by way of reflecting on temporal subjects, such as the passion of Christ. Schellhous associates this form of meditation with the spiritual practice of St. Bernard of Clairvaux, who as noted in the earlier discussion of the *Commedia*, accompanied Dante on his final steps to the Beatific Vision. Formal meditation involves the three powers of the human soul: memory, understanding, and will. By memory one recalls a subject for contemplation, the understanding considers it from various perspectives, and through the will converses with God inspired to ascend to greater holiness. Each of these faculties of the human soul imaged a person of the Holy Trinity. Quoting St. Bernard Schellhous explains, “By memory we are like to the Father, by understanding to the Son, and by will to the Holy Ghost” (Schellhous 1985, p. 299).

Schellhous applies the method of meditation, later called mental prayer by St. Ignatius Loyola, to the structure and the spiritual import of Bach’s *Passion*. Listeners of the *Passion* are invited to focus on a scene from the *Passion* narrative, and within it an image that conveys a sensory experience, such as the gestures associated with the institution of the Holy Eucharist. In the arioso that follows on from the scene of the Institution of the Holy Eucharist in the *Passion*: the soprano sings:

Although my heart swims in tears  
Because Jesus takes leave of us,  
Yet his testament makes me glad.  
His flesh and blood, O preciousness,  
He bequeaths into my hands.  
As he, in the world, with his own  
Could not think evil,  
So he still loves them to the end. (Bach 1727)

This arioso expresses three ideas unified in one rhetorical form. First, the soul laments that Jesus must leave. Second, there is the consolation of his continued presence among us in the form of Holy Communion. Third, the Eucharistic communion instantiates Jesus’s eternal love for humanity. The hearers of this arioso may be inclined to meditate on the physical gestures of giving and receiving hands. The soprano comments on this communion in language familiar to the Christian mystical tradition:

I will give my heart to thee;  
Sink thyself in it, my Salvation.  
I will submerge myself in thee.  
And if the world is too small for thee  
Ah, then for me alone shalt thou  
Be more than world and heaven. (Bach 1727)

Schellhous’s gloss on this verse highlights “the soul’s desire for union with Jesus, a union associated with, but transcending, the act of receiving communion. The two movements are bound by the progression from the idea of receiving the flesh and blood of Christ in the hands to receiving Him in the heart—objective and subjective metaphors for intense mystical longing” (Schellhous 1985, pp. 298–99).

This scene of the Institution of the Holy Eucharist is characteristic of Bach’s use of *musica poetica* throughout the *St. Mathew Passion*: a scene is presented as a tableau, it receives commentary, a lesson is offered for reflection, and listeners make a personal, affective response meant to aid the soul in an ascent to the Divine. Thus by unifying the evocative power of music with the force of rhetoric, Bach imbues earthly events with eternal significance creating “a poem of the universe”.



## 6. Conclusions

The world of the *St. Matthew Passion* is a world we have lost. Like all of Bach's great compositions, the *St. Matthew Passion* is saturated with symbols, signs, tone-painting, and numerical puzzles that were the common property of his age. This world of signs and their meanings has become alien to many in the 21st century. Ultimately, Bach's semiotics point to "God's time". As Berger put it "For Bach the name of what most truly endures was 'God.' Hence, music—harmony—could serve as a metaphor for God. After Bach's time, and certainly for us, the matter is more complicated . . . The Enlightenment accelerated the process whereby, for the educated European elites at least, God himself increasingly became a metaphor" (Berger 2007, p. 127).

Is it any wonder then that Allan Bloom's depiction of his time as an "age of music and the states of souls that accompany it" is an age of shrunken imaginations devoid of a meaningful transcendence beyond the earth-bound rhythm of time. Victor Zuckerkandl, who taught music as part of the Great Books liberal arts program at St. John's College, Annapolis, put it this way: "Those who believe that music provides a source of knowledge of the inner world are certainly not wrong. But the deeper teaching of music concerns the nature not of 'psyche' but of 'cosmos.' The teachers of Antiquity, who spoke of the music of the spheres, of the cosmos as a musical order knew this" (Zuckerkandl 1973, pp. 147–48). Their ultimate aim in teaching music as a liberal art—as a *via-a-bios*—was making clear the connection between psyche and cosmos.

Quoting the 17th-century English physician and philosopher, Sir Thomas Browne on the subject of melody, Zuckerkandl wrote: "every melody is an Hieroglyphical and shadowed lesson on the whole World and creatures of God" [Emphasis in the original]. In the modern West, continued Zuckerkandl, "we consume music in greater quantities than any previous generation. But we no longer know how to read what stands written. We have forgotten the meaning of the characters". The 21st century conception of music for many rules out or ignores what Augustine said was essential about music as a liberal art: Its capacity to lead us beyond the terrestrial to the celestial.

Teachers can provide their students with pathways to understanding the centrality of music to a liberal arts education by studying the works of 20th and 21st century composers who based their compositional styles on music's mathematical and rhetorical elements. For example, In his book, *Formalized Music: Thought and Mathematics in Composition*, the composer, Iannis Xenakis (1922–2001), presented his idea of an integrated musical "space-time" that required modeling mathematical probabilities in imitation of the random sounds of natural events such as the collision of hail or rain with surfaces, or the songs of cicada in a summer field" (Xenakis 1992, p. 9).

Xenakis credited his teacher, the great Catholic composer, Olivier Messiaen (1908–1992), with prompting his thinking in this direction. Messiaen used mathematical elements of music as the organizing principle of his famous piece, *Quartet for the End of Time*, based on the Book of Revelation. Like Xenakis his music imitated sounds in the realm of nature, most especially birdsong. Messiaen used them as signposts pointing to the realm of timelessness. Messiaen described the first movement of the *Quartet for the End of Time*, entitled "Liturgy of Crystal", which he organized on the basis of prime numbers, in this way: "Between the morning hours of three and four, the awakening of the birds: a thrush or a nightingale soloist improvises, amid notes of shining sound and a halo of trills that lose themselves high in the trees. Transpose this to the religious plane: you will have the harmonious silence of heaven (Messiaen n.d.).

The compositions of James MacMillan (b. 1959) and Arvo Pärt reclaim the rhetorical tradition using modern compositional techniques, such as texture music and minimalism. Both have composed Passions on the text of St. John's Gospel. Introducing students to these contemporary works is not only a means to discuss the position of music in liberal education. It also shows them that the tradition of Western art music constantly renews itself by a creative retrieval of past musical thought and practice.

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